National Strategic Assessment

of Drug-Related Serious and Organised Crime in the Netherlands

2021

National Strategic Assessment

of Drug-Related Serious and Organised Crime in the Netherlands 2021

Central Unit, Central Intelligence Division,
Analysis & Research Department

In cooperation with:
Central Unit, Central Intelligence Division,
Business Intelligence & Quality Department and
Central Intelligence Department

Colofon

Publication:
Central Intelligence Division
Postbox 100
3970 Driebergen
The Netherlands
The Central Intelligence division is part of the Central Unit
of the National Police of the Netherlands

Zoetermeer, February 2022
Classification: not confidential

Content editing:
Tirza Chessa, Jessica van Mantgem and Irma Vermeulen
Central Unit, Central Intelligence Division, Analysis and
Research Department

Final editing:
Florence Meershoek and Iet Voorhoeve
Police Services Centre, Communications Service,
Production Team

Translation: Acolad
Cover image: Getty Images
Layout: Osage,Utrecht

Table of Contents

Preface

This document is the first National Strategic Assessment of Drug-Related Serious and Organised Crime published by the National Police of the Netherlands.
In multiple national and international studies, the Netherlands has been found to be the primary logistics hub in Europe for the cross-border trafficking of drugs.
The Netherlands is a cannabis and synthetic drugs-producing country, while major quantities of cocaine enter Europe via the Dutch and Belgian ports. The vast majority of these drugs are exported or transited.
Over the past few decades, drug problems have not received much attention from the government. The dependence problem and drug-related nuisance seemed manageable, while the debate concerning the public health aspect focused predominantly on legalisation and regulation.
In part thanks to this relative quiet, the drug trade was able to continue growing almost without impediments. This trade, it must be obvious, does not benefit from a great deal of government attention.
The relative quiet also provided room for new players to enter the drug market. Drug runners and dealers were allowed to grow, as drug networks comprised of all sorts of nationalities and ethnicities were formed. These new drug networks increasingly display extreme violence among themselves.
Business conflicts, such as rip deals and the settling of scores, have become rampant over the past few years.
Police investigations mainly focus on violent excesses: killings, rip deals involving a great deal of violence, and mistaken-identity murders. Only a limited number of investigations have been conducted into the organised drug trade. The view that the various drug markets are separate markets predominates and is reflected in the various investigations. Investigations into the organised cultivation of herbal cannabis, for example, often result in information about other types of drugs and drug networks being found, but this only rarely leads to follow-up investigations. The primary concerns are the use of violence in the underworld and the money earned through drug crime that makes its way into legitimate society. As a consequence, the view of the nature, seriousness, and size of the drug problem in the Netherlands is a very limited one.
Partly because of the study by Pieter Tops, Waar een klein land groot in kan zijn, but in particular due to the murder of Derk Wiersum, it suddenly became clear how subversive drug trafficking had become in the Netherlands.
Starting in 2019, the government made substantial investments in tackling the drug problem. Funds were made available for rounding up drug lines, confiscation, preventing import, and increasing the resilience of society.
But what do we want to achieve and what are the police's strategic objectives? We need to know this to initiate activities to achieve these objectives and determine the intervention strategies necessary in this respect.
In order to arrive at a sound answer for the aforementioned questions, I, the Drug Portfolio Holder of the National Police of the Netherlands, have instructed the National Police Information Unit to make a strategic assessment of the organised drug trade and our country's position in this trade.

The National Police Information Unit has, within a relatively short amount of time and deploying a great deal of capacity and expertise, studied the aforementioned phenomenon.
In my capacity as Portfolio Holder and client, I wish to express my gratitude to all those colleagues for their efforts and input!

I hope that this National Strategic Assessment not only informs you, but also inspires you to mutually arrive at successful strategies and interventions.

Max Daniel, MSc

Drug Portfolio Holder
National Police of the Netherlands
January 2022

1

Introduction

1. Introduction

For many years now, the Netherlands has played a major role in the world of drugs. The country is an important transit hub in the global drug trade, especially for the import and transit to European markets. In addition, drugs have been produced in the Netherlands for decades, for the Dutch and, in particular, for foreign markets.
The aim of this National Strategic Assessment is to provide an overview of the drugs situation in the Netherlands: the state of affairs with regard to the scope and nature of drug-related organised crime and the criminal networks and subjects involved. It becomes clear that the phenomenon is not only a vast and complex criminal one, but also a social and economic one.

The Drug Portfolio Holder of the National Police of the Netherlands (*politie*) instructed the Central Intelligence Division (*Dienst Landelijke Informatieorganisatie - DLIO*) of the Central Unit (*Landelijke Eenheid*) to draw up this National Strategic Assessment, allowing him, in cooperation with the police organisation, to determine targeted national and international police strategies that will form the basis for policy recommendations, policy programmes, and projects.

The report was drawn up by a working group comprised of staff of the Analysis and Research Department. They worked in close cooperation with staff of the Central Intelligence Department and the Business Intelligence and Quality Department. All three departments form part of the Central Intelligence Division.

The report will first address the study design (Chapter 2). The most important aspects and developments common to the various topics covered in this report are discussed in Chapter 3, General findings.
Chapters 4 through 7 address the themes of cannabis, cocaine, synthetic drugs, and heroin and illegal synthetic opioids, while Chapter 8 will discuss other drugs. As part of the trade in these drugs is conducted via the dark web, this phenomenon receives separate attention in Chapter 9.
The drug trade is a commercial activity and therefore primarily aimed at making profits. The extent to which and the ways by which these profits end up in the legitimate Dutch economy is detailed in Chapter 10, Financial and economic perspective.

2

Study design

2. Study design

2.1 Introduction

The Drug Portfolio Holder of the National Police of the Netherlands (*politie*) instructed the Central Intelligence Division (*Dienst Landelijke Informatieorganisatie* - DLIO) of the Central Unit (*Landelijke Eenheid*) to draw up this National Strategic Assessment of Drug-Related Serious and Organised Crime. In this chapter, we will discuss the objective, delimitation, research questions, research methods, and sources in greater detail.

2.2 Objective

The objective of the National Strategic Assessment is to provide an overview of the scope and nature of drug-related organised crime in - and in connection with - the Netherlands and the criminal networks and subjects involved.[1] In addition, it aims to make the trends and developments with respect to both known and new, emerging drugs visible, all from the perspective of public order and security in the Netherlands and to the extent they may touch on the work of the police.

The National Strategic Assessment will allow the Drug Portfolio Holder, acting in cooperation with the police organisation, to determine targeted national and international police strategies that may form the basis for policy recommendations, policy programmes, and projects.

2.3 Delimitation

The National Strategic Assessment was drawn up to help the police in all facets relating to tackling drug-related organised crime, from primary policing to investigations and intelligence. The focus is on the following themes:

- cannabis (herbal cannabis and cannabis resin)
- cocaine
- synthetic drugs (precursors, chemicals, and synthetic drugs)
- heroin and illegal synthetic opioids
- other drugs (nitrous oxide and khat)
- the trade of drugs via the dark web
- the financial and economic perspective

The discussions on the topics of cannabis, cocaine, synthetic drugs, heroin and illegal synthetic opioids, and the online trade mainly focus on organised crime, as rendered punishable in Section 11b of the Dutch Opium Act and Section 140(4) and (5) of the Dutch Criminal Code. These sections of law relate to offences realised by way of the long-term cooperation between persons and committed with a view to jointly obtained financial or material profits. The “long-term cooperation between persons”

1 In this report, “the Netherlands” refers to the country of the Netherlands, except for the Caribbean part of the Kingdom of the Netherlands.

characteristic means that an offence is committed repeatedly, or that the intention to do so exists, while there must be a certain level of consistency in the composition of the organised group (Boerman et al., 2017).

This report in describing the phenomenon mainly uses the term “subjects” when it concerns persons performing criminal activities in the context of drug-related organised crime. The term “suspects” is used when information derives from criminal investigations conducted on the basis of a suspicion.

Organised crime in the Netherlands features a wide range of forms of cooperation (Van de Bunt & Kleemans, 2007; Kruisbergen et al., 2012; Kruisbergen et al., 2019). Such forms range from more or less traditional organised crime groups (OCGs) featuring a strict division of tasks, to fluid, flexible networks comprised of individual entrepreneurs who work on a freelance or ad hoc basis, without belonging to a centrally managed group (De Middeleer et al, 2018).
Criminal cooperation takes place from the local to the global levels. Its scope varies. Spapens (2012) distinguishes between networks operating on the micro, meso, and macro levels. The micro level concerns the activities and structure of OCGs. These are criminal networks involving criminal cooperation between a few or more persons. The meso level is composed of criminal networks clustered around various types of illegal activities or criminal markets, or within a geographical area. Finally, the macro level is comprised of a global network of criminal relations. The (transnational) criminal networks described in this report mainly concern networks operating on the micro and meso levels, as the study focused on drug-related organised crime within and via the Netherlands (i.e., on OCGs and networks active on the (transnational) drug market).

Dutch drug-related organised crime is mainly of a transnational nature. Crime is coordinated across borders and it involves networks and subjects active in multiple countries (Kruisbergen et al., 2012). The focus in this report therefore is on the transnational, cross-border nature of drug-related organised crime. The perspective or position of the Netherlands is leading in this connection. This concerns organised crime occurring within the Netherlands or the involvement of Dutch criminal networks and/or Dutch subjects and/or international networks active in the Netherlands in the context of the transnational trafficking of drugs. When considering (the emergence of) other drugs, too, the report provides attention to the international component.

Social relationships provide an important basis for criminal cooperation. Such relationships may be based on family connections. Yet persons may also know each other from the neighbourhood, village, or area they come from and/or they reside in (Kleemans et al., 1998). In the context of international criminal cooperation, the fact that certain Dutch drug criminals have a migration background can be relevant, especially when this means that communications can take place in the same language. “Migration background”, as the term is used in this report, implies a connection someone has with a country due to being born there or to (one of) their parents or grandparents being born there. Having been born in a country other than the Netherlands and/or possessing two nationalities (Dutch nationality and that of another country) both form indications for having a migration background.

International social relationships can provide access to important countries of origin or transit countries for drugs (Kleemans et al., 1998). In addition to relationships being important, the ability to speak the same language also plays a major role, as people who speak the same language do business more easily (Vermeulen et al., 2018).
However, Dutch drug network rarely to never consist of closed, homogeneous groups of persons with one specific (migration) background (Kleemans et al., 1998). Various grounds exist for entering into criminal partnerships: family and friendly relationships, similar backgrounds, the presence of a dominant person, group loyalty, certain (individual) expertise and/or sharing certain resources (cf. Morselli, 2009).

The study focused on the 2017-2020 period. Where information on the first half of 2021 was available, this has been included.

2.4 Research questions

In order to achieve the objective of the National Strategic Assessment, the following research questions have been formulated in consultation with the Portfolio Holder.

The main questions are:

1. What is, on the international and national levels, the size (production, trade, seizures, and consumption) of cannabis, cocaine, synthetic drugs, heroin and illegal synthetic opioids, and other drugs?
2. What is the nature of the organisation of and performance by drug-related organised crime?
3. What are the size and nature of the criminal networks and subjects involved?
4. How many drugs are sold via the dark web and shipped from the Netherlands?
5. To what extent and in what ways do the profits from drugs end up in the legitimate Dutch economy?

The subquestions formulated for all the main questions are listed in the annexe to this report.

2.5 Research methods

The report presents the results of a descriptive study into the size, nature, and possible related criminal networks and subjects in the field of drugs. It also describes trends and developments.
Data triangulation has been used for this study: that is, various quantitative and qualitative sources have been used and combined in order to paint as valid and reliable a picture as possible. The research questions were leading when collecting and analysing the data.

The crime scripting method was used to describe the nature of the Dutch drug market. So as to penetrate the complexity of drug trafficking and/or drug production, the underlying criminal process can be presented in a simplified form using crime scripting. This method involves subdividing a criminal process into multiple components or phases. For each component or phase, the related criminal activities required to commit a crime are charted and made visible. Crime scripting also helps identifying the necessary positions or roles within the criminal process. These roles make up the cast within a script. The positions or roles concerned require certain competences,

knowledge and/or skills that are essential for successfully performing criminal activities or for having them performed (Cornish, 1994; Duijn, 2016; Morselli & Roy, 2008).
The police has been using the crime scripting method for some time now and has developed crime scripts for the topics of herbal cannabis, synthetic drugs, and cocaine. These scripts have been used to get a better view of the nature of these topics. In addition, they have been used as input to enable the application of the crime scripting method to the topics of cannabis resin and heroin.
It became apparent during the analysis and the research this report is based on that similar criminal processes are deployed for all themes detailed in this report - cannabis, cocaine, synthetic drugs, and heroin - and, therefore, that the crime scripts for all themes are similar. This makes sense, as the criminal process of the trade in cocaine via the Netherlands does not substantially differ from the trade in cannabis resin via the Netherlands, for example. The order of the various components can differ per crime script, however. Moreover, for each drug topic, different activities or roles may be given central stage within these components.
Despite the fact that similar components, activities, and roles exist, we found that the current herbal cannabis, synthetic drugs, and cocaine crime scripts, as used by us, are composed of similar components, but use different terminology. We therefore decided to draw up uniform definitions of various components, that can be applied to the cannabis, cocaine, synthetic drugs, and heroin criminal processes. Depending on the order of their phases, the various components can be added in modular fashion to "construct" the crime scripts. The components or phases are displayed in Figure 2.1.

Figure 2.1 Generic components of drug crime scripts

The position of the Netherlands in the various crime scripts is always leading when selecting the components. All components selected relate to trade via the Netherlands, production in the Netherlands and/or involvement of Dutch criminal networks and/or subjects.

Only the general components or phases have been named. The order (the script) of the components may differ for each thematic crime script. For example, in the case of heroin, the sale of an essential raw material for its production takes place before the product is acquired. This raw material is sold to heroin-producing countries from Europe. In the context of cocaine, no sales phase exists prior to its acquisition.
It may also be that a component is not included in a crime script, or appears more than once. The synthetic drugs crime script, for example, includes the storage phase twice, representing, first, the storage of raw materials prior to production and, later in the script, the storage of the synthetic drugs themselves.
A component may be qualitatively different for each drug type. It may also have different subphases. In the case of the production of synthetic drugs in the Netherlands, for example, acquisition refers to the acquisition of raw materials (precursors and other chemicals) while, in the context of the trade of cannabis resin via the Netherlands, it refers to the acquisition of a final product (cannabis resin). Ripping is an important subphase in the context of importing cocaine, but seems less relevant when importing, for example, herbal cannabis. And, the cultivation of herbal cannabis requires different production essentials than the production of synthetic drugs does. It may also happen that certain subphases take place simultaneously or are difficult to distinguish from each other. This is the case, for example, when so-called "cocktail batches" of heroin and synthetic drugs produced in the Netherlands are sent abroad (sales), as, formally, this concerns transit and export, respectively.

It should be clear that these components and this crime scripting method constitute a highly simplified and abstract representation of the real situation. Criminal networks and subjects operating in or via the Netherlands may be active within various drug markets and phases and may perform multiple activities and/or fulfil multiple roles. Moreover, the various components, criminal activities, and required roles are not set in stone, but can vary and are often interchangeable. However, this approach does make a modular structure of the various thematic drug crime scripts possible and shows that they contain similar components, activities, and roles.
We do not pretend to have developed a new crime scripting method. Our approach merely serves to construct the various scripts for this report using similar components.

2.6 Sources

To gather information, we consulted public sources, police sources, and information from our partner enforcement and investigative authorities, all covering the period from 2017 through 2020. Where information on the first half of 2021 was already available, this has also been included.
Public sources include international and national reports, (academic) studies and articles, and websites.
The police sources consulted include Summ-IT, BVH, LURIS, and other police information. Summ-IT is the investigation system used by the investigation service and by intelligence. A data set of drug-related criminal investigations and the suspects registered in these cases was aggregated from this system. BVH is the national law enforcement database and is an application used by the police to perform primary policing. The database lists all incidents, including drug-related ones. We used the registrations relating to the discovery of drug production and storage sites and herbal cannabis nurseries, as well as the registrations concerning nitrous oxide incidents. As our focus is on organised crime and in order to prevent double counting, we did not

consider the suspects and criminal investigations registered in BVH. LURIS, the national uniform international mutual legal assistance registration database, is used to register all international mutual legal assistance requests received and submitted. We have consulted the system to aggregate a dataset of drug-related mutual legal assistance requests.
The public sources and police sources were supplemented by information provided by the Financial Intelligence Unit - the Netherlands (*FIU Nederland - FIU*), the Royal Marechaussee (*Koninklijke Marechaussee – KMar*), Customs (*Douane*), and the Fiscal Intelligence and Investigation Service (*Fiscale Inlichtingen- en Opsporingsdienst* - FIOD). We also conducted a series of semi-structured interviews with staff of, inter alia, various police units and the FIOD. Finally, we have requested various thematic experts employed within the said organisations to provide feedback on the draft chapters.
An overview of all sources consulted has been provided at the end of this report.

By employing the data triangulation method, we aimed to draw up as valid and reliable a report as possible. Data were obtained from various police systems using queries. The data were found to contain many imperfections, however.
We found that, in many cases, no complete or correct criminal activity (CA) code for the various drug types was given in Summ-IT. In consequence, we have manually cleaned the Summ-IT data set covering the years of 2019 and 2020 so as to be able to use it for the thematic chapters. We can only make general statements with respect to 2017 and 2018.
The registration of seizures in BVH was such that we could only make use of these data to a very limited extent, as quantities were not registered in a uniform manner. Various measures are used, including grams, liters, pieces, bags, etc. Moreover, in many cases, the quantities seized were unknown, as was the type of drugs concerned. The seizure figures maintained by the National Information Hub *(Informatie Knooppunt Nationaal – IKN)* of the Central Intelligence Division as retrieved from the various police units, did not provide a complete picture, either. The same holds for the data derived from the Seizure Portal, the system used by the central repository for seized goods and the Public Prosecution Service (*Openbaar Ministerie – OM*) to register and follow the status of seized goods, as the various quantities are not separately registered. For this reason, we primarily had to rely on the data provided by Customs and the Royal Marechaussee for the seizure figures.
Finally, an important reservation must be made with respect to the data set of drug-related mutual legal assistance requests aggregated from LURIS. The *general narcotics* category was found to be the largest: close to 80 percent of all drug-related investigations was given this label. In consequence, the mutual legal assistance requests that were labelled as relating to cannabis, cocaine, synthetic drugs, or heroin only provide an indication of the total mutual legal assistance provided with respect to those themes.

3

Overall findings

3. Overall findings

3.1 Introduction

Drug-related crime is neither new nor unknown. For many years now, the Netherlands has been an important transit hub in the global drug trade, especially for the import of various types of drugs and their transit to (mainly) European markets. In addition, drugs have been produced in the Netherlands for decades, both for the Dutch and for foreign markets.

The aim of this report is to provide an overview of the drugs situation in the Netherlands: the state of affairs with regard to the scope and nature of drug-related organised crime and the criminal networks and subjects involved.

The drug situation of the Netherlands is worrying. This is not only because of the sheer size of the problem, which becomes painfully clear the moment the figures, though mostly incomplete, are put together. It is also because we have found that Dutch criminal networks and subjects are truly at home in all (drug) markets, that the mutual interdependence and interconnectedness of these networks and subjects is very high, and that many actors in drug-related crime are active in or via the Netherlands. Finally, this research shows that drug- related organized crime in the Netherlands can exist not only because there is a demand for drugs, but also because there are citizens willing to facilitate this form of crime and profit from it financially. The phenomenon is therefore not only a vast and complex criminal one, but also a social and economic one (cf. Noordanus, 2020).

The substantiation of our findings can be found in the various thematic chapters: cannabis (cannabis resin and herbal cannabis), cocaine, synthetic drugs, heroin and illegal synthetic opioids, other drugs (nitrous oxide and khat), drug trafficking via the dark web, and a financial and economic perspective on the Dutch drug trade. We mainly considered the 2017-2020 period. Where information on the first half of 2021 was already available, this has been included. For the sources and methods used (including crime scripting), please refer to Chapter 2 and References.

The most important aspects and developments common to the various topics covered in this report are discussed in this chapter.

3.2 Size

To get an indication of the size of the drug market, we looked in each chapter at the consumer markets, the number of seizures, and the numbers of investigations, suspects, and mutual legal assistance requests. This section explains the overarching figures and additional general findings on the size of the market.

3.2.1 Consumer markets

The supply of drugs is partly driven by the demand. Supply and demand are closely interrelated, which is why we have also considered the consumer markets. It is difficult to compare these on the global, European, and national levels. This is because the different (international) bodies that monitor consumption use different age categories and drug classifications. However, it is important to also look at the use outside the

Netherlands, as most of the outlets for the drugs produced in or transiting through the Netherlands are abroad.

According to the UNODC, around the globe, approximately 275 million people aged 15 to 64 used drugs at least once in 2019. This boils down to 1 in 18 people. Since 2010, this group has grown by about 22 per cent.
Cannabis is by far the most widely used drug, both on the global, the European, and the national levels. By 2019, 4 percent of the world's population aged 15-64 - or some 200 million people - had used cannabis. In the European Union, after cannabis, cocaine is the most commonly used drug, followed by MDMA. In the Netherlands, MDMA is the most commonly used drug after cannabis.
The use of heroin and other opiates in the European Union, including the Netherlands, is less prevalent than the use of the aforementioned drugs. The group of heroin users is ageing and diminishing, but there is still a demand for heroin in several countries in the European Union and in the United Kingdom.

The COVID-19 pandemic, especially the lockdown period, has affected the use of certain types of drugs, such as drugs commonly used in nightlife, like cocaine and MDMA. The pandemic has probably had less impact on the use of cannabis and heroin, which has remained stable.

3.2.2 Seizures

The police figures regarding seizures are not complete. This is due to registration differences in the systems. You cannot simply add a brick of cannabis resin to 250 grams of that drug. For this reason, we have used various sources to present the seizure figures and to supplement the police data in the thematic chapters. This also means that the figures should be regarded as an absolute lower limit of the totals seized in the Netherlands.

With respect to herbal cannabis, we find that the number of cannabis nurseries closed down has decreased over the period from 2017 to 2020. This downward trend is also found to continue in the figures for the first six months of 2021. However, we also notice a slight increase in the average capacity per nursery. This may be due to the use of new techniques, such as the use of CO_2 during cultivation, which makes a plant yield more product. Whether this is a trend is something that will become apparent in the years to come. As the energy theft figures have remained stable over the past few years, the actual number of cannabis nurseries has presumably not decreased.

The cannabis resin seizure figures of the police are supplemented by those of Customs (*Douane*) and the Royal Marechaussee (*Koninklijke Marechaussee – KMar*). The figures fluctuate, and we find that higher annual figures are often caused by one big seizure, which makes the totals for that year skyrocket. A particular eyecatcher is the seizure of a consignment of approximately 3,600 kilos of cannabis resin coming from Lebanon in the port of Rotterdam. In total, some 10,000 kilograms of cannabis resin has been seized by police, Customs and Royal Marechaussee in recent years.

The amount of cocaine annually seized in the Netherlands by Customs has increased from around 10,000 kilos in 2017 to almost 50,000 kilos in 2020. 2019 even shows a doubling of the 2018 figure. In total, Customs has seized around 120,000 kilos of

cocaine between 2017 and 2020. The seizures mainly took place in the port of Rotterdam, but a few major consignments have also been seized in the ports of Flushing and Moerdijk.
Moreover, a lot of cocaine is seized in the port of Antwerp, in Belgium. In fact, in recent years, the amount of cocaine annually seized in Belgium is greater than the amount seized in the Netherlands. It is strongly suspected that some 70 to 80 percent of the cocaine seized in Antwerp was destined for the Netherlands. In Antwerp, too, the amount seized has grown each year between 2017 and 2020.

With regard to synthetic drugs, we find that the number of production sites found has increased from 82 in 2017 to 108 in 2020.
Amphetamine production processes were found in most locations, with MDMA production taking second place. Of particular note is the increase in the number of methamphetamine laboratories. The user base for these drugs is very small in the Netherlands. In recent years, 2C-B, mephedrone, clephedrone, and ketamine production sites have also been discovered. Although no fentanyl production was discovered, the presence of the necessary precursors and chemicals indicates that such production may be taking place in the Netherlands.
Apart from a small dip in 2019, the amount of seized (pre)precursors increased in the years 2017 to 2020. Even when just considering MDMA, the amount of seized (pre) precursors required for its production was already enough to produce 101,671,000 MDMA pills. We also find that the amount of seized finished product has increased significantly in the years 2019 and 2020. In line with the increase in production sites, there is also an increase in waste, with more than one million liters/kilos of waste being produced in the period from 2017 to 2020. This is a conservative estimate that does not include waste that has not been examined. With respect to the production of synthetic drugs in the Netherlands, both the amounts of waste found and the number of production locations discovered have quintupled in the span of a decade (2010-2020).

The European heroin market has remained stable in the period from 2017 to 2020. The seizure figures in the European Union show no clear upward or downward trend between 2017 and 2019. As the Dutch figures are not complete, no conclusions can be drawn from them. It can be said, however, that this is a somewhat smaller drug market - by Dutch standards - with some hundreds to a few thousands of kilos being trafficked via the Netherlands and/or by Dutch subjects each year.
Seizures of acetic anhydride decreased in 2019 and 2020 after peaking in 2018. However, they have increased again in the first half of 2021, compared to 2020. Acetic anhydride is a chemical used in the production of heroin that is exported to producer countries via the Netherlands and other EU countries.

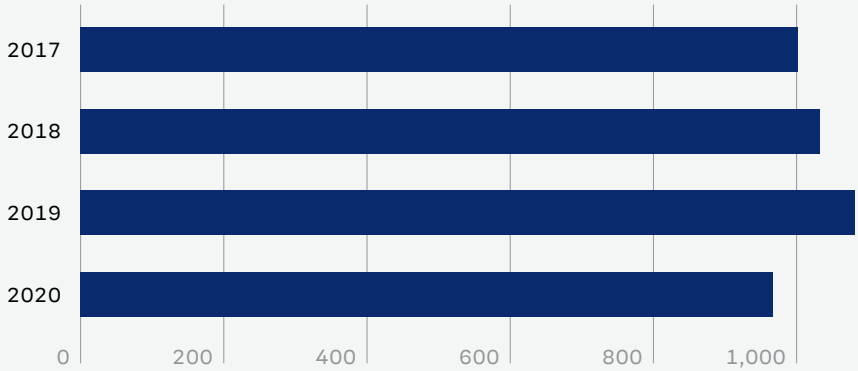
Even though the figures for the different drug types cannot be compared, we can draw some general conclusions. For example, we find that seizures of both cocaine and synthetic drugs have increased in the last four years. With respect to herbal cannabis, we find that the number of nurseries closed down has decreased, but that the capacity per nursery has increased slightly. With regard to heroin, too, we find that the number of seizures in the Netherlands has been decreasing, while in the European Union as a whole, the seizure figures have remained fairly stable. This may be due to the fact that cocaine and synthetic drugs receive more police attention in the Netherlands, resulting

in less capacity being deployed to tackle themes like cannabis and heroin. The same applies to the number of investigations and the related suspects.

3.2.3 Investigations

Between 2017 and 2020, a total of 4,089 drug-related police investigations were registered in Summ-IT. Refer to Figure 3.1. As can be seen, the number of drug-related investigations has remained fairly stable over the years. We do see a slight decrease in 2020, but whether this is the start of a trend remains to be seen in the coming years.

Figure 3.1. Number of drug-related investigations 2017-2020

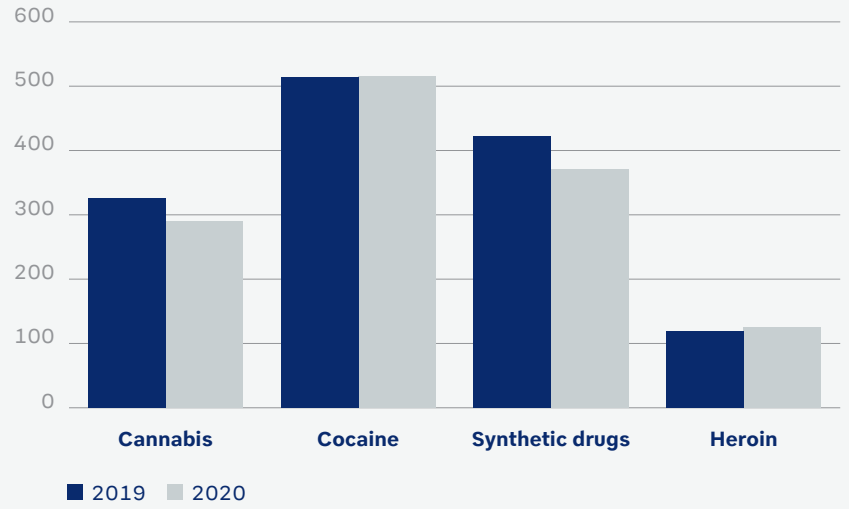


Source: Summ-IT.

The data covering the years 2019 and 2020 have been further refined, allowing for a breakdown by drug type as well. Refer to Figure 3.2. Most of the investigations are cocaine-related. Investigations into synthetic drugs are the second most common, followed by those into cannabis and heroin. The vast majority of investigations into synthetic drugs are related to MDMA, amphetamine and precursors. As precursors are needed for the production of drugs, it is not surprising that many investigations focus on precursors as well.
Within the cannabis category, by far the most investigations are related to herbal cannabis and, to a lesser extent, cannabis resin.

The numbers cannot be added up. It may happen that an investigation is labelled as relating to both cocaine and heroin, causing the investigation to appear in the figures for both cocaine and heroin.

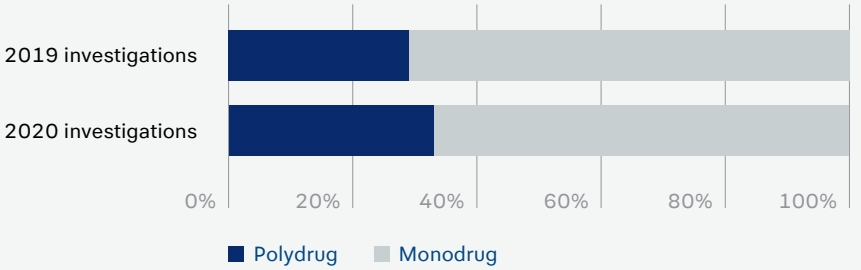
Figure 3.2. Number of criminal investigations 2019 - 2020 by drug type



Source: Summ-IT.

Figure 3.3 divides investigations into those concerning one type of drug (monodrug) and those concerning several types of drugs (polydrug). Of all drug-related investigations in 2019 and 2020, more than half are monodrug investigations. About 30 per cent of the cases involve investigations where several types of drugs have been found or searched for (polydrug).

Figure 3.3. Distribution of polydrug and monodrug investigations



Source: Summ-IT.

The number of monodrug investigations as listed in this general chapter is comprised of the sum of the monodrug investigations listed in the individual chapters. But the

percentage of polydrug investigations is lower than the combined total of the investigations listed in the individual thematic chapters. This is because the polydrug investigations listed in the various chapters cannot be added together, as that would result in a considerable number of investigations being counted twice. An investigation into cocaine and synthetic drugs, for example, is included in both the cocaine and synthetic drugs chapters, but only counts once in this general chapter.
This is at odds with other police information, which shows that trade, in particular, is mostly of a polydrug nature.
A possible explanation is that investigations often start following the seizure of a consignment of drugs or the dismantling of a cannabis nursery or synthetic drug production site. However, this does not mean that the suspects in that investigation are only involved in the trafficked in one type of drug.

3.2.4 Suspects

Between 2017 and 2020, a total of 13,827 suspects were registered in the context of drug-related investigations by the police in Summ-IT. Using these data, we looked at the top 4 nationalities of the suspects of drug-related crimes. By far the majority of suspects – 84 percent - turn out to have Dutch nationality. 13 percent of them also hold Moroccan nationality, while 11 percent also hold Turkish nationality. The remainder of the top 4 is comprised of Albanian or Kosovar nationals (1.7% of the suspects), Polish nationals (1.7%), and Syrian nationals (1.4%).[2]

Social relationships, such as family ties, can provide access to drug-producing countries or transit countries. Language also plays an important role. People who speak the same language do business more easily.
For example, within the cannabis resin investigations we have identified a larger percentage of suspects that hold Moroccan nationality, be it in addition to Dutch nationality or not. A plausible explanation for this finding is that Morocco is one of the largest producers of cannabis resin and that this cannabis resin is trafficked via, inter alia, the Netherlands.
Suspects holding both Turkish and Dutch nationality or just Turkish nationality are slightly more often represented in the context of heroin-related investigations. A possible reason for this is Türkiye's position as a transit country for heroin that originates from the heroin-producing countries and is destined for Europe.

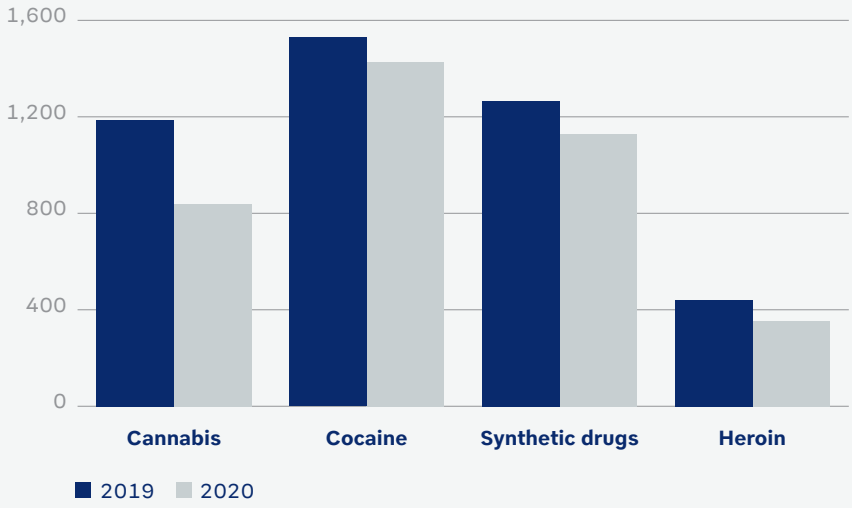
Albanian-speaking criminal networks are said to be involved in drug trafficking in the European Union and the United Kingdom. Drug-related investigations in the Netherlands have identified only a relatively small group of suspects with Albanian or Kosovar nationality. Only with respect to herbal cannabis did a major investigation involving several suspects of Albanian nationality take place. This does not have to mean that Albanian-speaking criminal groups are not active in the Netherlands. They appear to be involved as purchasers of drugs traded via the Netherlands. Polish, British, Scandinavian and other criminal networks and subjects, too, purchase drugs trafficked via the Netherlands.

2 Kosovar and/or Albanian suspects can jointly be considered as Albanian-speaking suspects. 95% of Kosovo's population is of Albanian origin.

Dutch synthetic drug networks cooperate with Latin American networks for the production of methamphetamine, as these latter networks possess knowledge of some of the processes within the overall production process. For example, a relatively large number of Mexicans, Colombians, and Dominicans have been arrested at methamphetamine production sites. But out of the total number of drug-related suspects registered in Summ-IT, their share is small: 0.2 percent of suspects hold Mexican nationality, 0.8 percent hold Colombian nationality, and 0.4 percent hold Dominican nationality.

For the years 2019 and 2020, we manually cleaned the Summ-IT dataset of drug-related investigations and made a breakdown of suspects by drug type. This is shown in Figure 3.4.

Figure 3.4. Number of suspects of drug-related crimes by drug type 2019-2020



Source: Summ-IT.

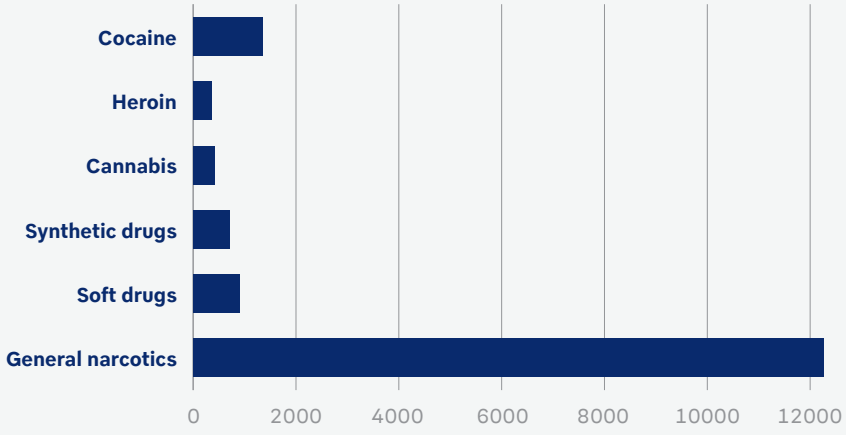
As in the case of the investigations broken down by type of drug, suspects may appear in the overviews for more than one type of drug. This occurs when someone is a suspect in a polydrug investigation and is therefore linked to, for example, both cannabis and cocaine. In that case, this suspect appears in both categories. This means the numbers cannot be simply added up.
The distribution of suspects per drug type corresponds to the distribution of criminal investigations per drug type.

3.2.5 International mutual legal assistance

To conduct this research, we made use of data covering the period 2017-2020 as contained in LURIS, a system registering all mutual legal assistance requests (reference date: July 2021). Each mutual legal assistance request is provided with a registration number upon receipt. Sometimes, multiple notifications are submitted as part of a single mutual legal assistance request. They are, in such a case, all registered under the same registration number. In conducting this analysis, we only considered unique registration numbers. Mutual legal assistance requests containing multiple notifications were counted only once.

Between 2017 and 2020, a total of 103,482 mutual legal assistance requests were registered. 15,447 - approximately 15 percent - of them were drug-related. This seemingly low percentage is due to the large variety in the types of mutual legal assistance requests: a large share of them concern traffic violations, for example. It must also be noted that a registration number relating to, for example, a traffic fine only contains one or two notifications, while a registration number relating to drugs often contains multiple notifications.

Figure 3.5. Number of mutual legal assistance requests per type of drug 2017 - 2020



Source: LURIS.

As becomes evident from Figure 3.5, the *general narcotics*[3] category is the largest: 12,260 requests have received this label. This could be due to the mutual legal assistance request not making clear what type of drugs it relates to. In addition, a number of requests have been given a drug-related label in addition to the "general narcotics" one, in which case the mutual legal assistance request is also counted in the total of that other type of drugs. Because the "general narcotics" category is so large, it is impossible to obtain proper insight into the number of mutual legal assistance requests per type of drug per country.

Compared to 2017, the number of drug-related mutual legal assistance requests has gone down slightly. This is in line with the general trend visible in the number of mutual legal assistance requests received over the past few years.

Table 3.6. Number of drug-related mutual legal assistance requests per year

2017	2018	2019	2020	**Total**
4,045	4,138	3,897	3,358	**15,447**

Source: LURIS.

The top 10 of countries most mutual legal assistance requests concerning drugs have been exchanged with in the 2017-2020 period is presented in Table 3.7. By far the lion's share of mutual legal assistance requests is exchanged with Belgium (5,023) and Germany (4,685), with some 63 percent of the total number of drug-related mutual legal assistance requests being exchanged with these countries. This is in line with the overall trend in mutual legal assistance requests: by far the majority of them - 62 percent - is exchanged with Belgium and Germany. France and the United Kingdom take up the number 3 and 4 spots, respectively. Most legal assistance is exchanged with our neighbouring countries. The top 10 is completely made of European countries and Türkiye. In addition, we note that 73 percent of mutual legal assistance requests concerns incoming requests and 27 percent concerns outgoing ones.

3 The requests included in this category have been given the following labels: general narcotics and/or European Investigation Orders (EIO) illegal trade in narcotics and psychotropic substances.

Table 3.7. Number of drug-related mutual legal assistance requests per country

	2017	2018	2019	2020	**Total**
Belgium	1,406	1,449	1,210	958	**5,023**
Federal Republic of Germany	1,110	1,239	1,216	1,120	**4,685**
France	277	272	262	221	**1,032**
United Kingdom	117	135	145	150	**547**
Spain	131	139	138	115	**523**
Poland	110	96	111	77	**394**
Sweden	61	49	64	53	**227**
Italy	61	54	51	52	**218**
Türkiye	65	49	63	37	**214**
Norway	47	34	37	25	**143**

Source: LURIS.

Belgium, Germany, and France take up the top 3 spots for all drug types, though the order does differ per drug type. Spain takes up the number 4 spot for both cannabis and cocaine. This is due to Spain being an important transit country to the Netherlands for both herbal cannabis and cannabis resin (sometimes also combined) and for cocaine. We also note that Türkiye is the number 4 with respect to heroin, which is due to Türkiye forming a transit country for heroin deriving from heroin-producing countries. With respect to synthetic drugs, Poland takes up the number 4 spot. Poland is an important country for the import of chemicals used to produce synthetic drugs and for the transit of chemical substances.

3.3 Nature

The nature of the production of drugs in the Netherlands, and of drug trafficking in and via, the Netherlands cannot be easily expressed in a few words. In order to grasp its complexity, in this study we made use of crime scripting. This method involves subdividing a criminal process into multiple components or phases. Certain similarities exist between all themes detailed in this report. The Dutch drug market is transnational. Opportunism reigns supreme and (sound) business is business. The level of professionalism is high and the entire process is geared towards making money. If necessary, violence is employed to realise criminal objectives.

3.3.1 Crime scripts

It became apparent during the analysis and the research this report is based on that similar criminal processes are deployed for all themes detailed in this report (cannabis, cocaine, synthetic drugs, and heroin). These processes have been mapped by way of crime scripting, allowing to identify similar components or phases those criminal processes or crime scripts are made up of. This makes sense, as the criminal process of the trade in cocaine via the Netherlands does not substantially differ from the trade in cannabis resin, for example. The order of the various components can differ per crime script, however. Moreover, for each drug type, different activities or roles may be

given central stage within these components or phases. Nevertheless, as noted above, similar components or phases, activities, and roles can be identified in, for example, both the trade in heroin and that in cocaine, or in both the cultivation of cannabis and the production of synthetic drugs. We differentiate the following components. The position of the Netherlands is leading. Refer to Figure 3.8.

Figure 3.8 Generic components of drug crime scripts

It should be clear that these components and this crime scripting method constitute a highly simplified and abstract representation of the real situation. Criminal networks and subjects operating in or via the Netherlands may be active within various drug markets and phases and may perform multiple activities and/or fulfil multiple roles. Moreover, the various components, criminal activities, and required roles are not set in stone, but can vary and are often interchangeable. However, our approach does make a modular structure of the various thematic crime scripts possible and shows that the various scripts contain similar components, activities, and roles.

3.3.2 Transnational Dutch drug market

Dutch drug-related organised crime is mainly of a transnational, i.e., cross-border nature. It is coordinated internationally and is made up of networks and subjects active in multiple countries. The Netherlands form an important transit hub in international drug trafficking. Drugs are imported and transited. Drugs are produced on a major scale, mostly for export. The raw materials required for this production are generally imported from abroad.

Drugs imported into the Netherlands to be traded further are produced in various countries and regions. Cocaine originates from Colombia, Peru and Bolivia, cannabis resin from Morocco, Lebanon, Afghanistan, and Pakistan. Heroin, too, is imported from Afghanistan and Pakistan, but also from Iran and northern Türkiye. Herbal cannabis originates from Spain, Albania, and even from Canada. Synthetic drugs, too, are

imported from abroad (as a final product). Ketamine is imported from China, India, and Pakistan, for example, while methamphetamine derives from Mexico.
China is the primary country of origin of (pre)precursors used to produce synthetic drugs in the Netherlands. The chemicals that are also required for production (including for, among other substances, cocaine) mainly derive from China and Poland. Dutch networks and subjects export acetic anhydride - a chemical used to produce heroin - from the European Union to, inter alia, Iran and Afghanistan. Finally, we must note that Dutch criminal networks and subjects produce - or are closely involved with the production of - drugs abroad, which are subsequently traded in or via the Netherlands. Dutch subjects operate cannabis nurseries in Spain and Belgium and are involved with establishing and maintaining such nurseries. It has also become apparent that Dutch subjects may be involved in heroin being produced in countries of origin.
While some of the drugs imported into or produced in the Netherlands are destined for the Dutch consumer market, the lion's share is exported or transited abroad. The primary markets for cocaine, cannabis, synthetic drugs, and heroin trafficked via the Netherlands are the European Union and the United Kingdom. Cocaine is also exported to, inter alia, Russia, the Middle East, and Australia. Australia also forms an important market for synthetic drugs produced in the Netherlands, as do Morocco, Türkiye, and Indonesia. Strikingly, cannabis resin, heroin, and illegal synthetic opioids are also forwarded to Canada.

3.3.3 Business is business

The Dutch criminal networks and subjects live by the creed that "(sound) business is business". Opportunism reigns supreme. They trade in various types of drugs (polydrugs) and should perhaps another lucrative product be on offer - such as illegal cigarettes, illegal medicine, firearms, and cutting agents - they will sometimes trade in it on the side. Knowledge and expertise, such as how to establish a new cocaine smuggling route, is also provided against payment. The trade may also take the form of barter. Heroin could be bartered against cocaine, cannabis resin, and various types of synthetic drugs, for example. Batches of drugs are sometimes paid by way of, or exchanged for, expensive watches.

Polydrug trafficking takes place at multiple levels, from wholesale to street-level dealing. We assume that one Dutch (poly)drug market exists, composed of multiple closely interconnected drug markets.
Dutch wholesalers import various types of drugs from the same country or region. The same traffickers may, for example, be involved in the import of both methamphetamine and of cannabis resin and heroin from Southwest Asia. They may also all make use of the same transport route to, for instance, import cocaine or methamphetamine from South America. In optima forma, the transnational wholesale controlled by the same network or subject comprises the import of drugs from various countries of origin and multiple regions, such as the import of ketamine from India and of cocaine from South America. Import hardly ever takes the shape of cocktail batches, that is multiple types of drugs shipped in one batch.
Polydrug trafficking at the distributive trade level, including the transit and export of drugs from the Netherlands, seems to be the rule, rather than the exception. All sorts of combinations of cannabis (herbal and resin), cocaine, heroin, various synthetic drugs, and precursors are trafficked, both as combined shipments (cocktail batches) and by way of multiple shipments. When trading with markets abroad, the various

criminal networks use each other's infrastructure. For a fee, they hitchhike on a safe smuggling route. The same criminal network may export various types of drugs to buyers in various countries.
Dutch drug vendors offer various types of drugs online. The Dutch trade in drugs on the dark web focuses mainly on cocaine and other stimulants, such as MDMA and amphetamine.
Retail and street-level dealing in the Netherlands also usually takes the form of polydrug sale. The trade in user's quantities of cocaine is usually conducted side by side with the trafficking of XTC, speed, and other synthetic drugs. The small group of Dutch heroin users are usually provided with heroin in combination with cocaine - "coffee with milk" - by their dealers. Cannabis products are sold via coffee shops. However, cannabis is also sold to street dealers who, in turn, offer it to the consumer, either by itself or in combination with other drugs.
Opportunism is also visible in the context of the production of synthetic drugs in the Netherands, and its trade via the Netherlands. Locations where new psychoactive substances (NPS) are produced are being discovered in the Netherlands every year.[4] Dutch criminal networks and subjects also conduct trade in NPS. This consists of NPS produced in the Netherlands (sometimes on a small scale) or of NPS originating from abroad, such as ketamine and synthetic cannabinoids. The traffickers act on the basis of demand and respond to existing and arising consumer markets abroad. However, the production of and trade in NPS also results in consumers being offered new drugs. The trafficking of illegal synthetic opioids, including fentanyl, could therefore develop in a way similar to that in methamphetamine. The production of methamphetamine has soared in the Netherlands in the past few years. Methamphetamine markets are mainly to be found abroad, in particular the United States and Australia. Even though no fentanyl production location has so far been discovered in the Netherlands, indications do exist that this substance is produced in the Netherlands, as the required chemicals have been discovered. In view of the global demand for fentanyl and the major profits associated with its trade, it is no stretch of the imagination that Dutch criminal networks (will) try to produce this drug and that the trafficking of illegal synthetic opioids will increase.
Combined synthetic drug laboratories - also referred to as "combilabs" - have been discovered at a number of locations in recent years. The combination of MDMA and amphetamine was found most often. Because of similarities in the required hardware and raw materials, criminal networks can easily switch from MDMA to amphetamine and vice versa if demand calls for this. In addition, production locations have been discovered where synthetic drugs, cocaine, heroin, cannabis and/or the raw materials and hardware for these substances were found. In other words, these are locations where multiple drugs have been produced, processed and/or cultivated. In one case, the same criminal network was found to run both a cannabis nursery and a heroin lab. For the other production locations discovered, it is unknown whether the same persons were producing drugs and whether the buyers or clients were the same.

4 NPS are substances that have not (yet) been regulated under the United Nations Single Convention on Narcotic Drugs of 1961, the United Nations Convention on Psychotropic Substances of 1971, and/or the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, but which may constitute a threat to public health. NPS can already have been made punishable under the Dutch Opium Act. "Regulated" means that certain substances may only be used and/or traded in under strict conditions.

The proposed prohibition of nitrous oxide under the Dutch Opium Act, which would inter alia render the import, export, and possession of, and trafficking of, nitrous oxide punishable, could result in an increase in the illegal trade in nitrous oxide.[5] This is due to the opportunist nature of the Dutch drug market.

3.3.4 Professionalism

Though there will undoubtedly be a few fortune hunters who are active on the Dutch drug markets, the data we studied shows that the Dutch criminal networks and subjects include many "professionals" who operate in the echelon of drug-related organised crime. They act with a high level of professionalism, are usually well informed of all the rules, identify opportunities, and possess the proper contacts. Subjects are apparently equally at ease importing cocaine from South America as heroin from Iran. They are able to export and transit multiple types of drugs to various countries and switch between various smuggling routes and smuggling methods. During the COVID-19 pandemic, for instance, the smuggling of drugs was not fully suspended, as closed borders were circumvented by using different routes. It seems likely that the good connections of the Dutch airlines via the African continent, which stayed intact during the lockdown, caused an increase in the number of khat shipments transited via Amsterdam Airport Schiphol and an associated increase in the amounts of khat seized. Experienced Dutch drug traders provide advice and counselling on, for example, establishing new smuggling routes. This is often done against payment. Whenever they do not possess specific knowledge, expertise and/or access, they engage specialists.

Should a chemical used as a precursor for the production of synthetic drugs be internationally regulated, they switch to other, not yet regulated, chemicals. Ever since APAA became a regulated chemical, MAPA has been found more often, for example. And now that MAPA has also been added to the list of regulated chemicals in 2020, we expect this substance to be replaced, as well. The first indications for this switch have already been identified.

This level of professionalism also becomes apparent from the quality provided by Dutch drug traffickers and drug producers and the methods they use to cover up their criminal activities.

Quality

Quality forms an important and distinctive characteristic that makes foreign traders choose to procure drugs from Dutch criminal networks and subjects.

Dutch herbal cannabis is famous for its very high quality and high THC levels, which explains the demand for Dutch herbal cannabis abroad. Herbal cannabis from the Netherlands also fetches higher prices than herbal cannabis cultivated elsewhere in Europe. Dutch networks operating cannabis nurseries in Spain make use of the "Dutch" cultivation methods, allowing them to provide the cannabis with a Dutch quality guarantee. In Belgium, it is assumed that the larger the nursery and the higher the level of professionalism, the more likely it is that a link with the Netherlands exists.

While Dutch herbal cannabis is worth more due to its quality, cocaine produced in the Netherlands fetches lower prices: cocaine from Peru, Colombia, or Bolivia is preferred.

5 Three exceptions apply: the use of nitrous oxide is not punishable when serving a medical, technical, or gastronomical purpose.

Peruvian cocaine, in particular, is in high demand due to its high quality. The scarcity of Peruvian bricks mean they can go for a high price. Colombian bricks are preferred over Bolivian ones. The quality - and thus the price - of a brick depends on a number of factors: its origin, as noted above; the hardness; the colour; the smell, the sheen; and the stamp. The stamp indicates the producer or owner of the cocaine and its place of origin. Similarly to how herbal cannabis cultivated in the Netherlands is associated with quality, the stamps form a guarantee of quality and buyers of cocaine offered by Dutch traders therefore specifically ask for cocaine featuring certain stamps indicating a high quality.
Quality also forms an important aspect of the trafficking of heroin. Experienced traders focus not so much on the colour of the heroin, but on its quality or potency. However, some buyers attach more value to the appearance of the heroin than to its quality and prefer, for example, darker heroin. Even though business is, in principle, business, deals may fall short if a supplier believes a potential buyer is insufficiently knowledgeable about heroin. Buyers are willing to pay higher prices for better quality.
The importance attached to quality also means fiddling takes place. Some traders specifically procure CBD cannabis from abroad. This is herbal cannabis containing a high cannabidiol content and a low content of THC, the compound that produces the feeling of being high. Upon its arrival in the Netherlands, they spray THC onto the herbal cannabis and sell it on for a higher price. At times, bricks of cocaine are deliberately marked with certain highly regarded stamps in order to increase the price - also fostering a trade in (forged) stamps. In order to be able to sell a batch of lesser-quality heroin, it may be mixed with heroin of a higher quality.
This focus on quality is also apparent from the level of professionalism associated with the production of drugs. Should it become clear that the cannabis plants are not growing properly, immediate action is taken to boost them, all in order to obtain a high-quality final product. In the context of synthetic drug production, suppliers must supply high-quality chemicals and reaction vessels if they want to be in business. Laboratory technicians set conditions for the laboratories they work in - not only in order to be able to provide high-quality synthetic drugs, but also to guarantee their own safety.
Finally, the view that Dutch goods are quality goods seems to be a reason for selling batches of drugs intended for European markets via the Netherlands, even when these drugs were originally produced in or smuggled through the countries concerned.

Cover-up

The level of professionalism is also expressed by the ways drug networks and subjects use to cover their activities and to improve and develop their cover-up methods.
Cultivators of herbal cannabis make use of innovative methods in order not to draw any attention. Automated equipment allows them to monitor the cultivation of herbal cannabis remotely, reducing visits to the nursery. They also make use of climate control systems, rendering the exhaust of hot air invisible from the outside. International regulation and national criminalisation of certain raw materials have, in the past few years, led to criminals in the synthetic drug market shifting their attention to developing new pre-precursors suitable for the production of BMK.
In the transnational drug trade, criminals often make use of “company to company constructions”: by shipping a batch of drugs or precursors from or via a foreign company to a company in the Netherlands, or from a Dutch company to a foreign company, a legal administrative flow of orders and transport documents is simulated.

When importing cocaine, deliberate use is made of reliable and well-established companies, in order to raise as little Customs suspicion as possible.
Moreover, special front companies are set up for the trafficking in drugs and all sorts of cover loads are used. However, the loads the drugs are concealed in must be marketable in order not to raise a suspicion of illicit trade. It may be concluded from this fact that companies and logistical service providers are often well aware that they are smuggling drugs.
Companies also exist that cooperate with the transport of shipments where the cocaine has been impregnated in the cover load, meaning this load itself can no longer be sold.
In order to thwart communication and the odds of detection, criminal networks and subjects use jammers. They also use encrypted smartphones in order to conceal communications. Despite the fact that multiple crypto communication providers have been shut down, subjects continue to make use of such phones. This may be related to the transnational nature of drug trafficking via the Netherlands. Nevertheless, face-to-face meetings are still often the preferred mode of communication.

3.3.5 Violence

Drug-related organised crime is associated with violence. Violence is most often used to realise certain specific goals or as a last resort.
Rip off (stealing) is a business model in the cannabis trade and often involves violence. Locations are observed to discover nurseries or drying houses so they can be robbed later on. At times, the persons charged with the supervision of such locations are held responsible for the theft and punished with abuse and threats. Rip off also takes place when cannabis is transported, with drivers being threatened or forced to hand over the load. Research by the Zeeland-West-Brabant Regional Unit has shown that the cultivation of herbal cannabis is associated with a relatively high number of casualties and fatalities. The rip off of cannabis nurseries in particular is associated with a high fatality level.
The violence used in the cocaine trade seems to have become more extreme in the past few years. Notable examples include hand grenades placed at the front door of persons involved in the cocaine business and the discovery of a torture container that was to be used by an organised crime group. Excesses have also taken place outside of the criminal environment. At present, multiple criminal investigations are being conducted into the murders of, inter alia, the brother of a key witness, a lawyer, and a journalist acting as a confidant of said key witness. However, some of the cocaine networks and subjects are also aware of the fact that violence, and in particular excessive violence, has resulted in the demise of their predecessors. For the use of excessive violence leads to attention from the media and the authorities, who try to counter this. Criminals active in cocaine trafficking therefore seem to rely more on corruption among both officials and other parties rather than on violence to effect the smuggling of drugs.
Even though violence also exists in the synthetic drug market, as is the case in the context of cocaine, criminals benefit from less attention and conflict as possible. Most networks cooperate closely and often for a long time. Before turning to violence, they will first try to come to a more peaceful solution. In fact, violence is almost always a consequence of the provision of information to the police or other criminals, of cheating the partnership, of failing to pay debts, or failing to fulfil agreements. Various persons associated with the synthetic drug trade have been killed or reported missing in the past few years.

Even though networks active in synthetic drug trafficking try to draw as little attention as possible on themselves, they do sometimes try to intimidate or threaten directors, police or judicial staff, private companies, and journalists in order to frustrate or end investigations into their business.
In the heroin business, too, subjects are held responsible when things go awry. Here, too, this may lead to violence, such as abuse and kidnapping. In comparison to the other drug markets, excessive violence is relatively less often used. Killings that may have taken place in the heroin business over the past few years concerned murders with a possible connection to both cocaine and heroin. In other words, no killings took place that only related to the trade in heroin. Many heroin traffickers are said to act more like entrepreneurs, albeit entrepreneurs active in illegal trade.

3.3.6 Financial aspects

Like other forms of (illicit) trade, the trade in drugs is a market-oriented business model: it takes advantage of the demand for drugs and profits are based on the difference between the purchase and sales price. The earnings are used to finance the trade, for reinvestment in the purchase of new batches of drugs, and as a source of income. Profits are partly laundered in the legal economy.
In cocaine trafficking, the most important and profitable step is the import and those who manage to smuggle cocaine may earn big money. This is closely connected to the fact that a major distance must be bridged between the producing countries and the European markets when importing cocaine (Kruisbergen et al., 2012). Indeed, prices soar when importing various types of drug. Not all of this increase is profit: the costs involved in effecting the smuggle must also be covered. Cocaine trafficking via the Netherlands may lead to the purchase price increasing tenfold. A kilo of cocaine costs about EUR 2,700 in Colombia, but is worth between EUR 26,500 and 28,000 once it has arrived in the Netherlands. Transit via the Netherlands at the wholesale level also brings an increase in value. In the German and UK markets, a kilo sells for about EUR 40,000 and for as much as about EUR 80,000 in Finland. Transit is therefore preferred over distribution in the Netherlands, where the sales margins are around EUR 500 per kilo. Similarly to how cocaine must cross a major distance when it is imported, when transiting or exporting drugs, the ability to bridge great distances does require expenses to be incurred but can also be highly profitable.
For example, a kilo of cocaine trafficked via the Netherlands sells for between EUR 100,000 and 130,000 in Australia. A kilo of methamphetamine (crystal meth) coming directly from a Dutch laboratory costs between EUR 7,000 and 8,000. In Australia a kilo of crystal meth sells for between EUR 100,000 and 120,000.
As is the case for the trade in cocaine, a kilo of heroin is often worth more in the Dutch wholesale trade than in Southwestern Asia. Even though prices do not increase tenfold, they do quintuple. The price for a kilo of heroin in Iran is between EUR 1,800 and 2,000, but the wholesale prices in the Netherlands are around EUR 9,000 to 10,000. An additional increase in value can be generated by transiting the drug to foreign markets. In the United Kingdom and Scandinavia, a kilo of heroin costs about EUR 20,000, while this goes up to around EUR 31,000 in Spain.
Cannabis resin originating from Afghanistan has more than doubled in price once it has entered the Dutch wholesale trade, from about EUR 1,300 to 1,400 per kilo to about EUR 2,875 per kilo. Wholesale herbal cannabis prices vary depending on the cultivation site of the cannabis, making it more difficult to determine how much the value increases when it is trafficked via the Netherlands. The wholesale price for herbal cannabis in the

Netherlands is about EUR 3,900 per kilo. Herbal cannabis from Spain costs about EUR 1,300 per kilo, but higher amounts are sometimes paid. Albanian herbal cannabis varies in price between EUR 1,500 and 2,500 per kilo.
During the COVID-19 pandemic, wholesale prices in the Netherlands were temporarily higher, due to the scarcity of drugs as a consequence of the lockdown measures, including border closures.
As was indicated in the above, the increase in value is not pure profit. Expenses must be paid in all phases of the various drug crime scripts. These expenses are paid in money or in a quantity of the batch of drugs. Because of the high costs, it does happen that multiple criminal networks jointly purchase large batches of, inter alia, cocaine and cannabis. The costs of transport from the country of acquisition to the Netherlands is often included in the agreed price.
The import of cocaine inter alia involves payments to the Dutch company importing a container with a cover load and to the people removing the cocaine from the container. Costs are also incurred in connection with the transport of heroin to the European Union. The rent, the establishment of a drug lab, the people cutting the herbal cannabis after the harvest: these are all expenses that must be paid.
The money made is partly reinvested in new batches. Money made with heroin trafficking is used as an investment to import cocaine. There are signals that the cultivation of herbal cannabis is used as a source of income for funding other criminal activities, such as the import and trafficking of cocaine.
Other expenses include the settling of deals that have fallen through, for example when a batch of drugs was seized or a drug laboratory was dismantled.
Payments are often effected in cash or by exchange of goods. Cryptocurrencies are also used in online drug trafficking, but also in the offline trade in cocaine and in the synthetic drug trade. Payments using cryptocurrencies have - so far - not been discovered in the cannabis and heroin trade. Financial facilitators arrange for the (illicit) transfer of money and the conversion of cash. Cash is still physically smuggled in major quantities or virtually moved outside of the legal financial system by underground bankers.
When made use of the legal financial system, (some) money laundering practices are identified. The total sum of transactions declared suspicious by the Financial Intelligence Unit – the Netherlands that related to the Summ-IT dataset of drug-related suspects amounted to EUR 467,759,526. This calculation must be considered an indication.
Due to the hidden nature of the Dutch drug economy, it is unclear how much money truly is involved and what percentage of it is being laundered. Opaque financial schemes are often employed.
A part of the money made is invested in and laundered via real estate abroad. Police investigations have shown that suspects try to spend their money as much as possible in cash to fund a life of luxury, involving the purchase of expensive clothing, expensive watches, renting cars and houses, partying, and vacations.
It is difficult to obtain a view of the criminal earnings and additional hurdles are being raised to the authorities going after the criminally obtained assets by diverting it to countries the Dutch government does not, or only to a very limited extent, cooperate with on the basis of (bilateral) treaties. Dubai, for example, seems a prominent location for drug criminals to store their funds and/or live a life of luxury.

3.4 Criminal cooperation

The production of drugs in, and the transnational trafficking of drugs via the Netherlands can flourish only with the support and cooperation of others, who are generally not criminals themselves. This is true on the one hand because criminal networks and subjects produce and trade drugs to serve domestic and foreign consumer markets. Without demand there is no supply, and without supply and demand there is no market. And on the other hand, this is because they cannot perform their activities without the efforts of brokers, specialists, facilitators and, importantly, willingly citizens. Criminals cooperate with each other, but also with non-criminals. A symbiosis of the underworld and legitimate society thus exists.

3.4.1 Criminal networks and subjects

Dutch criminal networks and subjects trade in various types of drugs and other illegal products. Sometimes acting within a network and sometimes acting on their own, they fulfil various roles within the same or various drug markets.

The various Dutch drug markets seem to make up one large, strongly interconnected network that makes opportunistic use of each other's contacts, trade, and production. This renders it difficult to clearly separate wholesale, distributive, and even retail trade. Dutch criminal subjects switch their activities between these various echelons and markets. They are independent entrepreneurs who sometimes cooperate with person A and next with person B. Some subjects have been active for many years and may also have cooperated with the same persons for years on end.

3.4.2 Brokers

The Dutch criminal subjects active in drug trafficking are true networkers. They all know each other through multiple contacts and can deal either directly or through others with each other. In addition, Dutch drug producers and traffickers engage brokers to get things done. Brokers are persons with social relations in multiple communities or networks. This person serves to bridge the gap between and connect two or more persons not mutually connected. Brokers are, therefore, persons with a strategic position within and between criminal networks, but also between criminal and non-criminal networks (cf. Duijn, et al., 2014). The position the broker has within and between networks is decisive for his importance and degree of success: it is his social capital (Burt, 1992; Borgatti & Lopez-Kidwell, 2014). Moreover, the broker must avail of human capital - specific knowledge, skills, organisational talents and/or funds - in order to actually play a strategic and crucial role within drug-related organised crime (Duijn et al., 2014; Spapens, 2012). Various types of brokers exist. They are active within multiple phases of the various drug crime scripts.

Grow shop owners fulfil the role of brokers in the large-scale herbal cannabis cultivation sector in the Netherlands, being able to get herbal cannabis producers into contact with electricians and shed builders. In addition, the grow shop owner may advance the procurement costs for materials in exchange for, for instance, the proceeds of the first harvest. Intermediaries also play a role in scouting for locations where cannabis nurseries, cutting nurseries, or drying houses may be established.

As is the case for the cultivation of herbal cannabis, criminal networks active in the production of synthetic drugs in the Netherlands are constantly looking for suitable locations. Once again, this specific task is performed by brokers. Should a building be found unsuitable for the production of synthetic drugs, it may still be used for the cultivation of herbal cannabis. This broker role may be played by real estate agents,

who will also arrange for a tenancy agreement signed in the name of a straw man. Even though direct contacts between hardware suppliers (and in particular reaction vessel) and the various networks active in synthetic drugs do exist, brokers taking care of the supply of the required reaction vessel hardware are also active. The broker also makes sure that the hardware suppliers are paid on behalf of the buyers.
Internationally and domestically operating brokers are active in the cocaine trade. In South America, they act as the contacts between the producers and owners of the cocaine and the Dutch criminal networks or subjects wishing to purchase the cocaine. Brokers are also active in the Netherlands, acting as the link between the criminal networks requiring cocaine to be removed from a container and the rip-off teams able to do so. In addition, there are brokers who pass on the required information to smuggle cocaine from corrupt officials to the cocaine importers.

3.4.3 Criminal outsourcing

Dutch drug traffickers and producers outsource specific, difficult tasks to others. Such criminal outsourcing results in these tasks no longer being controlled by the drug network; instead, they are performed by criminal specialists and/or facilitators (Boerman et al., 2017; Mayntz, 2004). While no clear distinction exists between the roles of specialist and facilitator, it may be assumed that one side of the spectrum is made up of (full-time) criminals possessing specialised skills and the other side of facilitators who, in addition to working their legal jobs, perform criminal activities. Specialists and facilitators may also fulfil the role of broker.
Generally speaking, specialists and facilitators do not work for one criminal network, drug trafficker, or drug producer, but are active for multiple drug networks. This makes them very relevant. The scarcer the supply of the expertise and the more crucial this expertise is to performing certain criminal activities, the more important the role played by these persons is (cf. Kruisbergen et al., 2018).
Laboratory technicians and hardware producers are important specialists required for the production of synthetic drugs. Laboratory technicians often work as independent entrepreneurs. They provide their knowledge to multiple criminal networks at once and physically assist them with the entire laboratory process. A relatively small group of hardware producers provide hardware to the various criminal networks. Materials like reaction vessels and glassware are manufactured or modified by experts from the metal and glass sectors. We find that specific reaction vessel manufacturers serve multiple criminal networks.
Rip-off teams are responsible for removing cocaine from containers held in port and therefore play an important role. These teams are generally small in size, are hired by multiple criminal networks, and work on the instructions of an experienced collector. Removing cocaine from a container is highly profitable work: each rip-off job pays thousands of euros per person. The relatively low punishments imposed should they be discovered do not discourage collectors from hiring themselves out more often. As from 1 January 2022, the punishment for being present at ports and airports without authorisation has become more severe (Section 138aa of the Dutch Penal Code). The effects of this new provision of law still remain to be seen.
Facilitators are persons who generally work legal jobs but perform certain illegal activities for criminals in the performance of these jobs. Financial service providers and logistics service providers are important facilitators. Corrupt contacts exist within law enforcement and/or investigative authorities (official corruption) and within commercial companies (non-official corruption).

Various criminal networks engage with the same facilitators. One administrative firm was identified to have been used by multiple illicit companies and subjects, for example. This firm was involved with the large-scale import of cocaine and the import of heroin. Financial facilitators may cooperate to launder money. Networks of illicit financial facilitators have been identified in the Netherlands as well.
Illicit logistics service providers arrange for transport abroad for multiple criminal networks. The same transporters may be involved with retrieving different loads of cocaine and heroin. Corrupt customs officials also sometimes work for multiple criminal organisations at once.

3.4.4 Getting a piece of the pie, turning a blind eye

The Dutch drug trade and production can exist only because of the assistance provided by willing citizens. They can make good money providing this aid, though in some cases they are forced to help through threats or intimidation.
Official and non-official corruption form the outgrowths of this fact. Official corruption inter alia includes the search in police systems and the aid provided by customs officials. Such officials are extremely well paid for their assistance. A customs coordinator or planner is said to be able to earn between EUR 100,000 and 225,000 for facilitating cocaine trafficking. Officials working for municipal and provincial authorities and social agencies, too, can be susceptible to corruption.
Official corruption is not limited to the Netherlands. Because of corrupt customs officials, Dutch networks and subjects are able to have batches of cannabis resin cross the border between Morocco and Spain. In the context of heroin smuggling, too, Dutch subjects possess direct contacts with border officials, for example in Iran.
Cocaine cannot be imported without receiving some form of assistance in the ports. This involves corruption by both officials and people other than officials. Many criminal networks and subjects prefer working with companies where the director or other senior manager is aware of the import of cocaine. This allows them to keep the shipped batch under their control and ensures that they are provided with all the right papers and digital documents. The employees of such companies can make a lot of money helping out in this way and they are often advised to simply deny knowing anything about the cocaine shipments should these be discovered. As a consequence, these companies hardly run a risk when providing assistance.
Non-official corruption is highly lucrative, as well. For example, a clearer - the employee taking care of the customs formalities for a company - may make EUR 20,000. Drivers may be paid EUR 50,000 for moving a container with cocaine on a port site.
When smuggling drugs via Amsterdam Airport Schiphol, the services of multiple baggage handling staff are used.
Synthetic drug producers actively approach the residents of farms, company owners, and warehouse lessors. In almost all cases, the lessors or residents are aware of what is going on - in fact, certain clients even specifically require this. The amount of rent paid varies between EUR 5,000 and 15,000 per week. This amount is most likely paid in cash. In some cases, a resident or lessor may assist with the construction of the laboratory and the disposal of waste. Cases of farmers prohibiting access to their grounds until the criminal network had paid the agreed fee are also known. These hardly constitute cases where force was used and the farmers were victims.
Metal construction company owners or employees construct the reaction vessels to be used for the production of synthetic drugs on their own company premises. Depending on the size and complexity of a reaction vessel, prices vary from a few thousands to

over ten thousand euros. Specific workers, including electricians, shed builders, and cutters (for cutting the harvest) are engaged in the large-scale herbal cannabis growing business. Some people also have a cannabis nursery or drying room placed in their house in exchange for lower rent.

Finally, we want to emphasize that medium and small enterprises in the Netherlands, too, very likely profit from the trade in and production of drugs. It is an open question whether companies where holiday arrangements, expensive watches, the lease of cars, the rent of houses, etc. are paid in cash truly are unaware of the fact that this money may be illegal, or just turn a blind eye.

4

Cannabis

4. Cannabis

Tirza Chessa

4.1 Introduction

"Cannabis" is an umbrella term used to denote products derived from the cannabis plant. The two most widely traded cannabis products in the European Union are cannabis resin and herbal cannabis (Europol, 2021a). They are used for both recreative and medicinal purposes. Cannabis resin is derived from the resinous flowery tops of the cannabis plant (www.jellinek.nl; EMCDDA, 2017). By compressing the resin, a solid is produced. Herbal cannabis consists of the dried and ground leaves and flowering tops of the cannabis plant.(www.jellinek.nl).
The cannabis plant produces multiple cannabinoids, the most prevalent of which is delta-9-tetrahydrocannabinol, more commonly known as THC (EMCDDA & Europol, 2019). This active substance is responsible for users feeling high. The second most prevalent cannabinoid is cannabidiol, more commonly known as CBD. Research has shown that CBD counters the possible negative effects of THC without reducing the sense of being high (EMCDDA & Europol, 2019).
In the Netherlands, cannabis is most commonly used by smoking it in a joint (Van Laar et al., 2020). It can also be smoked (pure) or ingested orally, for example by processing it in a space cake. Consumers often feel calmed and relaxed, which effects are often described as feeling "high". However, consumers may also experience anxiety and/or display psychotic symptoms. These effects are caused by the substance THC in the cannabis plant.

Many definitions of cannabis products exist. The Dutch Opium Act, for example, uses terms that differ from those used in everyday parlance. Academia and the police, too, use different terms. This report will use the terms "herbal cannabis" and "cannabis resin". Herbal cannabis refers to the dried flowering tops and/or leaves, also referred to as weed or marijuana. Cannabis resin refers to the solid produced when compressing the resin of the cannabis plant. In addition, we will refer to cannabis nurseries, by which we mean the sites where cannabis plants are cultivated. When we refer to cannabis, we mean both herbal cannabis and cannabis resin.

The Dutch Opium Act does not refer to cannabis resin or herbal cannabis, but uses the terms weed and hashish. Both substances are included in list II to the Dutch Opium Act. The Netherlands feature a policy of tolerance concerning the sale of cannabis by licensed coffeeshops that keep to the conditions of their licence. By the end of 2020, the Netherlands hosted 564 tolerated coffeeshops, down from the 813 that existed in 2000. However, the number of coffeeshops seems to have stabilised since 2015 (Mennes et al., 2021). The decrease in coffeeshops may be due to enforcement initiatives, such as the distance criterion and a negative recommendation under the Dutch Public Administration Act (Wet bevordering integriteitsbeoordelingen door het openbaar bestuur – *wet Bibob*). Estimates are that about 70 percent of cannabis is sold

via coffeeshops and about 30 percent via unlicensed points of sale (Jellinek, 2021). In addition, part of the cannabis is grown for export. This will be covered in more detail in section 4.3.1, discussing the crime script.

However, no policy of tolerance applies to the production of cannabis and its supply to coffeeshops. These acts have been criminalised under Section 3 of the Dutch Opium Act, which prohibits the cultivation, preparation, processing, sale, supply, provision, transportation, possession, and production of substances included in list II of the Dutch Opium Act, as well as importing such substances into, or exporting them from, the Netherlands. As a consequence, cannabis enters a coffeeshop illegally, but its subsequent sale by the coffeeshop is tolerated. This means that coffeeshop owners cannot legally procure the product. A strange situation is constructed in this way, sometimes referred to as the (tolerated) front door / (illegal) back door paradox. The strict conditions under which the sale of soft drugs by coffeeshops is tolerated, are detailed in the Instructions concerning the Opium Act (Aanwijzing Opiumwet).[6]

The focus of this chapter will be on organised crime in relation to cannabis. This specifically concerns organised crime within the territory of the Netherlands, but also outside of it when there are direct links to the Netherlands, and the criminal networks active in this type of drug trafficking. The chapter will not consider medicinal cannabis use. Each section is subdivided into a discussion of herbal cannabis and one of cannabis resin. This chapter will first address the scope of the cannabis market, discussing consumer markets, seizures, and criminal investigations. Next, the nature of the cannabis market is discussed by way of the crime script. This is followed up on by a section on the criminal networks active in cannabis trafficking.
Finally, this chapter will devote two sections on other cannabis products: CBD and synthetic cannabinoids. The section on synthetic cannabinoids is closely connected to the section on new psychoactive substances (NPS) in the chapter on synthetic drugs (Chapter 6).
We consulted various sources in writing this chapter, including interviews and criminal investigations. These have been included in the text in coded form. I-41 through I-43 are the interviews; O-41 through O-46 are the criminal investigations (also refer to References).

6 These criteria are also referred to as the AHNYLR criteria (or the AHNYL criteria until 2013: the residency criterion entered into force in 2013). This abbreviation stands for:
A: no advertising: this means that no advertising is allowed except for a brief notice displayed at the site concerned itself;
H: no hard drugs: this means that no hard drugs may be present and/or sold;
N: no nuisance: nuisance inter alia includes nuisance caused by parked cars near the coffeeshops, noise, waste and/or customers milling in front or close to the coffeeshop;
Y: no sale to youths and no access to coffeeshops by youths: in view of the increase in cannabis use among youths, the age limit of 18 years is strictly enforced;
L: no sale of large amounts per transaction: this means amounts greater than allowed for personal use (= 5 grams) and only limited stock (no more than 500 grams); a “transaction” in this context means all purchases and sales within one coffeeshop with respect to the same buyer on a single day;
R: no access and sale to non-residents of the Netherlands
(The Dutch abbreviation is: AHOJGI)

4.2 Scope of the cannabis market

In order to get an insight into the scope of the cannabis market, we will consider the various aspects that may provide an indication. This first of all concerns the consumer markets at the global, European, and Dutch levels and, second, the seizure figures at these three levels. Supply and demand are closely interrelated. These data are next supplemented by those arising from the criminal investigations and mutual legal assistance requests.

4.2.1 Demand - consumer markets

Cannabis is the most widely used drug at the global level, in the European Union (EU), and within the Netherlands (UNODC, 2021a3; EMCDDA, 2020a; Europol, 2021a; Van Laar et al., 2021). The cannabis market is therefore also by far the largest drug market in the EU (Europol, 2021a).

The UNODC estimates that almost 4 percent of the global population aged between 15 and 64 – around 400 million people - has used cannabis at least once in the year 2019 (UNODC, 2021a3). This figure has risen by 18 percent in the last ten years.
Percentage-wise, consumer figures in 2019 are lowest in Asia, with about 2 percent of the population aged between 15 and 64 having used cannabis. However, due to the size of the population, Asia accounts for about one third of the total global number of cannabis consumers. North America was in 2019 found to host the highest percentage of adult consumers (14.4%), followed by Australia and New Zealand (12.4%), and Europe (8%) (UNODC, 2021a3).
According to the EMCDDA, the total percentage of people in the EU aged between 15 and 64 who have consumed cannabis at least once in their life is 27.2 percent (EMCDDA, 2020a). The percentage of people aged between 15 and 34 who consumed cannabis in the past year was estimated to be about 15.4 percent in 2020. Considering only the group of people aged between 15 and 24, this figure rises to 19.2 percent, or 9.1 million persons. Around 10.3 percent of persons in this last-mentioned age category (4.9 million persons) has consumed cannabis in the past month. The (near) daily consumption figure of persons aged between 15 and 64 is about 1.8 percent. 61 percent of this group is aged below 35.
Differences are visible between EU countries. For example, the percentage of young adults (aged 15 to 34) who consumed cannabis in the past year varies from 3.5 percent in Hungary to 21.8 percent in France.

The percentage of people in the Netherlands aged between 15 and 64 who, in 2019, had consumed cannabis at least once in their life was 27.7 percent (Van Laar et al., 2020a). This percentage is close to the European average. The percentage of people (aged 15 to 64) who consumed herbal cannabis or cannabis resin in the past year or month is lower: 9.3 percent in the past year and 6.2 percent in the past month. 1.6 percent of the population aged 18 or over - approximately 220,000 adults - indicates to consume cannabis on a (near) daily basis (Van Laar et al., 2020). These figures are almost the same as those of previous years. While the number of daily consumers has grown since 2015 (1.2%), it remained stable when compared to 2018 (Van Laar et al., 2020).

As consumer data are not kept in the same way across the globe, it is not possible to compare consumption levels at the global, European, and Dutch levels.

Table 4.1. Consumer figures

	Consumed in the past year, 2019 (aged 15-64)	Consumed at one point, 2019 (aged 15-64)
Global (UNODC)	4%	-
European (EMCDDA)	aged between 14 and 34: 15.4%	27.2%
The Netherlands (Trimbos Institute)	9.3%	27.7%

No major changes in consumption were identified during the COVID-19 pandemic. While some people started consuming more cannabis, other decreased their consumption or kept it even. A peak was visible at the start of the pandemic: consumers stocked up on cannabis before measures that might complicate procurement would enter into force (EMCDDA, 2019a). In general, consumption remained very stable since (EMCDDA, 2021c). In the Netherlands, too, multiple studies were conducted on the impact of the COVID measures on the consumption of cannabis. It would appear that many people (temporarily) changed their consumption habits due to the crisis. However, it remains unclear whether there has been a change in overall consumption prevalence (Van Laar et al., 2020).

4.2.2 Supply - Seizure and production figures

The introduction already indicated that cannabis is the most widely consumed drug, both on the global and on the European and Dutch levels. The cannabis market remains by far the largest drug market in the EU (Europol, 2021a). Herbal cannabis is, to some degree, cultivated in nearly all countries in the world, therefore including in the European Union (Europol, 2021a; UNODC, 2021a3). Cannabis resin is mainly produced in North Africa, the Middle East, and Southwest Asia (Europol, 2021a; UNODC, 2021a3). The production process and producing countries are discussed in more detail in sections 4.3.1 and 4.3.2, which will address the crime script of both herbal cannabis and cannabis resin.

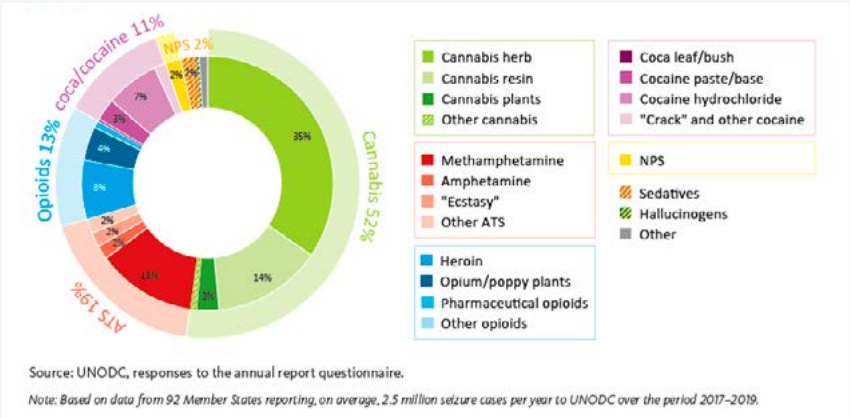
Seizures may provide an indication of the size of the cannabis market. The number of seizures can be deemed a lower limit of the total amount of illegal trade. We will therefore in this section consider seizures at the global, European, and Dutch levels.

4.2.2.1 Global

The UNODC keeps records of the global drug seizure figures on the basis of the reports submitted by the Member States. Of all drug seizures reported to the UNODC from 2017 through 2019, 52 percent is related to cannabis (UNODC, 2021a2). These figures are subdivided into 35 percent relating to herbal cannabis, 14 percent to

cannabis resin, 3 percent to plants, and a small figure to other cannabis products. Cannabis-related drugs by far make up the major share, followed by synthetic drugs, which account for 19 percent (the UNODC refers to this group as amphetamine type stimulants in the below figure). It must be noted that the increase in the number of seizures of synthetic opioids and synthetic drugs over the past few years has been far greater, with the figures increasing 300 and 20 times, respectively, from the 1998 totals. With respect to cannabis, there has been a 30 percent increase in the number of seizures.

Figure 4.2 Global distribution of seizures per drug type



Source: UNODC, responses to the annual report questionnaire.

Note: Based on data from 92 Member States reporting, on average, 2.5 million seizure cases per year to UNODC over the period 2017–2019.

Source: UNODC, 2021a2.

Table 4.3 lists the global seizure amounts over the past few years. According to these figures, the amount of herbal cannabis seized has decreased since 2017, in line with a trend that had started before 2017. The amount of herbal cannabis reported seized in 2019 was the lowest since 1998. The amount of cannabis resin seized, on the other hand, has slightly increased since 2017.

Table 4.3. Global cannabis seizures in kilos

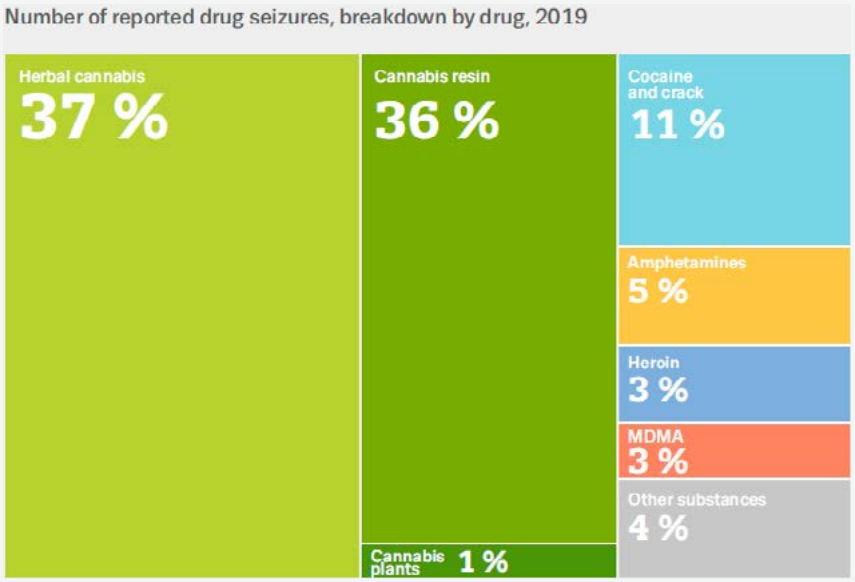
	Herbal cannabis	Cannabis resin
2017	5,109,000	1,161,000
2018	4,303,000	1,307,000
2019	3,779,000	1,395,000

Source: UNODC, 2019a5; UNODC, 2020a3; UNODC, 2021a3.

4.2.2.2 European Union

Within the EU, too, by far the major share of drug-related seizures concern cannabis. In 2019, 74 percent of all reported drug seizures relates to cannabis. Of this figure, 37 percent concerns herbal cannabis and 36 percent concerns cannabis resin. Refer to Figure 4.4.

Figure 4.4. Seizures in the European Union by type of drug



Source: EMCDDA, 2021a.

Table 4.5 provides an overview of the herbal cannabis and cannabis resin seizures in the EU. These figures are collected and updated by the EMCDDA. The table shows that, although fewer cannabis resin seizures were reported in 2017 and 2018 than herbal cannabis seizures, the volumes of cannabis resin seized were higher. It must be noted that cannabis resin weighs more than dried herbal cannabis. In 2019, cannabis resin seizures outpace herbal cannabis seizures both in number and in volume.

This runs counter to the trend on the global level, with yearly herbal cannabis seizures normally outpacing cannabis resin seizures. According to the EMCDDA, this is partly due to the fact that cannabis resin tends to be smuggled in higher volumes, which may lead to it being intercepted more easily. However, in line with the global trend, we also find that the volume of herbal cannabis seized is decreasing, while the volume of cannabis resin seized has remained stable, except for a peak in 2018.

Table 4.5. Herbal cannabis and cannabis resin seizures in the EU

	Number of herbal cannabis seizures	Weight of seized herbal cannabis	Number of cannabis resin seizures	Weight of seized cannabis resin
2017	440,000	207,000 kg	311,000	466,000 kg
2018	412,000	194,000 kg	318,000	668,000 kg
2019	313,000	148,000 kg	326,000	465,000 kg

Source: EMCDDA, 2019; EMCDDA, 2020a; EMCDDA, 2021a.

Spain reports the most seizures of both herbal cannabis and cannabis resin of the EU countries. France takes second place with respect to cannabis resin and the UK with respect to herbal cannabis. It must be noted that the Dutch figures are not included in this EMCDDA overview.
The number of seizures of both herbal cannabis and cannabis resin has remained relatively stable in the EU since 2012.
At least 20,000 cannabis nurseries are estimated to be dismantled in the EU every year (EMCDDA, 2019a). However, the actual number of active nurseries is presumably much higher.

4.2.2.3 Developments in the Netherlands (and Belgium)

Having discussed the seizure figures on the global and EU levels, we will consider the Netherlands. We will first discuss the figures relating to herbal cannabis and next those concerning cannabis resin.

The Netherlands keeps track of the number of dismantled cannabis nurseries. In addition, figures are also kept of the number of (mother) plants, cuttings, and tops. These figures are kept for each individual regional unit of the National Police of the Netherlands (*politie*). Table 4.6 provides an overview of the number of cannabis nurseries closed down in the period from 2017 through the first half of 2021.

Table 4.6. Number of dismantled cannabis nurseries

Unit	2017	2018	2019	2020	First half of 2021
Noord-Nederland	404	436	313	246	98
Oost-Nederland	761	640	587	527	229
Midden-Nederland	405	306	236	231	83
Noord-Holland	357	281	325	226	78
Amsterdam	309	206	176	158	102
Den Haag	510	414	374	240	117
Rotterdam	550	507	576	363	142
Zeeland-West-Brabant	532	424	365	249	88
Oost-Brabant	301	193	245	233	86
Limburg	538	502	437	419	153
Central Unit	3	4	1	2	1
Total	**4,670**	**3,913**	**3,635**	**2,894**	**1,177**

Source: 2020 Cannabis Nurseries Overview, Drugs Portfolio.

The cannabis nurseries may be closed down under administrative or criminal law. The difference between these two approaches is that, in the case of a closure under administrative law, the cannabis nursery is cleared by the municipal authorities on the basis of urgent administrative enforcement. The offenders are not always prosecuted in this case. The overview does not differentiate between the two types of closures. Administrative closures only take place in the Rotterdam and Noord-Holland Regional Units.

As the overview shows, the number of cannabis nurseries closed down decreased by about 40 percent between 2017 and 2020. Den Haag and Zeeland-West-Brabant Regional Units reported the most significant decrease. The Oost-Brabant and Limburg Regional Units reported the smallest decrease. The overview also provides the figures for the first six months of 2021. Comparing these to the figures covering the first six months in previous years, once again a decrease becomes apparent.

The number of plants seized has also gone down since 2017 (apart from a small increase in 2019). Apart from a peak in 2018, the number of mother plants used to produce cuttings has remained virtually stable. The total number of cuttings seized decreased, while the amount of cannabis tops seized in grams remained virtually stable, apart from a sharp decrease in 2018. Table 4.7 lists the number of plants, mother plants, cuttings, and cannabis tops seized in the past few years. It must be noted in this connection that no uniform definition of “cutting” exists. Some reporting colleagues may identify a cutting as a plant, or vice versa. The amount of cannabis tops is listed in grams. Cannabis tops may be wet or dry. Wet cannabis tops are heavier than dry ones. The figures listed in table 4.7 do not take account of this difference.

Table 4.7. Number of (mother) plants, number of cuttings, and total weight of cannabis tops 2017 - 2020

	2017	2018	2019	2020
Number of plants	722,618	516,418	556,802	464,169
Number of mother plants	12,819	30,283	13,896	13,082
Number of cuttings	371,323	310,240	407,193	188,593
Cannabis tops in kilos	4,067	2,439	3,958	4,274

Source: 2020 Cannabis Nurseries Overview, Drugs Portfolio.

A few factors may serve to explain the decrease in the number of cannabis nurseries closed down. One important factor is that the regional police units have little capacity for, and attach low priority to, investigating and closing down cannabis nurseries. The Frontline Teams, which often are charged with dismantling cannabis nurseries, lack sufficient capacity, while other types of drugs, like cocaine and synthetic drugs, are given higher priority in investigations.

We also find that, despite the decrease in dismantled cannabis nurseries, the production capacity has slightly increased in the past few years. The number of seized plants has dropped less sharply than the number of closed-down nurseries, which would suggest that production capacity has increased. This is a tentative conclusion and it must be seen, in the years to come, whether this remains the case. In addition, using, for example, CO_2 during cultivation allows for obtaining more product from a plant (I-43).

Table 4.8. Average number of seized plants per closed-down nursery 2017 - 2021

Year	Number of seized plants
2017	about 154 plants per nursery
2018	about 130 plants per nursery
2019	about 153 plants per nursery
2020	about 160 plants per nursery
2021 (based on the first six months)	about 204 plants per nursery

Source: 2020 Cannabis Nurseries Overview, Drugs Portfolio.

The State Property Service Movable Goods (*Dienst Roerende Zaken – DRZ*)[7] indicates that more large nurseries have indeed been closed down in 2021 than in previous years. However, because this increase has been identified in just one year, we cannot consider this a trend yet. The figures for the years to come will prove whether this indeed constitutes a trend.

The use of new counterstrategies also makes it more difficult to discover cannabis farms. Refer to section 4.3.1. on the herbal cannabis crime script for more details on this.

Energy theft

Netbeheer Nederland (the sector organization for electricity and gas grid operators in the Netherlands) keeps the annual figures concerning cannabis nurseries and energy theft. Table 4.9 lists the figures covering 2017 through 2020.

Table 4.9. Number of cannabis nurseries where energy theft was identified and amount of energy stolen

	Number of cannabis nurseries where energy theft was identified	Amount of energy stolen (in kilowatt hour)
2017	3,300	125 million
2018	2,600	95 million
2019	2,300	114 million
2020	1,800	110 million

Source: Netbeheer Nederland.

These figures show that the number of cannabis nurseries where energy theft was identified has decreased. This decrease is partly due to the overall decrease in the number of cannabis nurseries closed down. However, the figures concerning the total amount of energy stolen do not show a clear decrease, despite the drop in the number of cannabis nurseries where energy theft was identified. Following a decrease in 2018, the total amount of energy stolen even increased in 2019.
Netbeheer Nederland estimates some 30,000 cannabis nurseries exist in the Netherlands and that about 1 billion kilowatt hours of energy is stolen each year (Netbeheer Nederland, 2021). The energy theft figures provide no indication that the number of cannabis nurseries is decreasing. The estimate by Netbeheer Nederland is significantly higher than the number of cannabis nurseries actually closed down every year.

7 The State Property Service Movable Goods is a service within the Ministry of Finance involved in the closing down of cannabis nurseries.

Customs and Royal Marechaussee figures

Table 4.10 presents the amount of cannabis seized by Customs (*Douane*) and the Royal Marechaussee (*Koninklijke Marechaussee - KMar*). As the Customs figures show, significantly more cannabis was seized in 2017 than in the years after. This is because a large batch of 2,500 kilos of cannabis coming from Nigeria was seized in the port of Rotterdam in 2017 (www.om.nl). While the total seized by Customs in 2018 was only 300 kilos, the figures for 2019 and 2020 were fairly stable between 500 and 600 kilos.

Table 4.10. Cannabis seizures by Customs and the Royal Marechaussee, in kilos

Herbal cannabis	Total seizures by Customs	Total seizures by the Royal Marechaussee
2017	2,852	259
2018	322	109
2019	583	85
2020	514	496
Total	**4,271**	**949**

Source: Customs, Royal Marechaussee.

Cannabis nurseries in Belgium

Since the cultivation of cannabis in Belgium is closely connected to that of the Netherlands (police information; Middeleer et al., 2018), the figures available from the Belgian authorities are represented in table 4.11. The connection between the Netherlands and Belgium will be discussed in more detail in section 4.3.1. The figures presented in the tables are the sum of all nurseries, both the small and the large ones.

Table 4.11. Number of dismantled cannabis nurseries in Belgium

	Closed-down cannabis nurseries
2015	1,257
2016	1,046
2017	1,234
2018	1,006
2019	1,036
2020	1,024

Source: Middeleer et al., 2018; DJSOC, 2019; DJSOC e-mail, 7 February 2022.

Starting in 2003, the number of dismantled cannabis nurseries in Belgium has increased (Middeleer et al., 2018). This trend kept up through 2015. While a first decrease was visible in 2016, the figure went up again in 2017, and down again in 2018. Despite the decrease in the total number of cannabis nurseries, their capacity did increase in 2018 (DJSOC, 2019). As was indicated in the above, while in the Netherlands, too, the number of dismantled cannabis nurseries decreased, a slight increase in capacity per cannabis nursery was visible. These developments are comparable.

Seizures of cannabis resin

The seizure figures concerning cannabis resin are less systematically kept by the police. This might be related to the lack of national attention to this theme. All cannabis resin-related seizures have been mapped on the basis of a query in the national law enforcement database BVH. It must be noted that no uniform registration method exists. The figures presented in the below only concern those seizures where the weight of the resin was reported and do not, therefore, provide a complete picture of all seizures. The police figures only provide an indication of the amount of cannabis resin seized by the police. A more extensive explanation of the data collection method and the gaps in the data is provided in Chapter 2 and under References.
The police figures have been supplemented by the seizure figures of Customs and the Royal Marechaussee.

Table 4.12. Seizures of cannabis resin by the police, Customs, and the Royal Marechaussee over 2017-2020, in kilos

Cannabis resin	Total seizures by the police	Total seizures by Customs	Total seizures by the Royal Marechaussee
2017	2,268	716	187
2018	628	3,910	108
2019	301	299	122
2020	406	1,010	144
Total	**3,603**	**5,935**	**561**

Source: Police, Customs, Royal Marechaussee.

Between 2017 and 2020, the police, Customs, and the Royal Marechaussee jointly seized a total of 10,099 kilos of cannabis resin. Assuming an average price of 10 euros per gram in the Netherlands, the total street value of these seizures is about 100 million euros. It must be noted that, compared to the overall figures, the 2017 police figure and the 2018 Customs figure stand out. This is in both cases due to one major seizure. The police in 2017 seized about 1,200 kilos in a house in Rotterdam. The origin of this batch has not become clear. Customs in 2018 seized about 3,600 kilos coming from Lebanon in the port of Rotterdam. This single interception is comparable to all police seizures in the period from 2017 through 2020.

The Royal Marechaussee more often discovers cannabis - both herbal and resin - in cargo and parcels than on passengers. As the Netherlands is primarily a country of origin, the flow of cannabis is mainly outward. What is striking, is that the United States, in particular, is found to be the country of origin of cannabis hidden in cargoes (KMar, 2021).
It is not possible to compare the share of herbal cannabis and cannabis resin-related seizures in the Netherlands to that of seizures related to other types of drugs in the country (refer to Chapter 2 and References for a detailed explanation). We are, however, able to discuss the developments within herbal cannabis and cannabis resin seizures. We find that the number of dismantled nurseries has decreased in the past few years. The figures of the Royal Marechaussee on herbal cannabis and cannabis resin fluctuate, but the amount of herbal cannabis seized in 2020 is about half that of the total seized in the years from 2017 through 2020. Customs, too, reports varying figures, but the trend since 2017 is one of decreasing figures. No conclusions on cannabis resin can be drawn based on the police figures, as these figures are incomplete. As for the Royal Marechaussee, the quantity of cannabis resin it seized seems to be rather stable in the past few years. The Customs figures show greater variance, possibly due to major catches, which cause annual figures to shoot up.

4.2.3 Investigations

About 1.5 million drug-related incidents have been identified within the EU in 2018, constituting a 22 percent increase since 2008. About 75 per cent of the cases involve incidents relating to the use or possession of drugs. Of this figure, 75 percent concerns cannabis. Around 230,000 incidents relating to the trade in drugs were reported in the EU in 2018, constituting a 7 percent increase since 2008. This category, too, is dominated by cannabis-related cases, which form about 57 percent (EMCDDA, 2020a).

In the Netherlands, we mapped the 2019 and 2020 police investigation figures. This concerns investigations registered in Summ-IT. In both years, the investigations concerned range from those into street-level dealing to wholesale.
Table 4.13 provides an overview of the number of drug investigations in 2019 and 2020 and the number of investigations related to herbal cannabis and cannabis resin.

Table 4.13. Number of drug investigations in 2019 and 2020

	Number of drug-related investigations	Number of herbal cannabis-related investigations	Number of cannabis resin-related investigations
2019	1,086	274	113
2020	967	233	109

Source: Summ-IT.

Many dismantled cannabis nursery and their related investigations are, pursuant to Section 8 of the Dutch Police Data Act, registered in BVH, and not in Summ-IT. This means that those reports registered only in BVH are not included in this overview.
Consultations with experts and police analysts have shown that the number of investigations started is very limited, both as concerns herbal cannabis and cannabis resins (I-41; I-42; I-43). Investigations into cocaine and synthetic drugs receive higher priority, meaning little or no capacity is available for investigations into herbal cannabis and cannabis resin. Once a cannabis nursery is discovered, it is dismantled; criminal investigations are not always initiated. Even when herbal cannabis or cannabis resin is discovered as part of an investigation into cocaine or synthetic drugs, this often receives no further attention, as it does not fall within the scope of the investigation.

4.2.3.1 Herbal cannabis

Of the 1,086 drug-related criminal investigations conducted in 2019, 274 - about one quarter (25%) - concerned herbal cannabis. Investigations into herbal cannabis are the third most prevalent drug-related investigations, trailing only those into cocaine and synthetic drugs.
Of these herbal cannabis-related investigations, 124 - about 45 percent - are polydrug-related: combined investigations into multiple drugs, at least one of which is not related to cannabis. 135 investigations, or about half (49%) of all herbal cannabis-related investigations, only relate to herbal cannabis and no other drug, not even cannabis resin.

In 45 percent of the cases, investigations into herbal cannabis are in combination with other drugs (not cannabis). The most prevalent combination is with cocaine, occurring in 84 of the 274 investigations. Sixty of the investigations concerned an investigation also dealing with MDMA; 41 of these also involve cocaine. 35 investigations were in combination with amphetamine and 19 with heroin.
Combinations with fentanyl, captagon, nitrous oxide, and khat are almost non-existent. Investigations into these types of drugs are very rare in general. 62 of the investigations is also in combination with cannabis resin.

A similar picture arises in 2020: 233 of the 967 investigations (24%) are herbal cannabis-related, albeit it that slightly over half (52 percent) of the herbal cannabis-related investigations in 2020 are polydrug-related ones. The number of investigations only concerning herbal cannabis was 101, or some 43 percent. In 121 cases (52%), herbal cannabis is investigated in combination with at least one other type of drugs.

In 2020, too, the combination with cocaine is most prevalent, occurring in 86 investigations.
Combinations of herbal cannabis with fentanyl, captagon, and khat are almost non-existent. The combinations with nitrous oxide, LSD, and GHB, too, show up less often. In 47 cases, investigations into herbal cannabis also concern MDMA, 37 of which also relate to cocaine. 36 investigations also concern amphetamine and 24 also concern heroin.

Table 4.14. Number of herbal cannabis-related investigations

	Herbal cannabis - related	Herbal cannabis - polydrug	Herbal cannabis - monodrug	Herbal cannabis - cocaine
2019	274	121	135	84
2020	233	121	101	86

	Herbal cannabis - cannabis resin	Herbal cannabis - heroin	Herbal cannabis - MDMA	**Total**
2019	62	19	60	**1,086**
2020	52	24	47	**968**

Source: Summ-IT.

4.2.3.2 Cannabis resin

Of the 1,086 drug-related criminal investigations conducted in 2019, 113 concerned cannabis resin. This constitutes around 10 percent of all drug-related investigations. Of these cannabis resin-related investigations, 82 - or about 73 percent - are polydrug-related: combined investigations into multiple drugs, at least one of which is not related to cannabis. Sixteen cases exclusively concern cannabis resin and not a combination with another type of drugs. In addition, cannabis resin was found together with herbal cannabis in 62 cases.

Of the polydrug investigations - i.e., investigations also relating to at least one non-cannabis-related drug - the combination with cocaine is most common, appearing in 59 cases. The combination with MDMA was found in 42 cases, 31 of which also relate to cocaine. 27 investigations also concern amphetamine and 20 also concern heroin. Cannabis resin is not found in combination with captagon and khat and hardly ever in combination with nitrous oxide, fentanyl, precursors, and GHB.

Of the 967 drug-related criminal investigations conducted in 2020, 109 concerned cannabis resin. This constitutes some 11 percent of all drug-related investigations. About 74 percent of these cannabis resin-related investigations were combined investigations into multiple drugs, at least one of which is not related to cannabis. Seventeen cases exclusively concern cannabis resin. 52 investigations also related to herbal cannabis. Within the polydrug investigations, cannabis resin is most often found in combination with cocaine (65) and MDMA (31). The combination with amphetamine and heroin occurred in 21 and 20 cases, respectively. The combination with khat, captagon, and fentanyl is hardly ever found and that with cannabis resin, LSD, and GHB only sporadically.

Table 4.15. Number of cannabis resin-related investigations

	Cannabis resin-related	Cannabis resin - polydrug	Cannabis resin - monodrug	Cannabis resin - cocaine
2019	113	82	16	59
2020	109	81	17	65

	Cannabis resin - herbal cannabis	Cannabis resin - heroin	Cannabis resin - MDMA	**Total**
2019	62	20	42	**1,086**
2020	52	20	31	

Source: Summ-IT.

4.2.4 International mutual legal assistance

The mutual legal assistance requests bearing the "cannabis" label concern herbal cannabis and/or cannabis resin. A "soft drugs" category exists in addition to the "cannabis" one. The soft drugs category (909 requests from 2017 through 2020) consists of requests which do no clarify the type of drugs, but also requests related to khat and hallucinogenic mushrooms. It may be that this category contains requests that do relate to cannabis but are labelled "soft drugs". According to the International Legal Assistance Centre (*Landelijk Internationaal Rechtshulpcentrum - LIRC*), this can happen often. This analysis, however, proceeds from with mutual legal assistance requests that are specifically labelled as relating to cannabis. This means that the actual figures will be higher than those presented in the tables below.

Of the 6,447 drug-related mutual legal assistance requests submitted from 2017 through 2020, 421 have been categorised under the "cannabis" label. These may also include cases involving cannabis in combination with other offences (drug-related or otherwise). This means that about 6.5 percent of all drug-related mutual legal assistance requests have received the "cannabis" label. Table 4.16 lists the cannabis-related mutual legal assistance requests, both incoming and outgoing, from 2017 through 2020. The Netherlands has received more requests (312) than it submitted itself (109). In general, the Netherlands submits fewer requests than it receives, meaning this finding is not uniquely related to cannabis.

Table 4.16. Number of mutual legal assistance requests relating to cannabis

	2017	2018	2019	2020	2017 through 2020
Incoming	102	59	78	73	312
Outgoing	44	27	19	19	109
Total	**146**	**86**	**97**	**92**	**421**

Source: LURIS.

A breakdown of requests per country can next be made. The top 10 countries are presented in table 4.17. About 92 percent of all cannabis-related mutual legal assistance is exchanged with these top 10 countries. Belgium and Germany make up about 76 percent of cases and tower above all other countries in terms of mutual legal assistance requests. It must be noted that the number of mutual legal assistance requests received from Belgium has decreased from 76 (2017) to 24 (2020), while the incoming requests from Germany have increased from 20 (2017) to 42 (2020). The number of mutual legal assistance requests submitted have gone down for both countries.

Table 4.17. Cannabis-related mutual legal assistance requests per country (top 10)

	2017	2018	2019	2020	2017 through 2020
Belgium	**85**	**36**	**25**	**24**	**170**
Incoming	76	30	23	24	153
Outgoing	9	6	2		17
Federal Republic of Germany	**30**	**26**	**46**	**46**	**148**
Incoming	20	19	41	42	122
Outgoing	10	7	5	4	26
France	**3**	**3**	**7**	**3**	**16**
Incoming	1	3	6	1	11
Outgoing	2		1	2	5
Spain	**7**	**3**	**1**	**4**	**15**
Incoming	1	1	1	2	5
Outgoing	6	2		2	10
United Kingdom	**3**	**3**	**2**	**2**	**10**
Incoming	2	1	1	2	6
Outgoing	1	2	1		4
Poland	**3**	**3**	**3**	**1**	**10**
Incoming	1	1	1		3
Outgoing	2	2	2	1	7
Türkiye	**1**		**4**		**5**
Incoming			2		2
Outgoing	1		2		3
Italy	**2**	**1**	**1**	**1**	**5**
Incoming			1		1
Outgoing	2	1		1	4
Albania	**1**		**1**	**2**	**4**
Outgoing	1		1	2	4
Switzerland		**1**	**2**		**3**
Outgoing		1	2		3
Lithuania	**1**		**1**	**1**	**3**
Outgoing	1		1	1	3
Total	**136**	**76**	**93**	**84**	**389**

Source: LURIS.

When considering only the incoming requests, the top 5 remains unchanged. The same applies to the outgoing requests. Belgium and Germany take up the top spots, followed by France. However, the number of mutual legal assistance requests exchanged with France is significantly lower than those exchanged with Belgium and Germany. This top 3 (albeit possibly in another order) shows up for all other types of drugs, however.

Strikingly, Morocco, a country that plays an important role in the production of cannabis resin, does not show up in this overview. From 2017 through 2020, a total of nine requests were registered under the "soft drugs" category, which may concern requests where it is not entirely clear whether these are cannabis-related. Six of them were incoming requests and three outgoing.

4.2.5 Conclusion

The cannabis market is the largest drug market in the world, in Europe, and in the Netherlands. Cannabis plants are cultivated throughout the world. From 2017 through 2019, 52 percent of global drug seizures concerned cannabis products, with herbal cannabis and cannabis resin forming the two most prominent products. For Europe, this percentage was even higher in 2019: 74 percent.

The Netherlands has reported a decrease in the number of dismantled cannabis nurseries. Various factors may play a role in this development. One important factor is the declining police capacity deployed. However, this does not mean that production levels, too, have gone down. An increased cultivation capacity may play a part in this respect. At the moment this report is drafted, it is as yet impossible to state whether this constitutes a trend. As the energy theft figures have remained stable over the past few years, the actual number of cannabis nurseries has presumably not decreased.

The number of investigations related to herbal cannabis and cannabis resin that has been registered in Summ-IT has slightly gone down from 2019 to 2020. As this concerns a slight decrease in a relatively short amount of time and it is unknown whether this drop has already started in the previous years, no further conclusions can be attached to this given. In general, a somewhat smaller number of drug investigations have been started up in 2020 compared to the 2017-2019 period. This may form one reason for the decrease.

Between 45 and 52 percent of herbal cannabis-related criminal investigations registered in Summ-IT are polydrug. Herbal cannabis is most often found in combination with cocaine. It is also found in combination with cannabis resin, MDMA, amphetamine, and heroin. With respect to cannabis resin, on the other hand, between 73 and 74 percent of criminal investigations registered in Summ-IT are polydrug ones. With respect to cannabis resin, too, the combination with cocaine is most common. And cannabis resin, too, is found in combination with herbal cannabis, MDMA, amphetamine, and heroin.

When considering international mutual legal assistance requests, we find that by far the lion's share of cannabis-related mutual assistance is exchanged with Belgium and Germany. The same goes for other drug types. These countries are followed by France, Spain, the United Kingdom, and Poland. Between 70 and 80 percent of mutual legal assistance requests are incoming ones. This is a lot higher than the number of outgoing requests relating to cannabis. This trend is visible for all drugs.

4.3 Nature of the Dutch cannabis market

In order to obtain insight into the nature of the Dutch cannabis market - both of herbal cannabis and of cannabis resin - we will look into its organisation and operation. We do so by way of crime scripting: a method used by the police to structure the criminal process by dividing it into multiple stages. As the crime scripts relating to herbal cannabis and cannabis are different, including their respective production sites, they will be discussed separately.

4.3.1 Herbal cannabis crime script

Successfully cultivating cannabis plants is dependent on a lot of factors. Light is one of them. Both sunlight (outdoor cultivation) and artificial light (indoor cultivation) are used. Good seeds or cuttings are required, as well, as is knowledge about cannabis cultivation and the method used: the furnishings of the nursery, the correct amount of water, and the nutrients. All of these factors help determine whether a good harvest can be obtained. Other aspects, like storage and sales, are also of relevance to the final product. The crime script divides the various production and trade stages.

The crime script used by the Dutch police is composed of five different stages: production, import of the final product, storage/stash/possession, trade and distribution in the Netherlands, and export. The production stage is subdivided into five sub-stages, as herbal cannabis is often produced in the Netherlands and we therefore have a better view of the process.

However, based on our discussions with experts in the field (I-41), we use a different division. In each case, we will explain why we opted for the change. Moreover, when we drew up this National Strategic Assessment, we found that the criminal processes relating to cannabis, cocaine, synthetic drugs, and heroin are similar and, thus, that the associated crime scripts are similar, as well. We have therefore used the stages and names as described in Chapter 2 for the herbal cannabis crime script. This resulted in the following herbal cannabis crime script (refer to figure 4.18).

Figure 4.18. Herbal cannabis crime script

4.3.1.1 Production requirements - stage 1

In the adjusted version of the crime script, the production requirements form the first stage. No cultivation is possible without a location and hardware, meaning this constitutes the first essential step in the process. The cultivation of the mother plants that produce female cuttings (required for the cultivation of the plants that produce the tops), too, requires a location, also referred to as a cutting nursery.

Locations

Certain subjects are engaged in providing locations where nurseries can be set up (I-41; I-43). These persons actively look for suitable locations and inform the persons wishing to establish a nursery. They act like a sort of broker. This role is not exclusive to cannabis nurseries: it also appears in the context of finding locations for synthetic drug laboratories. Refer to Chapter 6, Synthetic drugs.

Some people also have a cannabis nursery or drying room placed in their house in exchange for lower rent (O-42). In addition, straw men or companies are engaged to have a tenancy agreement signed in their name, while straw men may also be used to pay for the fixed expenses, such as rent, water, and electricity (O-43; O-45). In one case, a company was engaged that did not only lease the premises but also paid other bills (O-43). Forged Greek and Italian identity documents were used in this case to conclude various contracts. The criminal group arranged for payments to be made to that company so all bills could be paid.
The company paid the rent of over a hundred buildings. About half of them have been searched. Cannabis nurseries were discovered in almost 90 percent of all premises searched. This indicates that this criminal group was active in setting up and operating cannabis nurseries on a very large scale.

As soon as a cultivation site is operational, it may become the target of ripping. Nurseries where no-one is present can form an easy target. This is why it may happen that one or more persons are constantly present and sleep in another room in the building where the nursery is set up (I-41; I-42). In addition to guarding the plants, these persons are also frequently active with the day-to-day care of the nursery (I-41).

Hardware and fertilisers

In order to prepare the site for cutting and cultivation, hardware and fertilisers are required. These include basic requirements, such as potting soil, pots, lamps, filters, and ventilation installations. Fertilisers are required during cultivation.
The hardware and fertilisers required for setting up a (cutting) nursery are available at grow shops, stores - both physical stores and webstores - that offer all sorts of products for cultivating crops and plants, including cannabis. Grow shops are not illegal by default, but we do find that they often sell products used only for cannabis cultivation - which is punishable at law.

Since March 2015, Section 11a of the Dutch Opium Act provides that preparatory acts for the professional and/or large-scale cultivation of cannabis are punishable. Under this section of law, those persons or companies that do not cultivate cannabis themselves but do make their money by providing goods and services to enable the professional and/or large-scale cultivation of cannabis or by funding the professional and/or large-scale cultivation of cannabis, are rendered punishable. This criminalisation allows for tackling grow shops, but also the lessors and builders of cultivation sites and electricians setting up illegal installations for tapping off electricity.

In order to assess whether (and rule that) a grow shop has violated Section 11a of the Dutch Opium Act, the court will ask three questions.[8]

6. whether the goods in question were intended to be used for the cultivation of herbal cannabis in the performance of a profession or operation of a company (Section 11(3) of the Dutch Opium Act)
7. or whether they were intended to be used for the cultivation of large quantities of herbal cannabis (Section 11(5) of the Dutch Opium Act)
8. and/or whether the suspect knew or could reasonably suspect that these goods were intended for this use.

In addition, the courts clearly state that Section 11a does not exist to bar all cultivation of cannabis, but only professional, commercial and/or large-scale cultivation.

In 2017 and 2018, in the context of a project by the Zeeland-West-Brabant Regional Unit, letters were sent to companies also selling materials for the professional, large-scale cultivation of cannabis, in order to make them aware of this new legislation. After this section of law became effective, a number of grow shops moved abroad - inter alia to Spain - to continue their business there (I-41).

At this point in time, insufficient case law exists on Section 11a of the Dutch Opium Act, resulting in there not yet being a systematic approach towards grow shops. Three grow shops were closed under administrative law in The Hague in 2021. Even though

8 ECLI:NL:GHDHA:2018:134

Section 11a allows for prosecuting and sentencing a suspect, this requires a great deal of capacity by the investigative services and the Public Prosecution Service (*Openbaar Ministerie – OM*). As other criminal phenomena take priority when assigning capacity to investigations, the decision is often made not to put staff on the tackling of grow shops under criminal law.

Besides selling products, a grow shop may possess a sizeable network of contacts useful to persons involved in the large-scale cultivation of cannabis (I-41; I-42). For example, a grow shop owner may bring its customers into contact with electricians able to install illegal connections or with persons building sheds for the nurseries. Sometimes, the grow shop owner may advance money in exchange for, for instance, the proceeds of the first harvest. Grow shop owners are therefore often designated as brokers (I-41). In addition, grow shop employees are sometimes asked for advice by cultivators when the plants fail to grow properly or when the cannabis plants are affected by pests or diseases (I-42).

4.3.1.2 Production - stage 2

This section addresses the various forms or sub-stages of the production of herbal cannabis: cultivation, harvest, and processing. We will also discuss the professionalisation of the cultivation process and the risks associated with cannabis cultivation.

Cultivation (cutting nurseries and cannabis nurseries)

Once the cultivation site has been set up and the fertilisers are present, stage 2, cultivation, can be started. Indoor cultivation of cannabis plants allows for impacting cultivation factors like environment, light, water supply, and pest control to such an extent that as large as possible a yield can be realised in as little time as possible (EMCDDA & Europol, 2019; I-42). Up to five or six harvests a year are possible. Outdoor cultivation does not allow for influencing factors like light and temperature, meaning cannabis cultivation is not possible throughout the year (I-42).

In the adjusted crime script, a sub-division is in this stage made into cutting nurseries and cannabis nurseries. Since these concern two different types of cultivation, which never take place in the same space. The cultivation of cuttings takes place under different circumstances than the cultivation of cannabis plants. Some nurseries are active only in the production of cuttings. These cuttings are then sold on and used in cannabis nurseries. This is a quicker method than cultivating a plant from a seed. Moreover, the cutting is identical to the mother plant, meaning that if the mother plant is a good one, the cutting will also grow into a good plant. When working with seeds, it is not known whether it will grow into a good plant, while quality is important (police information). Cultivation only requires female plants and cuttings.

Moreover, seeds are relatively expensive. Among a number of webstores selling seeds, the price of three seeds varies between EUR 15 and EUR 27, depending on the type. This means one seed costs between EUR 5 and EUR 9. A cutting costs about EUR 3 to EUR 5 (police information). Seeds are therefore hardly used in cannabis nurseries; they are possibly more often used by the home grower. This also forms the reason why the “seeds” section has been deleted from the adjusted version of the crime script. Moreover, selling seeds is not punishable at law.

The difference between a cutting nursery and cannabis nursery consists of the final product. The final product of a cutting nursery is made up of the cuttings, which effectively are semi-finished products. The final product of a cannabis nursery is made up of the (dried) tops. Cuttings are the products of a mother plant, while tops originate from normal cannabis plants.
Mother plants are often kept in a separate room or in another location. This is because mother plants require a different light cycle during the growing phase than plants that are in the flowering phase and producing tops. Mother plants require 18 hours of light and 6 hours of darkness, while plants in the flowering phase require 12 hours of light and 12 hours of darkness. Mother plants are able to produce good cuttings after about three months. New cutting cuttings can then be taken every two weeks (I-42). On average, this results in fifty cuttings being produced per mother plant every two weeks. A mother plant survives for six to nine months (I-41).

As soon as the cuttings are taken, they are put in seedbeds and placed under fluorescent lights to root. Sometimes, cutting nurseries make use of CO_2 to speed up the rooting process (I-43). Once the cuttings have rooted, they have to be placed in pots within 10 to 14 days. Some cuttings (20 to 30 percent) do not root, or develop insufficient roots, and die (I-41; I-43).

Apart from such cutting nurseries, separate cannabis nurseries exist, where the cuttings are cultivated further. It is at these sites that the plants form tops that can be harvested and used to create the final product: herbal cannabis. The cutting nurseries provide a semi-finished product, the cannabis nurseries the final product (I-41; I-42; I-43).

Cannabis nurseries house plants that are cultivated from cutting to fully grown cannabis plants. The cannabis plants are in their so-called “flowering phase”, meaning the light cycle employed is one of 12 hours of light and 12 hours of darkness. Once the cannabis plant is fully grown, it will have produced flowers, also referred to as “tops” (I-41; I-42; I-43).

Harvest and processing
As soon as the cannabis plants have reached the end of their flowering phase, the cannabis tops need to be harvested. Once the tops are removed from the cannabis plant, the small leaves in the tops still need to be cut away. The cut cannabis tops are then dried. All this can take place in the same room or in the same building, but often, these processes are spread over various locations. This is to spread the risk of discovery, as the harvest, cutting, and drying of cannabis tops produces a very strong odour. Neighbouring residents or by-passers often report the site during the harvest (I-41).

It does occur that the tops are roughly cut in the nursery, while the clean cut is performed at another location (I-42; I-43). The tops are moved to another location in seal bags. People are hired for cutting the tops. The amount of people hired depends on the size of the harvest, but it can concern large groups of people. These people are taken to the location, sometimes without knowing where it is (I-43).
Once the tops are cut, they need to be dried. This often takes place in drying rooms, where nets or racks are placed for the tops to dry on. Drying is possible at room

temperature, in which case it takes about ten days. The drying process can be sped up by using blowers, which also ensure that the wet cannabis tops do not get mouldy (I-42). In addition, the strong odours produced are filtered by using carbon filters and exhausts (I-42). In rare situations, the tops are sold when wet. In this case, the buyer will take care of the drying (I-42; I-43).

Professionalisation of the cultivation process

A lot of innovation in the cultivation process takes place within the EU (Europol, 2021a). We find this to be true for the Netherlands, as well. Cultivators do everything they can to realise maximum profits in as short as time as possible, while staying under the radar of both the investigative services and of other criminals (police information; I-41; I-42).

Innovative methods - such as illegal electricity tapping and the use of all sorts of equipment to regulate the temperature of the environment, the light, the CO_2 content, and the ventilation - help obtaining as high a yield as possible. Nurseries are for example equipped with exhaust systems, CO_2 regulators, and water timers that ensure these processes are conducted automatically and less manual intervention is required (police information). The use of CO_2 reduces the cultivation time and produces heavier tops (I-41; I-43).

The innovation in the cultivation process also serves to improve the quality and weight of the product. This has caused the amount of herbal cannabis taken from a plant to have increased over the past few years. The reported quantity per plant often exceeds the figure listed in the 2016 BOOM report (I-41; I-43).

Cultivators are also innovative in the context of making sure they do not attract attention. Automated equipment allows them to monitor the cultivation of herbal cannabis remotely, reducing visits to the nursery to take care of the plants. Another important trend is for criminals active in the cannabis trade to insulate and screen their sites very well (I-41). They make use of climate control systems, rendering the exhaust of hot air invisible from the outside (I-42). Over the past couple of years, their screening techniques have been outpacing the investigative techniques by the police ever more rapidly. By now, the average nursery is very well insulated and often fitted with water-cooled air-conditioning, making it difficult for the police to detect heat using a thermal-imaging camera (I-41; I-43).

Risks

There are multiple risks associated with cannabis nurseries. In 2018, the Dutch Safety Board (*Onderzoeksraad voor Veiligheid*) published an investigation on the physical safety risks of professional and/or large-scale cannabis nurseries (Onderzoeksraad voor Veiligheid, 2018). The cultivation of herbal cannabis requires a great deal of energy and water, which leads to cannabis cultivators illegally tapping electricity, gas, and water. The illegal electricity connection does not meet the safety requirements and has not been installed by a licensed company. This may result in a fire hazard, due to overheating and short-circuiting. The situation in 76 percent of the cannabis nurseries closed down in 2018 was demonstrably hazardous due to the electrical systems in place (Onderzoeksraad voor Veiligheid, 2018).

Moreover, all sorts of refurbishment activities take place in the building the nursery is established in, for example in connection with re-routing electricity cables or pipes. This may result in a risk of collapse.

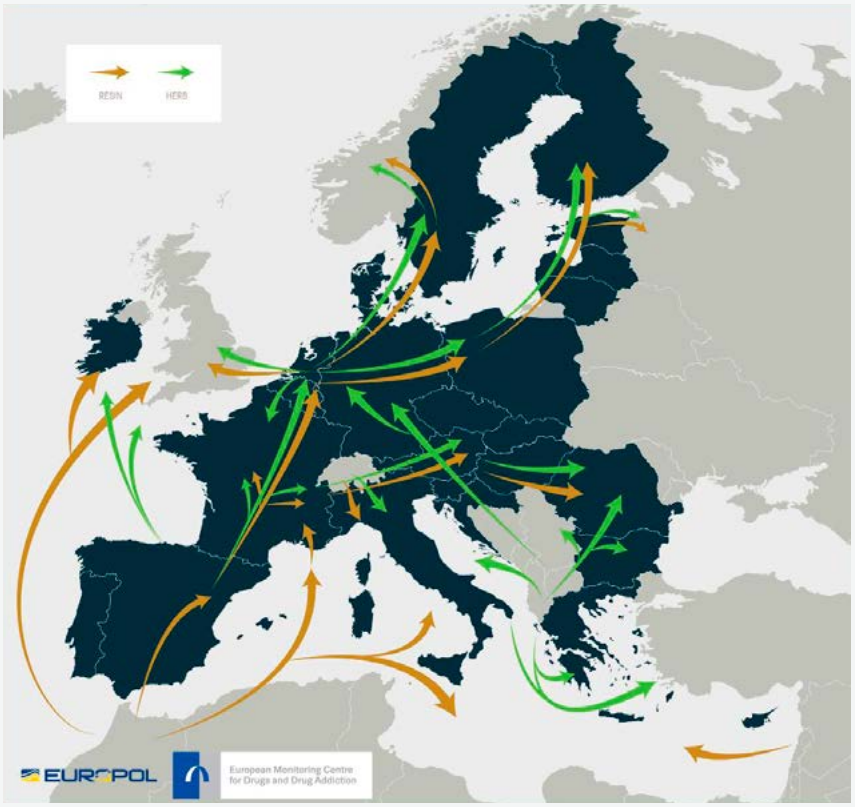
Health risks exist, as well. As was indicated under stage 2, various resources are used to promote growth. These chemicals - such as fertilisers and pesticides - are used without supervision, resulting in health hazards for both the persons present in the nursery and the neighbouring residents and consumers of the final product, who do not know what chemicals are mixed in the product.

The cultivation process also leads to waste. There have been multiple reports of cannabis waste being dumped (BN DeStem, 2019; 1Limburg, 2019; Algemeen Dagblad, 2020; RTV Oost, 2021). This may concern the dumping of pot soil and pots in forest areas or along roads.

4.3.1.3 Acquisition and import – stages 3 and 4

Herbal cannabis is cultivated not exclusively in the Netherlands: almost every country produces it to some degree (UNODC, 2021a3). EMCDDA and Europol have found that the cultivation of herbal cannabis mainly serves to supply the domestic market and the markets of neighbouring countries. Export outside of the region is less common (EMCDDA & Europol, 2019). Previous estimates indicate that the lion's share of herbal cannabis cultivated in the Netherlands is presumably also intended for export. This is discussed in more detail in section 4.3.1.4 (Giessen et al., 2014; Jansen, 2012). In addition, we find that herbal cannabis is also imported into the Netherlands as a final product. Countries of origin include Belgium, Spain, Albania, Canada, Switzerland, and Austria. The last two of these countries are interesting mainly for cannabidiol, or CBD, and will be therefore be discussed in more detail in section 4.5 on CBD. A part of the herbal cannabis imported is transited to other countries.
Seizures within the EU show that the majority of herbal cannabis originates from Spain and the Netherlands (EMCDDA & Europol, 2019). The Netherlands and Belgium are considered a herbal cannabis distribution hub (EMCDDA & Europol, 2019). Figure 4.19 provides an overview of the smuggling routes.

Figure 4.19. Herbal cannabis and cannabis resin smuggling routes within the EU



Source: Europol (2021a)

Belgium

Cannabis nurseries are increasingly more often discovered in Belgium since 2000. Before that time, the vast majority of the herbal cannabis available in Belgium was imported from the Netherlands. The herbal cannabis cultivated in Belgium is predominantly intended to serve the Dutch market. The Netherlands are considered a transit country where the Belgian herbal cannabis is exported to. It is then processed in the Netherlands and re-imported to Belgium (Middeleer et al., 2018). As was stated in the above, harvests are usually processed at a site other than the nursery, such with a view to spreading the risk. As Dutch subjects are involved with the cultivation in Belgium, it is possible they provide a location for the further processing in the Netherlands. For they can easily move between Belgium and the Netherlands, in particular in the border region.

The cultivation of herbal cannabis takes place throughout Belgium, but is concentrated in the districts of Antwerp, Limburg, and Liège, which are on the Dutch border. The larger the nursery and the higher the level of professionalism, the more likely it is that a link with the Netherlands exists. Moreover, the lion's share of the materials used in Belgian nurseries are provided by Dutch grow shops (Middeleer et al., 2018; FGP, 2019).

In addition to the fact that the herbal cannabis cultivated in Belgium is mostly shipped to the Netherlands, we also find that Dutch criminals are responsible for and involved with the maintenance of the Belgian cultivation sites. They also arrange for the procurement of this herbal cannabis, in order to bring it to the Netherlands (police information). The yield of the Belgian cannabis nurseries are mostly intended to be exported to the Netherlands. This is particularly likely for the larger nurseries, as production levels are too high to sell it all on the local markets. In addition, herbal cannabis harvested in Belgium is imported to the Netherlands for further processing, for example for fine-cutting (for, in some cases, the tops are initially only roughly cut) and drying. It is then stored and distributed. In some cases, the herbal cannabis may be re-exported from the Netherlands to Belgium, to serve the Belgian consumer markets (Middeleer et al., 2018).

Spain

Spain, too, is an important country for the import of herbal cannabis into the Netherlands. The cultivation of herbal cannabis in Spain has significantly increased over the past few years (EMCDDA & Europol, 2019). Like in Belgium, in Spain, too, Dutch subjects operate cannabis nurseries and are involved with establishing and maintaining such nurseries (police information). Dutchmen in Spain use Dutch cultivation methods, allowing for the product to receive a Dutch guarantee of quality (police information). According to the LIRC, most cultivation takes place indoors, but some outdoor cultivation also takes place (LIRC e-mail, 2 February 2022). Dutch logistics services providers sometimes arrange for the transportation (EMCDDA & Europol, 2019; Vermeulen, 2019). A connection with the trade in cannabis resin exists, as, given its location near Morocco, Spain is an important link in this trade. Criminal networks use the herbal cannabis lines to smuggle cannabis resin and vice versa (O-41). Section 4.4.2 on the nature of the criminal networks discusses the links between herbal cannabis and cannabis resin.

Other countries

Albania is considered a country of origin for herbal cannabis in the EU. The herbal cannabis is smuggled from Albania into Italy by ships crossing the Adriatic. In Italy, Albanian-speaking criminal groups work together with Italian ones. The amount of herbal cannabis seized in Italy doubled from 42 tonnes in 2016 to 90 tonnes in 2017, which may imply that the smuggling of herbal cannabis from Albania to Italy has been intensified. Albanian herbal cannabis is considered to be of lower quality than, for example, the high-quality Dutch and Belgian products (EMCDDA & Europol, 2019; police information). Herbal cannabis originating from Albania is often cultivated outdoors, meaning that the THC content is lower than that of Dutch or Belgian herbal cannabis. On the Dutch market, too, a supply of and demand for Albanian herbal cannabis exists (police information).

Herbal cannabis is also imported into the Netherlands from Canada (police information). Canadian herbal cannabis can be procured cheaper than the Dutch product (police information). A market for Canadian herbal cannabis exists. Canada legalised the production and sale of cannabis in 2018. Its export is prohibited, however.

4.3.1.4 Storage - stage 5

After the tops have been cut and dried, the final product is stored awaiting its sale. The final product thus consists of the dried tops, imported or otherwise. It can be sold to coffeeshops, middlemen, or street-level dealers. The buyers take care of packaging the product and, possibly, of making the joints.

According to the "tolerance conditions", coffeeshops may possess 500 grams of stock in trade. It may therefore occur that stock is stored in another location to replenish trade stocks running dry. In 2009, a significant quantity of cannabis products was found in the Almere home of the owner and employee of a coffeeshop. In 2012, the court ruled that the owners and the employee could not be prosecuted, as it was logical for a storage site to exist to replenish stock. [9] The Public Prosecution Service in 2014 appealed the case and the court in 2021 declared the prosecution inadmissible due to the length of the proceedings (rechtspraak.nl).[10]

4.3.1.5 Sales - stage 6

Sales in the Netherlands

As was mentioned in the introduction, the Netherlands hosted 564 coffeeshops in 2020. According to the "tolerance conditions", a licensed coffeeshop may not hold more than 500 grams of stock in trade. However, this does not mean only 500 grams are sold per day. Coffeeshops receive new stock multiple times a day. Coffeeshops may sell customers no more than 5 grams per transaction.

If every coffeeshop in the Netherlands would sell 500 grams of cannabis products per day, 282 kilos of herbal cannabis products would have to be supplied to maintain the stock of the licensed coffeeshops. This equals 1,974 kilos per week and a full 102,930 kilos per year. It may be that a coffeeshop sells less than 500 grams per day, but it may also be more. These figures are therefore no more than an estimate.

In November 2019, the Senate adopted the bill concerning a Controlled Cannabis Supply Chain Experiment. The experiment is currently taking place in ten municipalities[11] to investigate whether a controlled cannabis supply can be effected; that is to say, a study is performed into whether and, if so, how cultivators can supply herbal cannabis or cannabis resin that is inspected for quality to coffeeshops without this being a criminal offence. In addition, the effects of this supply on crime levels, security, nuisance, and public health are monitored. Of the ten cultivators selected by lottery to participate, seven received a positive recommendation under the Bibob and have been designated as suppliers. The experiment is currently still in the preparatory stage and

9 ECLI:NL:RBZLY:2012:BW0879.
10 ECLI:NL:RBMNE:2021:1618.
11 Groningen, Almere, Arnhem, Nijmegen, Zaanstad, Hellevoetsluis, Breda, Tilburg, Maastricht, and Heerlen.

no start date has been fixed yet. The experiment stage will run for at least four years (Rijksoverheid, 2020). In the coalition agreement of the Rutte IV government (December 2021), another major city was added as a site for the experiment. In addition, the duration of the experiment was halved and a report on the experiment will be submitted to the House of Representatives in 2024 (Rijksoverheid, 2021).

In addition to coffeeshops, herbal cannabis is also sold to middlemen or (street-level) dealers. We find that the distributive trade is mainly polydrug in nature, with traders selling combinations of herbal cannabis, cocaine, ketamine, and amphetamine, but also including precursors (police information).

Sales to foreign countries
No clear picture on the export of herbal cannabis exists among the units of the National Police of the Netherlands. Criminal investigations often do not proceed to the point that insight into the export is obtained. We do know that a share of the herbal cannabis produced in the Netherlands is intended to serve the Dutch market, but a greater share serves markets abroad. As was stated before, almost every country cultivates herbal cannabis. Those countries may possibly satisfy domestic demand. However, the fact is that Dutch (and Belgian) herbal cannabis are often considered to be very high-quality herbal cannabis with a high THC content (EMCDDA & Europol, 2019; police information). A demand for Dutch (and Belgian) herbal cannabis therefore exists abroad and this herbal cannabis is often sold for higher prices than domestically cultivated products (EMCDDA & Europol, 2019). The primary receivers are Germany and Belgium, but the herbal cannabis is also exported to Italy, France, and Scandinavia (police information). This means that, contrary to the reports by the EMCDDA and Europol, countries other than neighbouring countries are also served. Export is mainly of a polydrug nature (Vermeulen et al., 2018). This topic will be discussed in more detail in section 4.3.3.

Estimates with respect to the export
The 2012 crime pattern analysis (*criminaliteitsbeeldanalyse - CBA*) contains a calculation of the export abroad of herbal cannabis produced in the Netherlands. This calculation is based on the formula: production within the Netherlands minus consumption within the Netherlands. Multiple variables have been used to determine consumption and production levels.
This led to the estimate that export would amount to between 90 and 1,163 tonnes - or 48 to 97 percent of the estimated production level. The most plausible estimate based on this calculation arrived at 85 percent (Jansen, 2012).

This calculation was validated by the Research and Documentation Centre (*Wetenschappelijk Onderzoek- en Documentatiecentrum – WODC*), which later, in 2014, made a new calculation, based on the 2012 CPA plus some supplements.
The result of this calculation was that between 53 and 924 tonnes were exported (Giessen et al., 2014).

The 2014 calculation by the WODC is the most recent calculation into the export of herbal cannabis cultivated in the Netherlands. No more current picture is available.

4.3.2 Cannabis resin crime script

No crime script has currently been adopted with respect to cannabis resin. This is possibly due to the fact that the topic receives less attention within the police, with no national direction existing.
As the production of cannabis resin takes place largely outside of the Netherlands, stages 1 through 4 of the herbal cannabis crime script - concerning production - do not apply to cannabis resin. Because the product originates from the country of origin (such as Morocco) and is only later imported into the Netherlands, the crime script drawn up with respect to cocaine partly applies to cannabis resin. This, then, concerns cannabis resin not produced in the Netherlands. Most cannabis resin originates from outside of the Netherlands. Even though some coffee shops do sell "Dutch cannabis resin", this constitutes only a small section of the cannabis resin consumed in the Netherlands. A similar picture is visible within the rest of the EU: cannabis resin is produced on a small scale only (EMCDDA & Europol, 2019).

As was mentioned in the above, the cocaine crime script may be used for cannabis resin, as well, since cocaine, too, is mainly smuggled to the Netherlands as a final product. We therefore adopted the crime script as shown in figure 4.20.

Figure 4.20. Cannabis resin crime script

4.3.2.1 Acquisition - stage 1

Cannabis resin is produced by removing the resin present in the cannabis plant, in particular in the flowering tops. The resin is next compressed, for example by straining and then rubbing it in the traditional fashion, resulting in a sticky substance. The production of cannabis resin in Morocco mainly occurs in the Rif Mountains in the north of the country. A recent trend is for the traditional cannabis resin from Morocco to ever less often be a local product: new production techniques have turned it into an internationalised product (EMCDDA, 2017). The traditional production methods used up to the present day are being modernised, resulting in cannabis resin with a higher THC level (EMCDDA & Europol, 2019).

In addition to in Morocco, cannabis resin is also produced in Lebanon, Afghanistan, and Pakistan, and exported to Europe from there. While much of the cannabis resin entering the Netherlands originates from Morocco, a demand also exists for cannabis resin from Lebanon, Afghanistan, and Pakistan (police information). Afghanistan is also a production country for heroin and methamphetamine. Pakistan also produces heroin, ketamine, and ephedrine (refer to Chapters 6 and 7).

4.3.2.2 Import and storage – stages 2 and 3

As hardly any cannabis resin is produced in the Netherlands and the product therefore almost always is imported from abroad, the cannabis resin smuggling routes are routes into the Netherlands. This requires means of transportation. Once in the Netherlands, cannabis resin is also smuggled on to other countries (police information). This will be discussed in more detailed in the "Sales" stage. We will first discuss the smuggling routes of cannabis resin entering the Netherlands.

Small-scale cannabis resin smuggling has existed in Europe for a very long time, but the market only really expanded in the 1960s and 1970s. At that time, most of the cannabis resin derived from Pakistan and Afghanistan. Later, Lebanon became a country of origin as well. Due to conflicts in both Afghanistan and Lebanon, the Moroccan production market increased in size and Moroccan cannabis resin has been dominating the European market since the 1990s (EMCDDA, 2017).

According to the UNODC, Morocco, Afghanistan, Pakistan, and Lebanon make up the primary countries of origin of cannabis resin, followed by Iran, Albania, and the Netherlands (UNODC, 2020a3).

Moroccan cannabis resin is intended mainly for sale to the European market. The cannabis resin is first transported to Spain and then distributed to other European markets (UNODC, 2020a3). Spain is therefore considered the EU's primary entry point for cannabis resin from Morocco. Morocco is also used as a transit country for cocaine destined for the EU; refer to Chapter 5. While the cannabis resin originating from Afghanistan, Pakistan, and Lebanon is mainly intended for markets in the Middle East and Southwest Asia, part of it also enters the European market (EMCDDA & Europol, 2019). This includes the Dutch market (police information).

According to the Spanish authorities, the traditional route, also referred to as the Eastern Mediterranean Route, is less often used these days (Guardia Civil, 2021). Cannabis resin smuggled via this route is first transported from Morocco to Libya, from where it is brought into the EU. Nowadays, the so-called Atlantic Route is used: the cannabis resin is transported by ocean from Morocco to Guinea Bissau, Sierra Leone, and Senegal before following the Sahel Route over land to Libya (Guardia Civil, 2021). The cannabis resin is next transported to Europe from Libya.

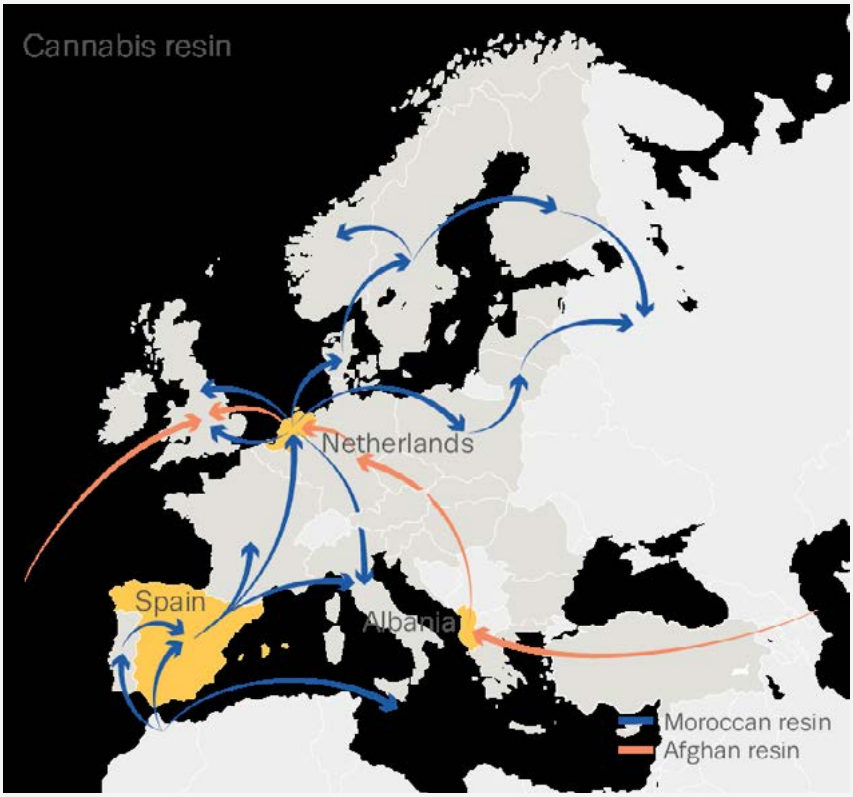
The EMCDDA warns that, because of the country's location in between Morocco and Lebanon, two major producers of cannabis resin, when considered in combination with its instability, Libya may form a weak point in the region - a weakness criminals make use of. The country is possibly already used as a storage and transit country (EMCDDA & Europol, 2019). Dutch criminals active in the cannabis resin trade also use the route from Morocco via Libya. They mostly ship the loads by boat (police information).

Cannabis resin is also found to be transported directly from Morocco to Spain. The transport from Morocco takes place by sea, for example by hiding it in lorries on the ferries to Spain. Cover loads include food products (police information). Smuggling of cannabis resin from Morocco to Spain also takes place by helicopter, go-fast boats, fishing vessels, or pleasure crafts (EMCDDA & Europol, 2019; police information). Criminals engage corrupt customs officials to ensure the loads cross the border between Morocco and Spain. Dutch subjects, too, are involved with receiving the loads in Spain and arranging for their storage (police information). As soon as a demand for cannabis resin exists, the product leaves that storage site and is transported by lorry via France to the Netherlands and other EU countries. Early this year, on the Spanish-French border close to Perpignan, a batch of 740 kilos of cannabis resin was seized from a lorry originating from Spain, which had both a Spanish number plate and a Spanish driver (Douane, 2021). In France, cannabis (both herbal cannabis and cannabis resin) forms the drug most often seized (Douane, 2021).

Because the smuggling route of cannabis resin mostly runs from Morocco via Spain to the Netherlands, it can be combined with the smuggle of herbal cannabis. As was already mentioned in the above, Spain is also a major herbal cannabis producer and Dutch criminal groups are also involved with that trade. The infrastructures set up for the transport of cannabis resin can also be used for herbal cannabis, and vice versa. A combined load of cannabis resin and herbal cannabis from Spain, where the routes for the two products meet, is therefore not uncommon. An investigation was conducted in the Netherlands into a combined batch of cannabis resin and herbal cannabis hidden under a cover load of garlic. The load originated from the south of Spain (O-41).

The Guardia Civil, too, conducted an investigation into a criminal group active in the production and trade of cannabis resin and herbal cannabis. This investigation started after a load of cannabis resin and herbal cannabis was seized from a lorry headed for the Netherlands (La Vanguardia, 2019). In early 2021, a shipment of herbal cannabis and cannabis resin under way to the Netherlands was intercepted near Córdoba in Spain (Diario Sur, 2021). Dutch suspects, too, were arrested at that time.

Figure 4.21. Cannabis resin smuggling routes



Source: EMCDDA, 2017

As Morocco is not part of the EU, checks take place of goods entering the EU from Morocco. As per the Schengen agreement, once the load has entered the EU, no border checks are conducted.

Cannabis resin originating from Lebanon, Pakistan, and Afghanistan enters the Netherlands by land or by sea, shipped in containers (police information). In 2018, a load of 3,600 kilos of cannabis resin was discovered in an ocean container originating from Lebanon at an industrial site in Rotterdam (O-46).

Companies are often engaged in the context of arranging the transport, with the drugs being sold from one company to the other (police information). This allows for taking care of the paper work concerning the shipments. This system is often seen in the cannabis resin trade, but also in the trade of other types of drugs. The price for a kilo of cannabis resin sometimes already includes the cost of shipping (police information).

The “company to company construction” is also used in the context of the trade in cocaine and heroin (refer to Chapters 5 and 7).

While we possess a clear image of the process of removing cocaine from containers, no such clear image of the rip-off teams used exists with respect to cannabis resin. However, once the cannabis resin has arrived in the Netherlands, it is often stored at sites before being sold or distributed abroad (I-41).

4.3.2.3 Sales - stage 4

The Netherlands
As is the case with respect to herbal cannabis, some of the cannabis resin entering the Netherlands is intended for the Dutch market. The cannabis resin is, for example, sold to coffeeshops, which then sell it on to their customers. More information on the sale of cannabis products in coffeeshops is presented in section 4.3.1.
Like herbal cannabis, cannabis resin is also sold to distributive traders, who then sell it on to (street) dealers. They, in turn, sell the cannabis resin to their customers, as part of a greater assortment of drugs on offer (police information).

Transit
Part of the cannabis resin transported into the Netherlands remains in the Netherlands to serve the Dutch market, while another part is shipped abroad. We have no picture of the ratio between the cannabis resin staying in the Netherlands and that transited abroad.
From the Netherlands, the cannabis resin is transported to, for example, Scandinavia and the United Kingdom (police information; Vermeulen, 2019). The transit of cannabis resin often takes place in the context of polydrug trade (Vermeulen et al., 2018).
The transport of cannabis resin from Morocco via Spain is also sometimes engineered by Dutch criminals, who also take care of the distribution to other countries (police information).

We also find that cannabis resin is imported from Pakistan into the Netherlands and then exported to Canada. When the product is immediately shipped from Pakistan to Canada, we find that this is arranged by Dutch-speaking subjects (police information).

4.3.3 Other aspects

Using the herbal cannabis and cannabis resin crime scripts, we have set out the workings of the cannabis market. This section will discuss a few other aspects that are also relevant to the cannabis market: the trade via the dark web, the THC content of cannabis products, the business model, and the level of violence employed.

Dark web
Use of the dark web becomes ever more common. It provides a handy channel to sell and distribute drugs, especially in smaller quantities (EMCDDA, 2021c). The EMCDDA assumes that the amount of cannabis sold online is only a fraction of the totals traded via traditional channels. The trade conducted online is characterised by high frequencies and low volumes (EMCDDA & Europol, 2019). This cannabis is distributed by shipping it via postal and courier services. Expectations are that this method will become more prevalent in the future (Europol, 2021a). The so-called vendors on the

dark web often offer an extensive range of products. In addition to herbal cannabis or cannabis resin, they also offer other types of drugs, such as cocaine, MDMA, or other synthetic drugs. Chapter 9 discusses the use of the dark web in the drug trade in more detail.

THC level

The THC level in a plant is largely genetically determined. It is for this reason that criminals use cuttings of a high-quality mother plant (I-42). Factors like light, soil, and air CO_2 content also contribute to the THC level of a plant. Cannabis plants produce more resins containing THC in a warm and dry environment (Niesink & van Laar, 2012).

The average THC level of cannabis resin in the EU is between 20 and 28 percent, while that of herbal cannabis is between 8 and 13 percent (EMCDDA & Europol, 2019). The EMCDDA data show that the THC level of cannabis resin sold in Europe is twice as high as that of herbal cannabis. Possible causes of these higher THC levels are the use of high-potency cannabis plants and new production techniques used in Morocco.

In the Netherlands, too, we find that the THC level of imported cannabis resin is higher than that of cannabis resin produced in the Netherlands. The Trimbos Institute (*Trimbos Instituut*) monitors the prices and THC levels of herbal cannabis and cannabis resin by procuring samples from multiple coffeeshops throughout the Netherlands.

The average THC level of imported cannabis resin has increased since 2014. It has remained relatively stable since 2018 and was 24.3 percent in 2021. The 2020 figure was 24.4 percent, almost equal to that of 2021. The average THC level of cannabis resin produced in the Netherlands has ranged widely over the years but was 21 percent in 2021, against 35.1 percent in 2017. The number of samples for cannabis resin produced in the Netherlands is a lot smaller, however (Trimbos Instituut, 2021). This may be related to the limited range on offer.

The average THC level of herbal cannabis in the Netherlands rose to about 20 percent in 2004. It has slowly decreased since, never again exceeding 20 percent, despite a slight increase since 2015. Both the most popular type of herbal cannabis - also referred to as *Nederwiet* (Dutch weed) - and the strongest variants never exceed a THC level of 20 percent. In 2021, the average Nederwiet THC level has remained stable from the 2020 figure, at 14.6 percent. The THC level of the strongest type of herbal cannabis was slightly lower in 2021 than in 2020, averaging 17.0 percent (Trimbos Instituut, 2021).
Compared to herbal cannabis produced in the Netherlands, the THC level of imported herbal cannabis is a lot lower, standing at 4 percent in 2021. This figure has remained relatively stable over the years, except for slight increases in 2008 and 2009 (Trimbos Instituut, 2021).

Business model

The drug prices as reported by the EMCDDA range between EUR 7 and EUR 12 per gram of cannabis resin and between EUR 8 and EUR 13 per gram of herbal cannabis (EMCDDA & Europol, 2019). The wholesale price of herbal cannabis in the Netherlands was EUR 3,900 per kilo in 2020 (Police, 2021). According to the EMCDDA, the wholesale price for herbal cannabis in Spain was about EUR 1,300 per kilo (EMCDDA

& Europol, 2019). However, the price of Spanish herbal cannabis could go up to EUR 2,200 per kilo in 2020 (police information). Part of the herbal cannabis produced in Spain is cultivated by Dutch criminals. This product is sold with the notice that it has been cultivated using the Dutch methods (police information). This in effect constitutes a type of quality guarantee. Albanian herbal cannabis varies in price between EUR 1,500 and EUR 2,500 per kilo.
The wholesale price of cannabis resin was about EUR 2,875 per kilo in 2020 (Politie, 2021). When procuring the cannabis resin from, for example, Afghanistan, the price would be between EUR 1,300 and EUR 1,400.

It must be noted that during the COVID-19 pandemic, and in particular in the period when many countries had closed their borders, the prices of both herbal cannabis and cannabis resin were a lot higher due to their scarcity. The price of cannabis resin from Morocco, for example, was a lot higher, ranging between EUR 5,000 and EUR 6,000 per kilo. Other types of herbal cannabis, such as that from Albania or Spain, which are usually considered to be cheap, also became a lot more expensive during the lockdown (police information).

Payments are made in cash. No sign exists of the use of other payment methods, such as the use of cryptocurrencies (police information).

The Trimbos Institute monitors the prices and THC contents of herbal cannabis and cannabis resin by procuring samples from multiple coffeeshops throughout the Netherlands. One gram of herbal cannabis (popular type) in 2021 on average went for EUR 11.70 in a coffeeshop, while the strongest variant cost EUR 14.21 per gram. In the past few years, both the popular and strongest variants of herbal cannabis have been gradually increasing in price. The price of imported herbal cannabis remained relatively stable over the past few years, fluctuating between EUR 4 and EUR 6 per gram in the last decade. In 2021, the average price was EUR 4.67 (Trimbos Instituut, 2021).
The prices of imported cannabis resin in coffeeshops have also gradually gone up since 2000. In 2021, one gram of imported cannabis resin on average cost EUR 11.74. Given that the average price in 2020 was EUR 9.65, this constitutes an increase of slightly over EUR 2 (Trimbos Instituut, 2021). During some periods of the COVID-19 pandemic, cannabis resin seemed to be more difficult to procure from the countries of origin (police information). This may have played a part in the price increase. In that case, this increase should be temporary in nature.

Violence
According to Europol, a major share of all reported cases of serious and deadly violence is linked to drugs and, in particular, to incidents relating to cannabis (Europol, 2021a). In the Netherlands, too, the cannabis market features a highly violent component. The Zeeland-West-Brabant Regional Unit finds that the herbal cannabis market is a market characterised by a relatively high number of casualties and fatalities. The ripping of cannabis nurseries in particular is associated with a high fatality level.

Ripping takes place during transport, of cannabis nurseries, and of drying rooms and other storage locations. Criminals observe locations to find out whether it might house a cannabis nursery or drying room. They check who enters the place and whether the

location is guarded, be it by guards with firearms or otherwise. Ripping seems to be its own profit model (police information).

It has also occurred that combined batches of herbal cannabis and cannabis resin were ripped during transport. The drivers were assaulted and had to surrender their load to the robbers under the threat of firearms. The latter would then drive the trailer to a warehouse located on the other side of the Netherlands, where the cargo was unloaded (O-41).
Another notable ripping incident involved a case where persons maintained a drying room in their house, the contents of which were ripped. The owner of the drying room held the occupants of the house responsible for the lost batch of herbal cannabis and mistreated and threatened them (O-42).
We also find that subjects involved with maintaining cannabis nurseries are involved in the procurement of and trade in handguns, as well (police information).

The above examples are among many showing that the trade in cannabis resin and the cultivation of and trade in herbal cannabis are highly violent in nature. This phenomenon appears to not get the attention it deserves, possibly because the topic of cannabis within the theme of drugs is not given priority by the police.

4.3.4 Conclusion

The crime script provides sound insight into the production of and trade in Dutch herbal cannabis. Cultivation locations are crucial to the process, as, without them, no cultivation is possible. Grow shops too are important, as they provide the materials for furnishing a cannabis nursery and bringing cultivators into contact with facilitators like electricians and shed builders. Cultivation becomes ever more professional in nature, as CO_2 and equipment like water-cooled air conditioning are used.

In addition to the large-scale production of herbal cannabis in the Netherlands, we also find Dutch subjects involved with the import of the product from, for example, Belgium, Spain, Albania, and Canada. A major share of this herbal cannabis is intended for further distribution within Europe.
As for export, we note that the Netherlands exports herbal cannabis to countries like Belgium, Germany, France, and Italy.

Belgium and Spain form important countries for the trade in herbal cannabis via the Netherlands, as herbal cannabis is also imported into the Netherlands from these countries. In addition, Dutch criminals run cannabis nurseries in these countries and are active in the transport of the product to the Netherlands.

At the moment this report was drawn up, no extensive crime script as available for herbal cannabis did as yet exist with respect to cannabis resin. We for this report therefore in part made use of the cocaine crime script, as in the context of cocaine, too, a final product is obtained from a country of origin. Cannabis resin present on the Dutch market mainly originates in Morocco. However, cannabis resin is also imported from Afghanistan, Pakistan, and Lebanon.

Upon leaving Morocco, the cannabis resin is transported by sea to Spain, either in lorries or in boats. In Spain, the cannabis resin is stored and then moved over land via France to the Netherlands. Dutch criminals are involved with the logistics of this process. Not all the cannabis resin transported to the Netherlands is intended to serve the Dutch market. Some of the cannabis resin is moved on to the United Kingdom, Denmark, and even Canada. We find that the herbal cannabis and cannabis markets join in Spain, as the cannabis resin is often transported via Spain. Combined loads of herbal cannabis and cannabis resin are prepared in Spain.

We find that the THC level of the herbal cannabis produced in the Netherlands has remained relatively stable, albeit with a slight decrease since 2020. Its price, however, has slightly increased. Both the average price and THC level of imported herbal cannabis has remained stable and are a lot lower than applies to the Dutch variant. Imported cannabis resin has remained stable in both THC level and price, albeit that the price slightly increased in 2021.

The cannabis market, and in particular that relating to herbal cannabis, is violent in nature. Violent incidents can be linked to cannabis nurseries, for example, while rip deals take place between criminals. Ripping takes place at cannabis nurseries, at other locations during the production process, and even during transport. The persons involved sometimes possess firearms to guard or rob the product.

4.4 Criminal networks and subjects

Multiple networks and subjects are active on the Dutch cannabis market. This section will discuss them in more detail. We will also address the primary roles as identified in the various stages of the crime scripts.

4.4.1 Size of the criminal networks

We listed the suspects identified during drug-related criminal investigations by the police in 2019 and 2020 (Summ-IT) and checked which suspects were linked to investigations concerning herbal cannabis and cannabis resin. It must be noted that the data set is small, especially that of cannabis resin. Care must therefore be taken not to draw broad conclusions.

4.4.1.1 Herbal cannabis-related suspects

As is indicated in Table 4.22, more suspects were linked to herbal cannabis-related criminal investigations in 2019 than in 2020. We also find that, for both years, over 80 percent of all suspects are men.

Some 43 percent of the herbal cannabis-related suspects were involved in polydrug investigations in 2019. This percentage was significantly higher in 2020: 58 percent. These suspects will therefore also appear in the chapters on cocaine, heroin, and synthetic drugs.

Table 4.22. Number of suspects in herbal cannabis-related investigations

Herbal cannabis	Men	Women	**Total**
2019	991 (87%)	146 (13%)	**1,137**
2020	700	600 (86%)	**100 (14%)**

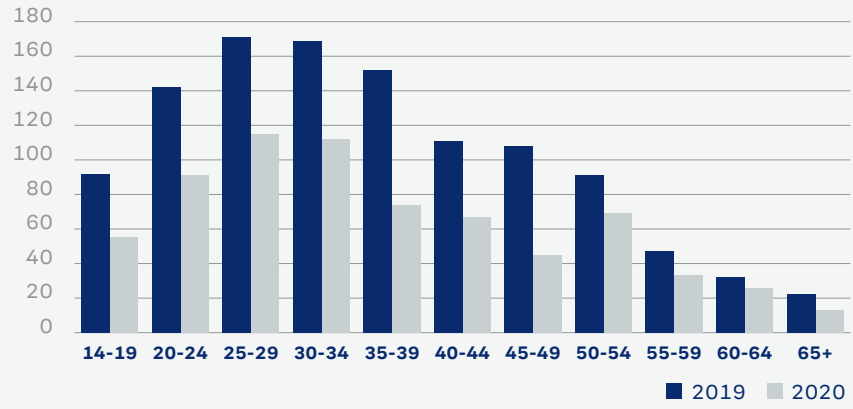
Source: Summ-IT.

In both 2019 and 2020, over 80 percent of suspects held Dutch nationality. Other suspects held Moroccan or Turkish nationality (often in combination with Dutch nationality) and Polish and German nationality.

A major difference between 2019 and 2020 concerns the number of suspects holding Albanian and Greek nationality. This may relate to two specific criminal investigations conducted in 2019 involving suspects with Albanian and Greek nationalities. Hardly any suspects holding Albanian and/or Greek nationality have been registered in 2020.

Figure 4.23 provides the ages of the suspects identified in herbal cannabis-related investigations in 2019 and 2020. No clear peak is visible in 2020; in 2019, the number of suspects peaks between ages 25 and 34. The number of suspects steadily decreases in the age categories of 35 years and over. This decrease is not very significant and we can even notice a slight increase in the 50-54 age category in 2020. Both in 2019 and 2020, it is only from the age of 55 that the number of suspects really goes down. It may be that the cultivation of herbal cannabis is an activity subjects conduct for the long term.

Figure 4.23. Age of suspects in herbal cannabis-related investigations in 2019-2020



Source: Summ-IT.

4.4.1.2 Cannabis resin-related suspects

The number of suspects linked to investigations into cannabis resin is listed in table 4.24. The table shows that fewer suspects were identified in 2020 than in 2019. This decrease is not as large as that seen for herbal cannabis-related investigations in 2019 and 2020. The share of male suspects is 90 percent, with women only constituting 10 percent.

In 2019, 74 percent of all suspects were identified in polydrug investigations, meaning the suspect was not active only in the cannabis resin trade. This percentage was slightly higher in 2020: 78 percent. These suspects will therefore also appear in the chapters on cocaine, heroin, and synthetic drugs. Compared to the suspects linked to herbal cannabis, the percentage of cannabis resin-related suspects identified in polydrug investigations is significantly higher.

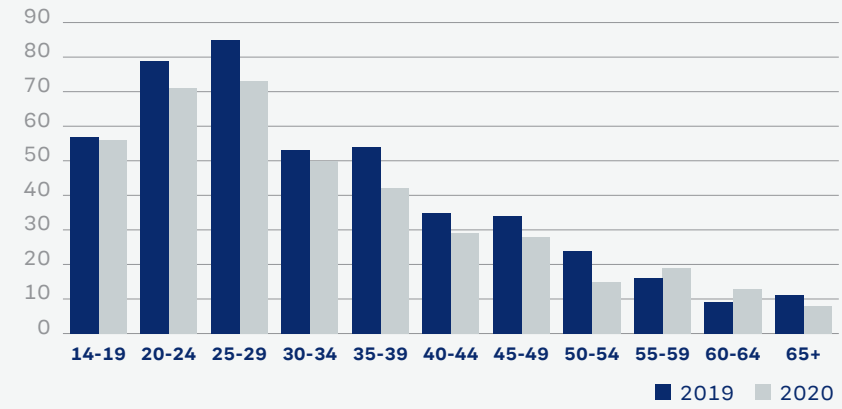
Table 4.24. Number of suspects in cannabis resin-related investigations

Cannabis resin	Men	Women	**Total**
2019	411 (90%)	45 (10%)	**457**
2020	404	363 (90%)	**41 (10%)**

Source: Summ-IT.

In both 2019 and 2020, over 86 percent of suspects identified in cannabis-resin related investigations held Dutch nationality. About one fifth of the suspects held Moroccan nationality, with a major share of them also holding Dutch nationality.
In addition, suspects holding Turkish, Polish, and German nationality have been identified. Of the suspects holding Turkish nationality, some also held Dutch nationality.

Figure 4.25. Age of suspects in cannabis resin-related investigations in 2019-2020



Source: Summ-IT.

The ages of the suspects identified in cannabis resin-related investigations in 2019-2020 have been provided in figure 4.25. This figure shows a more pronounced peak than that concerning herbal cannabis-related suspects. This peak is visible in the 20-29 age group. The peak also starts at a younger age than is the case for herbal cannabis. The number of suspects steadily decreases from age 30, such in contrast to the figure concerning herbal cannabis, where the decrease is more gradual in nature.

4.4.2 Nature of the criminal networks

According to Europol, the criminal networks active in the trade in herbal cannabis and cannabis resin are highly organised. The networks are often hierarchical in nature, featuring defined roles and ranks around a central leadership. It also happens that the networks are tightly organised, but are positioned in a wider circle of persons engaged in criminal activities (Europol, 2021a). A large diversity of criminal groups and increasing violence between these groups are noted (EMCDDA & Europol, 2019).

Dutch criminal groups are active in the cultivation of herbal cannabis, sometimes also across the border. Dutch subjects are involved in the cultivation of herbal cannabis in Belgium (usually along the border), but also in Spain, for example (police information). They make use of hardware provided by Dutch grow shops to conduct their activities. The final product obtained from both Belgium and Spain is partly intended for the Dutch market, but also for further distribution via the Netherlands.

Information received from the LIRC shows that 36 cannabis-related incidents involving Dutch suspects were registered in Spain in 2020. Up through late November, this figure stood at 53 for 2021. Some of these incidents concern investigations involving the seizure of major batches of herbal cannabis and cannabis resin. Most of the cases concerned herbal cannabis, but some batches of cannabis resin were also seized (sometimes in combination with herbal cannabis).

With respect to herbal cannabis, the reports concern dismantled nurseries, but also parcels with herbal cannabis sent from Spain to the Netherlands. The information provided by the LIRC shows that the purchase of these parcels is coordinated from the Netherlands and that contact exists with the managers of the nurseries in Spain. In some cases, the parcels are shipped on to the United Kingdom after having arrived in the Netherlands. Persons holding Dutch nationality are involved as carriers, growers, and organisers (e-mail from the LIRC, 6 December 2021).

The cultivation of herbal cannabis in Belgium is dominated by Dutch organisers. However, we increasingly find that other, non-Dutch criminal groups are starting to cultivate herbal cannabis, possibly also as a means to fund other criminal activities. Various multinational organised crime groups have arisen, where criminal groups from various countries are working together. Such OCGs have also been identified in the Netherlands (Middeleer et al., 2018).

Criminal groups with a Vietnamese background, too, are active in the cultivation of herbal cannabis. This is not a new phenomenon: it has been identified in multiple sites in Europe, including in Belgium and the Netherlands (EMCDDA & Europol, 2019; Middeleer et al., 2018; O-45; police information). Countries like the United Kingdom, Ireland, the Czech Republic, Norway, and Sweden, too, have been reporting the involvement of Vietnamese nationals in the cultivation of herbal cannabis for some years now. In the Czech Republic, their involvement in the cultivation of herbal cannabis is seen to decrease, however. This may be because they switched to producing methamphetamine (EMCDDA & Europol, 2019). Criminal investigations and other police information have shown that certain cannabis nurseries are operated by subjects with a Vietnamese background. They deal with the day-to-day activities in the cannabis nurseries (O-45; police information).[12]

According to the EMCDDA, Albanian-speaking criminal groups, too, are becoming ever more active in the cultivation of and trade in herbal cannabis. As was mentioned in the above, Albanian herbal cannabis is also exported to the Netherlands. In addition to this import from Albania, we also find that Albanian-speaking criminal groups are active in the cultivation of herbal cannabis in the south of the Netherlands. It concerned an Albanian criminal group that leased multiple premises where cannabis nurseries were discovered, such by way of engaging a company's services (O-43). The day-to-day activities in these nurseries were performed by persons from Albania who were flown in by the Albanian criminal group. The criminal group may have put the persons conducting the day-to-day activities in the cannabis nurseries under pressure. A follow-up investigation showed that the Albanian criminal group was active in the large-scale cultivation of and trade in herbal cannabis, both within and outside the Netherlands (Spain and Belgium) (O-44). They were also engaged in the import of herbal cannabis from Spain to the Netherlands. Apart from in these two investigations, no suspects holding Albanian nationality were identified in the context of the cultivation of herbal cannabis in the Netherlands.

12 Only a few suspects with Vietnamese nationality have been identified in the herbal cannabis-related investigations. It may be that they appear in the results for 2017 and 2018 or that these subjects are registered in BVH, and not in Summ-IT.

Europol also notes that Albanian-speaking criminal groups are setting up cannabis nurseries in Spain (Europol, 2021a). In that particular case, the herbal cannabis was hidden in pallets and transported to the Netherlands by lorry (Europol, 2021a).

Subjects active in the cultivation of herbal cannabis are knowledgeable about the cultivation process and exchange this information. Certain subjects are responsible for the day-to-day processes in the nursery, from the setting up of the nursery to the cutting and drying of the plants and tops. Use of automated techniques means that no more than a daily check on whether the plants are growing well is required. Should it become clear that they do not grow well, immediate action is taken to boost them, all in order to obtain a high-quality final product. Quality is important and the traders do take note of a product's quality when procuring it (police information).

4.4.3 Facilitating roles in the cultivation of herbal cannabis

In addition to the criminal networks active in the cultivation of and trade in herbal cannabis, a group of individuals taking on more facilitating roles also exists. These can be persons engaged for a specific job, almost as if they were independent workers. As previously mentioned in the section on the herbal cannabis crime script (4.3.1), we find that there are subjects looking for buildings where cannabis nurseries, cutting nurseries, or drying rooms can be set up. It may be that these persons play a similar role in the synthetic drugs market, where the same phenomenon has been identified (refer to Chapter 6). We also find buildings being registered in the name of straw men, which can also be companies. They make their accounts available for the payment of rent or other fixed expenses, such as electricity and taxes.

Other persons are active as electricians or shed builders. They play an important part in setting up a cannabis nursery or cutting nursery. Electricians make sure electricity is properly diverted, allowing the cannabis or cutting nursery to illegally tap power from the grid. Shed builders build the structures within a location, allowing for the cultivation of cannabis (I-42). These persons are important even before the production of the herbal cannabis can be started up.

Once the tops are harvested, people are hired to cut them. Depending on the harvest, this may be a large group of people, who are paid by the hour or the day (police information).

Such cutters are more likely to get caught than the organisers behind the cannabis nurseries, who tend to remain out of the picture. This is partly due to the fact that, in many cases, the discovery of a cannabis nursery does not lead to an investigation into the organised crime group behind the nursery.

Less information is available in the Netherlands on criminal networks active in the trade in cannabis resin. According to the EMCDDA and Europol, criminal groups with a Moroccan background still play a central role in the trade in cannabis resin from Morocco (EMCDDA & Europol, 2019). This is also noticed in the Netherlands (police information). The section on the suspects (4.4.1) already noted that more suspects with a Moroccan (migration) background were seen in the context of cannabis resin-related criminal investigations than in the investigations concerning herbal cannabis. The same was found to be the case in Belgium (Middeleer et al., 2018). These groups

often collaborate with other European criminal groups in, for example, the Netherlands or Albania (EMCDDA, 2017). Some criminal groups with a Moroccan background control the entire process from the production in Morocco to the sale on the streets of other countries (EMCDDA, 2017; police information).

In order to arrange transportation, procure drugs, make deals, and keep in contact, the groups often uses "PGP" ("pretty good privacy") telephones: telephones allowing for sending messages in encrypted format, so the police and others cannot, in principle, read their contents. In the past few years, the police hacked and seized a number of servers of PGP providers.

4.4.4 Polydrug

As was noted previously, in the section on criminal investigations into herbal cannabis and cannabis resin, these products are often found together with each other and/or other drugs. Criminals often do not limit themselves to trading in one particular type of drug - in fact, polydrug trade is the rule, rather than the exception. The trade varies from, inter alia, herbal cannabis, cannabis resin, heroin, cocaine, ketamine, and amphetamine, or a combination thereof (police information).

It has become apparent from the criminal investigations that both herbal cannabis and cannabis resin are most often combined with cocaine; in the context of cannabis resin, this applies to over half the cases. Criminals active in importing cocaine from South America are also engaged in the import of cannabis resin from Morocco (police information). We have received signals that the cultivation of herbal cannabis is also used as a source of income for funding other criminal activities, such as the import and trade of cocaine. Police investigations have shown that criminals start out "small" by transiting herbal cannabis and then transition to trading in hard drugs (Vermeulen et al., 2018). Consultations with experts, too, have shown that the trade in herbal cannabis and cannabis resin are often found in combination with other (drug) crimes and that criminals consider herbal cannabis and cannabis resin to be a stable source of income in addition to their other activities (I-41; I-43). However, it is difficult to confirm these statements by information obtained from criminal investigations. Precisely because the investigations are focused on something else, such as cocaine, subsidiary investigations into the herbal cannabis and/or cannabis resin are hardly ever conducted.

Police information shows that some of the subjects active in the trade in herbal cannabis and cannabis resin also trade in other drugs, such as heroin, ketamine, methamphetamine, amphetamine, or a combination thereof. The general image is that criminals are opportunists. They trade in those products that are in demand, which means they often trade in multiple drugs (police information).

One case from 2019 concerned a group involved in the production of heroin in a greenhouse in the Netherlands. This group operated a large cannabis nursery at another site.[13]
Due to its origin in Pakistan, cannabis resin, too, is found in combination with heroin, but also with ephedrine and ketamine (police information; also refer to Chapter 7). In

13 ECLI:NL:RBDHA:2019:1609.

early 2021, cannabis resin containing a small dose of heroin was discovered in the Belgian region of Limburg (VRT, 2021). The dealer might have done so in order to get users addicted more easily, according to the spokesperson of the Limburg Regional Unit. In the Netherlands, too, we find that dealers mix cannabis with heroin (also refer to Chapter 7).

We also find that, contrary to what EMCDDA and Europol argued in 2019, not all networks active in the trade are hierarchically structured. We in fact see something more akin to one large network that makes opportunistic use of each other's contacts and trade. For example, when the transport to the Netherlands from another country is scheduled, it may be that other criminals have their own batches shipped in the same load. They also make deals to jointly buy large shipments. No differentiation between wholesale, distributive trade, and street-level dealing therefore seems to exist. The activities seem to be strongly interconnected, in particular those at the wholesale and distributive trade levels (police information).

4.4.5 Conclusion

Significantly fewer suspects were linked to herbal cannabis-related criminal investigations in 2020 than in 2019. In the context of cannabis resin, the number of suspects has remained relatively stable. As the information concerned only two years, no further conclusions can be drawn from them. Between 86 and 87 percent of herbal cannabis and cannabis resin-related suspects are men. Suspects with a Moroccan (migration) background turn up more often in the context of cannabis resin than that of herbal cannabis, making up about one fifth of all suspects. This may be because Morocco has always been an important country in the cannabis resin trade, making it easier to establish contacts. The cultivation of herbal cannabis seems to be a more Dutch-controlled activity.

With respect to the age of the suspects, we note a clear distinction between herbal cannabis-related and cannabis resin-related suspects. In the context of cannabis resin, we find a clear peak of suspects aged 20 to 29. The number decreases rapidly beyond this age. While a peak is also visible in the context of herbal cannabis, this lies in the 20-39 age group and decreases slowly after. We do see a relatively high number of persons aged 40 or over among the suspects. Suspects in herbal cannabis-related investigations possibly continue committing their crimes in the context of herbal cannabis for longer.

Various criminal groups active in the cultivation of and trade in herbal cannabis, and the trade in cannabis resin, conduct their dealings in the Netherlands. These may consist of Dutchmen (in the Netherlands, but also in Belgium and Spain) and of Vietnamese and, to a lesser extent, Albanian-speaking criminals. Criminal groups with a Moroccan (migration) background are also visible in the context of cannabis resin.

Many facilitating roles can be distinguished within the herbal cannabis cultivation process. Some facilitators are independent workers hired as entrepreneurs to conduct a specific job. Among these roles are brokers looking for locations, persons registering buildings in their name, persons making their accounts available for the effectuation of payments, electricians, hydroponics systems providers, and cutters. The role played

by the grow shops, where cultivators can be brought into contact with various facilitators, like shed builders, is of importance, as well.

No clear division of roles is always visible within the networks. The criminals more closely seem to operate as one big network, with everyone working together on an opportunistic basis. Whenever opportunities arise for trading in another type of drugs, these are seized. Transportation, too, is shared. A large degree of interconnectedness exists between the wholesale and distributive trade levels and between the various drug markets.

4.5 Other cannabis-related products

In the final section of this chapter, we will discuss three cannabis-related products: cannabidiol, synthetic cannabinoids, and edibles.

4.5.1 Cannabidiol

In addition to THC, the cannabis plant contains another substance: cannabidiol (CBD). Both CBD and THC are cannabinoids. While CBD does not, in itself, have any psychoactive effects, it does impact the effect of THC. Research has shown that CBD can counter some THC effects, in particular psychotic symptoms, anxiety, and memory degradation. However, not much research has been conducted into the question whether herbal cannabis or cannabis resin featuring a high CBD level is less risky. CBD has been showing up more often in the past few years. This concerns products only containing CBD and, in some cases, containing a combination of CBD and THC or only THC. Many stores sell CBD products, as they might counter complaints like sleeping problems, anxiety, epilepsy, and chronic pain. These products have no psychoactive effect and do not produce the sense of being high (Jellinek, 2021).

4.5.1.1 Penalisation

These days, stores where CBD products are sold are everywhere. As long as CBD or THC is in a solvent form (oil), it is covered by list I to the Dutch Opium Act. The cultivation is not punishable if it is intended for scientific research into medicinal effects or the production of medicines. This exemption from the Opium Act is issued by the Office of Medicinal Cannabis.

One exemption exists to the rule that the cultivation of herbal cannabis is punishable, when it concerns the cultivation of hemp grown for fibre. This exemption is provided for by Section 12 of the Dutch Opium Act. The hemp grown for fibre is a hemp species not containing psychoactive substances. Hemp grown for fibre may be cultivated and used for two purposes only: the production of fibre and the increase of the stock of seeds for the production of this hemp. The THC content of this form of hemp may not exceed 0.2 percent. The use of the tops of this hemp plant is therefore not covered by the exemption. It follows from the above that the cultivation and processing of the tops and leaves (including the extraction of oil - list I) of cannabis and hemp plants for the production of CBD is punishable in the Netherlands. This means that CBD cannot be legally extracted in the Netherlands.

4.5.2.1 Developments

Trade in so-called CBD cannabis - cannabis with high CBD, but low THC level - is taking place in the Netherlands, as a demand for it exists. This trade is punishable under list II

to the Dutch Opium Act. The cannabis concerned is often considered to be of low quality, as it does not make you feel high, like you would when taking cannabis with a high THC level. Moreover, CBD cannabis is sometimes sold as another type of cannabis, as not everyone can easily distinguish it by its shape. This is a form of swindle affecting distributive traders, but also the consumers (police information).

CBD cannabis is mainly procured from Switzerland and sometimes from Austria. The prices of this type of cannabis are generally lower than that of cannabis with higher THC levels. The price of a kilo of CBD ranges between EUR 1,000 and 2,000. It does occur that someone specifically procures CBD cannabis, such with the aim to process it further. Upon arrival in the Netherlands, this cannabis is saturated with a spray containing THC and then sold on for a higher price. Because of the THC spray, the product does make the consumer feel high (police information). It is unclear whether this cannabis is intended for the Dutch or foreign markets.

4.5.2 Synthetic cannabinoids

Synthetic cannabinoids are new psychoactive substances (NPS) mimicking the effects of THC (Van Laar et al., 2020). THC is a substance present in cannabis products like herbal cannabis and cannabis resin. A more detailed explanation on NPS is presented in Chapter 6, Synthetic Drugs. The effects of synthetic drugs can be strong and, because they are unpredictable, also dangerous. One well-known type is called Spice. Other synthetic cannabinoids include Moonlight and K2.

4.5.1.1 Consumer markets

Synthetic cannabinoid consumption in the Netherlands is low. The most recent figure concerning its use dates from 2016, in which year 0.1 percent of young adults (aged 15-34) had consumed synthetic cannabinoids in the last twelve months.
Synthetic cannabinoids can be highly addictive; some types seem to be even more addictive than heroin. The consumption of synthetic cannabinoids among marginalised groups, such as the homeless and inmates, is considered a problem in a number of European countries. In Hungary, synthetic cannabinoids form the most widely consumed form of NPS, together with stimulants (Van Laar et al., 2020). While synthetic cannabinoids consumption in the Netherlands is low, they are popular in surrounding countries, like Germany and the United Kingdom (Jellinek, 2015). Some 1.9 tonnes of synthetic cannabinoids were seized around the globe in 2019 (UNODC, 2021a2). Within the EU, about 0.2 tonnes of synthetic cannabinoids were seized in 2020 (EMCDDA, 2021a).

According to the EMCDDA, new synthetic cannabinoids continue to be produced, forming a threat to public health. Reports from within the EU make mention of new and strong synthetic cannabinoids being produced as fake herbal cannabis and sold to consumers who believe to be buying “normal” herbal cannabis. Hungary has reported 21 deaths due to poisoning by a new form, 4F-MDMB-BICA, between May and August 2020. This new synthetic cannabinoid was first registered in 2020 (EMCDDA, 2021a).

4.5.1.2 Developments in the Netherlands

Two possible synthetic cannabinoids production sites were dismantled in the Netherlands between 2017 and 2020: one in 2018, and one in 2020. In 2018, an active cannabis nursery was discovered in a residential home. Another room was set

up as a cuttting nursery, while yet another room was found to contain a pill popper and blister packs containing white pills. Upon being examined, these pills were found not to contain substances criminalised under the Dutch Opium Act. They did contain traces of herbs. In addition, a herbal mixture and bags of herbs marked “Moonlight” were found (O-641). In 2020, a site was found to also have synthetic cannabinoids present, which were mixed with another substance (O-642). Signs also exist that Spice is being used by detainees in various penitentiaries in the Netherlands (police information).

4.5.3 Edibles

The term “edibles” is an overarching name for food containing cannabis, such as cake or candy (EMCDDA, 2019c). Because the cannabis is mixed with the food, it does not immediately start working, while the effects last for longer. It is exactly because it takes a while for the cannabis to become effective that users start consuming more, which may result in an overdose.
Because the cannabis is processed differently in the body, the effects of space cake are often more intense (Jellinek, 2020).

The Trimbos Institute in 2019 investigated the range of cannabis products on offer by coffeeshops. 54 coffeeshops completed the questionnaire. 48 percent of the coffeeshops consulted were selling edibles. The most commonly sold product by coffeeshops indicating they sold edibles was space cake (65%), but brownies, bonbons, cookies, and candy, too, are often named. The vast majority of edibles (88%) is made in-store; a small share is procured elsewhere.
The United States have witnessed a massive increase in the consumption of edibles. The coffeeshop owners consulted in connection with the Trimbos Institute investigation do not believe such a development to be likely in the Netherlands, partly because edibles may not be sold in coffeeshops. They do expect the group of cannabis consumers already looking for specific types of cannabis to be interested in new cannabis products and consumption methods. In addition, certain consumers do not smoke tobacco and are looking for more “healthy” consumption methods. According to the Trimbos Institute, this group seems to be growing larger (Rigter et al., 2019).

4.5.4 Conclusion

This section addressed three cannabis-related products: cannabidiol, synthetic cannabinoids, and edibles.
Cannabidiol (CBD) as a solvent (oil) is covered by list I to the Dutch Opium Act and the trade in CBD cannabis is punishable under list II to that Act. As CBD cannabis is of lower quality, it is sometimes sprayed with a spray containing THC, allowing criminals to sell this cannabis on against a higher price.
Synthetic cannabinoids are new psychoactive substances (NPS). The consumption of synthetic cannabinoids in the Netherlands is not prevalent, but a number of European countries report (problematic) consumption among marginalised groups, such as the homeless and inmates. Two possible synthetic cannabinoids production sites were dismantled in the Netherlands between 2017 and 2020.
Edibles are food products containing cannabis. Expectations are that the group of cannabis consumers already looking for specific types of cannabis may be interested in new cannabis products and consumption methods, including edibles.

5

Cocaine

5. Cocaine

Louise de Graaf and Caitlin Hoogendoorn

5.1 Introduction

The most important variants of cocaine are powder cocaine on the one hand and a range of cocaine base products - usually all referred to as “crack” - on the other (UNODC, 2010).
Cocaine (cocaine hydrochloride) or coke is a white, crystally powder that can be snorted. The active substance, cocaine, is extracted from leaves of the coca shrub (erythoxylon coca), which mainly grows in South America. The leaves contain between 0.1 and 0.9 percent cocaine. Cocaine is extracted from the leaves of the coca plant by way of a chemical process.
Crack is the processed form of cocaine. Crack is produced by adding washing soda (sodium carbonate) or ammonia to cocaine hydrochloride (snorting coke) and cooking it until it forms a base. Crack takes the shape of hard, whitish yellow or brownish yellow lumps (www.drugskompas.nl; www.jellinek.nl).

Cocaine, coca leave and the chemical compound ecgonine, which can be found in coca leaves (including its esters and derivatives, which can be converted into ecgonine and cocaine) are all included on Schedule I of the United Nations 1961 Single Convention on Narcotic Drugs (UNODC, 1961) and have been criminalised in the Netherlands by inclusion on list I to the Dutch Opium Act. Unless stated differently, wherever this report uses the term “cocaine”, the term refers to cocaine hydrochloride.

This chapter focuses on organised crime in connection with cocaine that has a link to the Netherlands. This may concern organised crime occurring within Dutch territory or the involvement of Dutch criminal networks and/or Dutch subjects and/or international networks also active in the Netherlands in the context of the transnational trade in drugs.

We will address the following topics: the scope of the cocaine market, its nature, trends and developments, and the criminal networks and subjects involved. In each case, we will first discuss the global image before zooming in on, first, the situation in Europe and, second, that in the Netherlands. We mainly used data from the 2017-2020 period. Whenever information from the first half of 2021 was available at the time this chapter was drafted, this, too, has been included. Information originating from criminal investigations has been included in the text in coded form: O-51 through O-57.

5.2 Scope of the cocaine market

The cocaine market is a market of supply and demand. In order to be able to provide an indication of the scope of this market, we will in this section first discuss the consumer markets. Next, we will look more closely into the supply, inter alia by considering the

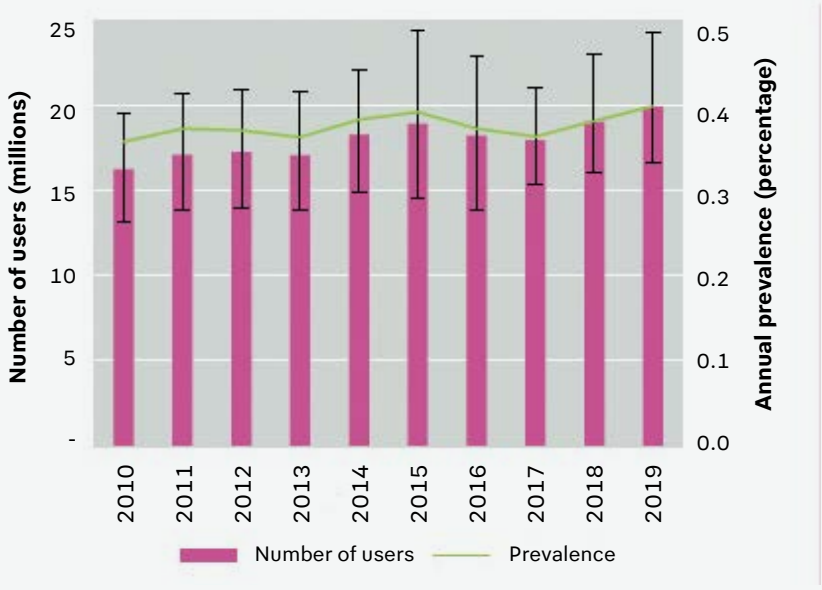
production and seizure figures. Both demand and supply are in each cases considered on the global, European, and Dutch levels.

5.2.1 Demand for cocaine: consumer markets

In 2019, 0.4 percent of the global population aged 15 to 64 - or about 20 million people - had consumed cocaine in the past year (UNODC, 2021a4). It is estimated that cocaine consumption is highest in Oceania. This in particular holds true for Australia and New Zealand, where consumption in the past year was estimated to be 2.7 percent in 2019. Consumption within the past year in 2019 amounted to 2.1 percent in North America, 1.4 percent in Western and Central Europe, and 1 percent in South and Central America (UNODC, 2021a4).

Total global cocaine use has been on the increase since 2017. Each year, the group of consumers aged 15 to 64 has grown by about a million persons. This partly corresponds to the increase of the global population. The prevalence of cocaine consumption increases less rapidly and stands at about 0.4 percent (UNODC, 2021a4; UNODC, 2020a3; UNODC, 2019a4). This is also evident from Figure 5.1.

Figure 5.1. Estimated global number of cocaine consumers 2010-2019



Source: UNODC estimates, based of the annual report questionnaire. Note: Annual prevalence of use among the population aged 15-64. Number of users in the past year aged 15-64

Source: UNODC, 2021a4.

In Western and Central Europe - or at least in some countries in the region - waste water analyses indicate that here, too, cocaine consumption is on the rise (UNODC, 2021a2).
Cocaine is the second most commonly used drug in Europe, albeit that prevalence levels and trends vary significantly between countries (EMCDDA, 2021a; EMCDDA, 2020a).[14]

Estimates of cocaine consumption in the European Union show that 1.2 percent of adults aged 15 to 64, or almost 3.5 million people, have used cocaine in 2020. The percentage of persons having used cocaine once in their lives was 4.8 percent, or 13.8 million people (EMCDDA, 2021a).

According to a 2019 analysis into cocaine traces in municipal waste water, the highest concentrations of benzoylecgonine - the most important metabolite[15] of cocaine - were found in cities in the EU countries of Belgium, Spain, and the Netherlands, but also in cities of the United Kingdom (EMCDDA, 2020a). This may indicate that consumption levels in these countries are the highest in Europe[16]. The most recent data indicate that cocaine consumption becomes ever more common in cities in Eastern Europe, even though detection levels remain low (EMCDDA, 2021a).

During the first lockdown caused by the COVID-19 pandemic, in 2020, benzoylecgonine levels in the waste water were found to decrease in a relatively high number of European cities. An increase was visible in relatively many cities after that lockdown was lifted. One possible explanation for this decrease in cocaine consumption during the first lockdown is that fewer opportunities existed to use drugs as a consequence of the COVID-19 measures. Cocaine is associated with the night economy, which was shut down during the first lockdown. In the second half of 2020, indications for increased use were identified in the summer months, possibly due to the social gatherings and nightlife activities that were organised once more (EMCDDA, 2021c).

Cocaine use in the Netherlands is higher than the European average. In 2019, 6.5 percent of people aged 15 to 64 had used cocaine once in their lives, and 2.3 percent had consumed it in the past year. Cocaine consumption among the population aged 15 to 64 was significantly higher in 2019 than in 2015. Where in 2015 5.1 percent had consumed cocaine once in their lives, this figure was 6.5 percent in 2019, as mentioned in the above. The trend of increasing consumption seems to have levelled off, however. The percentage of people that have consumed cocaine once in their lives was as high in 2019 as in 2018. The level of consumption in the past year was virtually the same throughout the 2015 to 2019 period, fluctuating between 1.9 and 2.3 percent. Young adults are most prone to use cocaine. People in their twenties most often reported

14 Cannabis is the most commonly used drug. Cannabis consumption levels are many times higher than those of cocaine (refer to Chapter 4).
15 Metabolites are the intermediate or final products created once a chemical substance has been metabolised in a biological system of living organisms. Metabolites include amino acids, adenosine triphosphate, glucose, adrenaline, alkaloids, and glycosides (www.ensie.nl/piet-van-der-ploeg/metabolitiet).
16 These analyses usually do not differentiate between dumping and human consumption. The data strongly indicating dumping have been left out of the analysis, however (www.trimbos.nl/kennis/feiten-cijfers-drugs-alcohol-roken/rioolwateronderzoek).

having used cocaine within the past year: 7.1 percent in the category aged 25 to 29 and 6.9 percent in the category aged 20 to 24. Cocaine is consumed in combination with other drugs relatively often. 54 percent of cocaine users in the Netherlands suffering a health incident had used another drug, usually ecstasy or GHB (Van Laar et al., 2021).[17]

5.2.2 Supply of cocaine: production and seizure figures

This section provides an indication of the size of the market on the basis of the production and seizure figures - i.e., the supply side. The number of seizures can be deemed a lower limit of the total actual size of cocaine trade. In this section, too, we will first discuss the global picture before focussing on the European and, finally, the Dutch situation. The Dutch seizure figures have been supplemented by data collected during criminal investigations and mutual legal assistance requests. As cocaine that was attempted to smuggled into the EU via the port of Antwerp would predominantly be intended for Dutch networks, the seizure figures related to these shipments, too, are discussed in this section.

The cultivation of coca and production of cocaine predominantly takes place in countries in the Andes region, including Colombia, Peru, and Bolivia. Production has significantly increased since 2017: in 2017 alone, almost 2,000,000 kilos of 100 percent pure cocaine was produced (EMCDDA, 2019a), constituting an increase of almost 25 percent from the previous year (UNODC, 2019a4). According to the UNODC, global cocaine production has doubled between 2014 and 2019, with the highest production level ever having been realised in 2019 (UNODC, 2021a4).[18]

Table 5.2. Global cocaine production in kilos and hectares of coca shrubs

Cocaine	Total cocaine* production in kilos	Total area of coca shrub cultivation in hectares
2017	1,644,000 - 1,976,000	245,000
2018	1,723,000	244,200
2019	1,784,000	234,200
2020	–	–

* Only the production of 100 percent pure cocaine was calculated to arrive at the production figures.

Source: UNODC, 2019a4; UNODC, 2020a3; UNODC 2021a4.

17 Health incidents are recorded by the Monitor Drug Incidents (MDI) and relate to acute drug use risks in the Netherlands, including acute health problems (www.trimbos.nl/kennis/feiten-cijfers-drugshandel-drugsincidenten/monitoring-drugsincidenten-in-nederland).

18 The UNODC has calculated multiple figures (cf. UNODC, 2019a4; UNODC, 2020a3). To prevent confusion, we in this report used the most recent UNODC report, from 2021, as much as possible. Incidentally, the global opium poppy cultivation level is higher than the coca cultivation level (UNODC, 2021a2; also refer to Chapter 7).

As table 5.2 shows, the area used for the cultivation of coca has decreased since 2018. This is due mainly to a decrease in Colombia (minus 9 percent). The number of hectares remained stable in Peru and increased in Bolivia (plus 11 percent) (UNODC, 2021a4). Despite the decrease in area used for the cultivation of coca in Colombia, the coca leaves harvest has actually increased slightly. This shows that the cultivation in Colombia has become more efficient and production per hectare has increased (INCB, 2021b; UNODC, 2021a4). The lion's share of coca cultivation still takes place in Colombia. The country was responsible for 64 percent of global cultivation in 2019. Peru came second, producing 23 percent, and Bolivia third, producing 11 percent (UNODC, 2021a4).

At the moment this report was drafted, the 2020 global cocaine seizure figures were not yet available. The figures covering 2017 through 2019 were available though. They have been reproduced in Table 5.3.

Table 5.3. Global cocaine seizure figures in kilos

Cocaine	Total seizures*
2017	1,275,000
2018	1,311,000
2019	1,436,000
2020	-

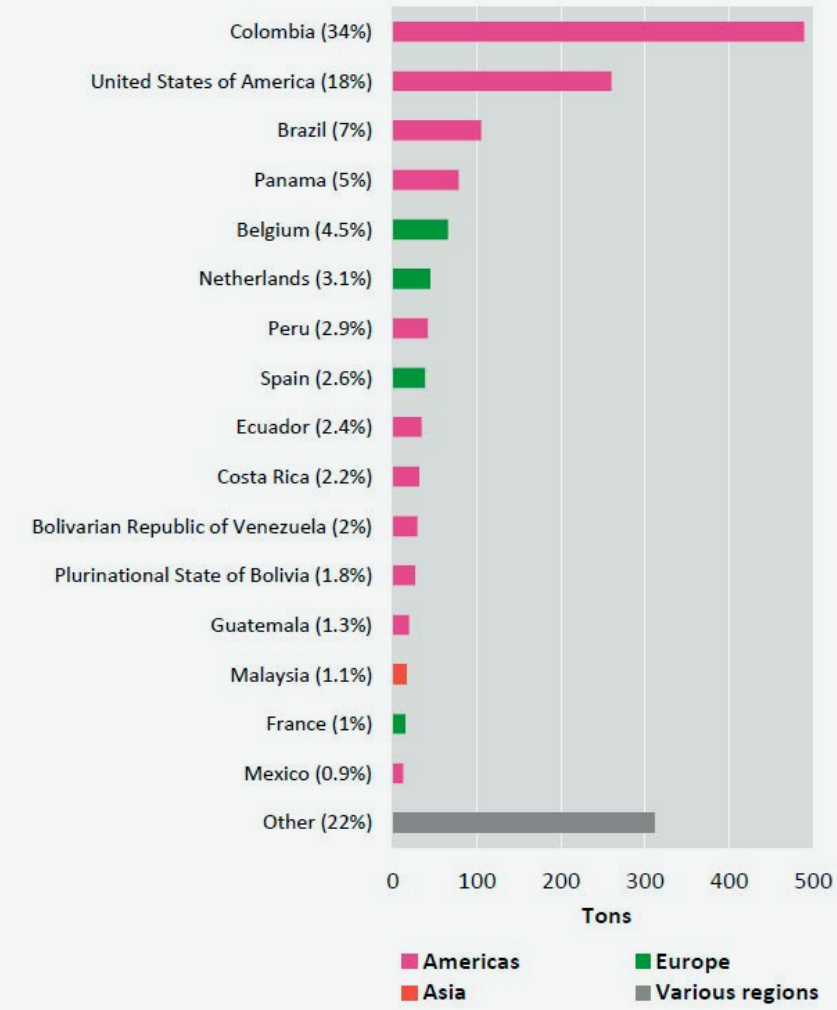
*The seized quantities are of varying levels of purity.

Source: UNODC, 2019a4; UNODC, 2020a3; UNODC, 2021a4.

The cocaine seizure figures as presented in Table 5.3 cannot be compared to the cocaine production figures listed in Table 5.2, as the production figures relate to pure cocaine, while the seizure figures include cocaine of varying levels of purity.
The majority of cocaine seizures in 2017 took place at sea or in seaports (55 percent). 25 percent was confiscated on land and 15 percent at airports (EMCDDA, 2019a). No such distribution figures exist for the years after 2017.
The number of kilos seized increased over the period from 2017 through 2019.
A record amount of 1,436,000 kilos was seized in 2019, constituting a 9.6 percent increase from the 2018 figure. This may relate to an increase in production and/or trade over the past few years. The UNODC also assumes this may be due to improved law enforcement efficiency (UNODC, 2021a4).

Of the sixteen countries seizing the highest amounts of cocaine in 2019, eleven were located in the Americas (UNODC, 2021a4). Figure 5.4 shows that most cocaine was seized in Colombia, the United States, and Brazil. Belgium, the Netherlands, and Spain, too, were responsible for major cocaine seizures.

Figure 5.4. Cocaine seized in kilos in 2019



Source: UNODC, 2021a4.

The European and European Union cocaine markets, too, are large. In 2018, 177,000 kilos were seized in the European Union, increasing to a whopping 213,000 kilos in 2019. 69 percent of this quantity was seized in Belgium, the Netherlands, and Spain (EMCDDA, 2021a). The amounts seized have increased in almost all European countries (UNODC, 2021a4).

In addition to powder cocaine, coca leaves and small quantities of coca paste have also been seized in the European Union: in 2018, it concerned 243 kilos of coca leaves and 184 kilos of coca paste. This may indicate a diversification of the production

process by some criminal networks. In the previous years, cocaine labs in Europe were mainly used as secondary extraction facilities, to extract cocaine from the carrier materials it was included or hidden in; they were not used to produce cocaine from coca leaves or coca paste (EMCDDA, 2020a). We address this in greater detail in section 5.3.4.

Figure 5.5. Number of seizures in the European Union in 2019 and quantity in kilos

*EU + 2 refers to the EU + Norway and Türkiye.

Source: EMCDDA, 2021a.

The cocaine purity level has been increasing in the past decade, both at the wholesale and consumer levels. The purity at wholesale level is relatively high: over 85 percent. This indicates greater availability of cocaine in Europe (EMCDDA, 2019a).
At the consumer level, the purity has increased by 57 percent from index year 2009 to 2019 (as also appears from Figure 5.5), while cocaine consumer prices have remained stable (EMCDDA, 2021a). This, too, suggests that the availability of cocaine in Europe has reached an unprecedented high (EMCDDA, 2020a).

Table 5.6. Top ten EU countries and Türkiye reporting the greatest quantities of seized cocaine hydrochloride in kilos*

Country	Amount of kilos 2017	Amount of kilos 2018	Amount of kilos 2019	Increase or decrease in % (2019 compared to 2017)
Belgium	44752	53032	65248	45.8
The Netherlands **	14629	40134	43836	199.7
Spain	40960	48453	37868	-7.5
Romania	8	35	16157	**196936.6**
France	17500	16357	15761	-9.9
Portugal	2734	5541	10567	286.5
Italy ***	4084	3623	8245	101.9
Poland	69	277	2248	3157.7
Latvia	2	5	2202	**95621.7**
Türkiye ***	1476	1509	1634	10.8

* rounded to kilos
** the figures for the Netherlands are the minimum figures. The figures regarding seizures are not complete. In addition, these figures derive from a different source, causing the variance with the figures presented in Table 5.7.
*** seizures of liters of liquid cocaine have not been included in these figures.

Source: Statistical Bulletin 2021 EMCDDA, seizures of drugs.

Table 5.6 lists the figures over 2017 through 2019 for the countries where the largest quantities of cocaine have been seized in 2019. The last column displays the increase or decrease, in percentages, comparing the quantities seized in 2019 to those in 2017. Strikingly, in 70 percent of the countries, the amount of cocaine seized has increased. For some countries, the increase or decrease in percentage terms is very high, as the quantities seized in those countries could be very small in 2017. 83 percent of all cocaine seizures in 2017 were conducted at the retail level. The quantities of cocaine seized differ per seizure. In many cases, it concerned amounts under 10 grams (EMCDDA, 2019a). The source of the Dutch figures presented by the EMCDDA is not known. They therefore differ from the figures we list in Table 5.7. This goes to show how difficult it is to obtain a sound picture of the Dutch figures. Both tables do display the same trend: the number of kilos seized in the Netherlands has increased year on year.

Indication of the market size in the Netherlands based on the Dutch seizure figures
Similarly to the rest of the European Union, an increase in the number of seized kilos has been noted in the Netherlands, as well (refer to Table 5.7) - in fact, in 2018 and 2019, the quantities seized by Customs (*Douane*) have virtually doubled. While an increase is still visible in 2020, it is less pronounced than in the previous years. The Royal Marechaussee (*Koninklijke Marechaussee – KMar*) seized a lot less cocaine than Customs did. This is due to Customs inspecting the flows of goods and the Royal

Marechaussee exercising border controls on flows of people (and any baggage), which latter flows do not allow for smuggling major quantities (refer to Table 5.7). It is in particular by freight transport over sea that large volumes of cocaine can be transported, and transport by sea is the most commonly used smuggling method (refer to section 5.3.2.1). As the police does not use a single system for registering its seizures, these figures have not been taken into account for this chapter (refer to Chapter 2 and References for more information).

Table 5.7. Seizures by Customs and the Royal Marechaussee in kilos*

Cocaine	Total seizures by Customs	Total seizures by the Royal Marechaussee
2017	10,219	804
2018	21,188	1005
2019	40,095	1067
2020	48,891	948
Total	120,393	3,824

* Data obtained from Customs

Source: Customs and Royal Marechaussee.

Cocaine destined for the Netherlands is loaded somewhere else. The HARC has provided us with data from these countries of loading for the purposes of this National Strategic Assessment.[19] These figures concern the seized cocaine that was shipped to the Netherlands using container vessels in the years of 2019 and 2020. Refer to Table 5.8. The country of loading of a number of batches seized in the Netherlands is not known. This may be because the cocaine was found washed ashore on the beach or in a van on the quay, in which case the container it was shipped with could not be identified.

The following is based on data provided by the Rotterdam HARC team. These data slightly differ from the presented totals of seized cocaine, due to a few missing figures (refer to Table 5.8). In 2019, Customs discovered 134 batches with cocaine in the Dutch ports. This figure rose to 148 in 2020. The total quantity seized increased from 37,338 kilos in 2019 to 47,681 kilos in 2020. The seizures mainly took place in the port of Rotterdam, but also in Flushing and Moerdijk.
Table 5.8 lists the top fifteen countries where the cocaine discovered in 2019 and 2020 was loaded. 41 percent (15,375 kilos) of the cocaine seized in 2019 was loaded in Brazil. Ecuador takes second place as country of loading, representing 20 percent

19 The HARC Rotterdam is a cooperative venture of Customs, FIOD, the Rotterdam Regional Unit Seaport Police (*Zeehavenpolitie*), and the Public Prosecution Service.

(7,350 kilos), while Costa Rica ranks third with 5,461 kilos (15 percent). Suriname and Colombia, too, were responsible many seized shipments containing cocaine in 2019.

The quantity of cocaine loaded in Ecuador more than doubled in 2020 from the 2019 figure, up to a total of 15,007 kilos. Ecuador for this reason in 2020 ranks first as the country where most of the seized cocaine was loaded, with about 31 percent of the total figure originating there. Brazil dropped to second place in 2020, representing 12,093 kilos (25 percent), or less than in 2019. Like in 2019, Costa Rica ranks third in 2020, with 7,372 kilos (15 percent). Of note is the increase of shipments from the Dominican Republic in 2020: the figures went up from one shipment of fifteen kilos in 2019 to ten shipments totalling 4,044 kilos in 2020. A major increase in the number of shipments was also witnessed for Curaçao: from three shipments to nine.

Table 5.8. Countries of loading and quantities in kilos in 2020 and 2019

Country of loading	Total kilos (kg)		Number of shipments		Average quantity per shipment in kilos	
Year	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Ecuador	15,007	7,350	30	38	500	199
Brazil	12,093	15,375	35	33	346	466
Costa Rica	73,712	5,461	5	7	1,474	780
Dominican Republic	**4,044**	**15**	**10**	**1**	**404**	**15**
Chile	2,259	2,068	7	2	323	1,034
Colombia	1,534	2,363	11	20	140	124
Peru	1,324	96	8	5	165	24
Panama	1,077	–	2	–	539	–
United States	856	–	2	–	428	–
Suriname	537	3,111	17	15	32	207
Mexico	259	499	2	1	129	499
The Netherlands	156	–	2	–	78	–
Curaçao	127	352	9	3	14	117
Russia	35	–	1	–	35	–
China	19	–	1	–	19	–
Total	**47,681**	**37,338**	**148**	**134**	**322**	**285**

Source: Rotterdam HARC team.

Data obtained from the Rotterdam HARC team. The total amount seized in kilos in this table is different from that displayed in Table 5.7. This is due, inter alia, to differences in the counting method and the fact that some data were missing from the document. For example, Customs indicates to have seized 40,095 kilos of cocaine in 2019, but the amounts listed in the data provided by the HARC team total to 37,338 kilos

Compared to 2019, more smaller shipments were discovered in 2020. They also arrive from a greater number of countries, including Russia, China, Panama, and the United States. This would indicate that smugglers have started more often using other routes and points of departure (police information; UNODC, 2020a3). Criminals seem to be aware of the so-called "high-risk countries", the loads arriving from which are more prone to inspection, causing them to look for alternative routes to stay below the radar of the customs authorities and the police (police information).
The changes in the list of primary countries of loading may be related to the COVID-19 pandemic: multiple countries were in (full) lockdown during the pandemic, with all or part of the trade between countries grinding to a halt (www.UNCTAD.org; www.Waypointports.com). The lockdowns sometimes involved ports or transportation companies being fully or partly closed for business, meaning that alternative routes needed to be found to smuggle cocaine to Europe. In addition, as many national borders were closed in South America, batches of cocaine could not always be transported to the intended countries of transit or loading (such as Brazil) and alternative transit countries in South or Central America had to be sought (https://diplomatie.belgium.be).

The data received from the Rotterdam HARC team shows that most of the cocaine confiscated in the Netherlands is seized in the port of Rotterdam. In addition, eleven batches were in 2020 seized in Flushing. Even though few inspections take place in smaller ports, as few large container vessels moor there, indications exist that ports like IJmuiden, Zeebrugge, Lauwersoog, Harlingen, Den Helder, and Urk are, in fact, used for smuggling cocaine (police information). The cocaine is smuggled into these ports using small boats and fishing cutters. In these cases, the cocaine is dropped or transshipped at sea (police information). The batches of cocaine seized in the Netherlands are generally also destined for the trade in and via the Netherlands (HARC Rotterdam data).

The Rotterdam HARC team seizure data analysed mainly show the import of cocaine and the shipments exclusively containing cocaine. The export of drugs from the Netherlands is a blind spot, as this receives less attention from the investigation services (Staring et al., 2019). Research by Vermeulen et al. (2018) shows that transit of cocaine via the Netherlands mostly takes place in a polydrug trade context. No total figures of the polydrug shipments seized are available from the HARC team. We were therefore unable, on the basis of the data available to us, to conclude which combinations of cocaine and other drug types appeared in the imported and exported shipments.

Indication of the market size in the Netherlands on the basis of the seizure figures in Antwerp

The majority of the cocaine entering or intended for the port of Antwerp was destined for Dutch criminal networks. Antwerp is the second-largest port of import in Europe, trailing only Rotterdam. Estimates arrived at in earlier studies suggest that 70 to 80 percent of cocaine shipments entering the port of Antwerp were destined for the Dutch criminal market (Boerman et al., 2017; Colman et al., 2018).

We therefore in this section also consider the seizure figures from Antwerp. The Belgian Federal Judicial Police (*Federale Gerechtelijke Politie – FGP)* made data available for use in this report. Table 5.9 lists the total amounts of cocaine seized in Antwerp, in kilos.

As was previously indicated in this section, from 2017 through 2019, Belgium each year topped the list of EU countries where most cocaine was seized. The majority of this cocaine was discovered in Antwerp (FGP data). In 2020, well over 2,451 kilos of cocaine - 4 percent of the total Belgian figure - were seized outside of Antwerp (FGP data). With respect to Antwerp, too, the quantities seized have significantly increased in the past few years, even though the rising trend has flattened somewhat in 2020. Refer to Table 5.9.

Table 5.9. Antwerp cocaine seizure figures in kilos

	Cocaine
2017	41,160
2018	50,644
2019	62,102
2020	65,568
Total	**219,474**

Source: Antwerp FGP.

The top three countries of loading in 2020 were Ecuador, Guyana, and Brazil. 58 percent of the total number of shipments and 56 percent of the total kilos seized arrived from these three countries, Of note is that Guyana takes second place. This concerned one shipment, which also formed the largest international seizure of cocaine ever, at 11,497 kilos (The Brussels Times, 2020). As Guyana might provide a distorted picture of the primary countries where cocaine destined for Antwerp is loaded, Table 5.10 displays the top five countries in 2019 and 2020. Both in 2019 and 2020, Ecuador is in the top three. The number of shipments from Ecuador increased from 30 to 43 and the quantity from 10,237 kilos to 25,401 kilos of cocaine - or 39 percent of the total figure for 2020. Like in the Netherlands, the number of kilos of cocaine from Ecuador seized has risen sharply.

The number of shipments from Brazil decreased (from 23 to 15), as did the number of kilos; likewise, the number of shipments (from 18 to 8) and kilos from Colombia went down. However, both countries are still in the top five of countries of loading. Strikingly, Costa Rica has dropped from the top five in 2020. In 2019, Costa Rica took the fourth spot, with 9,176 kilos in nine shipments, but this decreased to 646 kilos in three shipments in 2020.

Table 5.10. Countries of loading and quantities destined for Antwerp in 2019 and 2020

	2020			2019		
Country of loading	Total number of kilos	Number of shipments	Average quantity per shipment in kilos	Total number of kilos	Number of shipments	Average quantity per shipment in kilos
Ecuador	25,401	43	591	10,237	30	341
Guyana	11,498	1	11,498	-	-	-
Brazil	6,332	15	422	15,793	23	687
Paraguay	5,609	3	1,870	5,110	3	1,703
Colombia	4,040	8	505	10,405	18	578

Source: FGP.

The FGP also possesses data on shipments of cocaine destined for Belgium (Antwerp) seized internationally. In 2019, 76,986 kilos of cocaine were seized outside of Belgium. This figure dropped by about 12 percent to 67,780 kilos in 2020. Brazil, Ecuador, and Colombia by far seized most of the cocaine destined for Antwerp in 2020. No data of international seizures of cocaine destined for the Netherlands (Rotterdam) are known to the police.

Indication of the market size in the Netherlands on the basis of investigations listed in Summ-IT

Table 5.11 shows that 514 criminal investigations into cocaine-related crime - from street dealing tot wholesale trade - were conducted in 2019. In 2020, it concerned 515 such investigations. These criminal investigations vary from investigations into street dealers and distributive trade (a major share of the investigations) to investigation into the large-scale import, transit, and export of major batches of cocaine. In both years, quite a few investigations were conducted into cocaine extraction facilities.

The subject (criminal activity) of 99 of the 514 investigations carried out in 2019 was the "import and transit of cocaine", meaning they may have had an international component. In 2020, this applies to 103 of the 515 investigations.

Table 5.11 also shows that almost half of the investigations - 48.8 percent (251 of 514) in 2019 and 50.7 percent (261 of 515) in 2020 - also related to other types of drugs.

Table 5.11. Polydrug distribution in cocaine-related investigations in 2019 and 2020

Criminal investigations	Cocaine-related	Cocaine - polydrug	Cocaine - heroin	Cocaine - synthetic drugs
2019	514	251	92	290
2020	515	261	96	320

Criminal investigations	Cocaine - chemicals	Cocaine - cannabis	**Total**
2019	28	146	**1,086**
2020	46	153	**968**

Source: Summ-IT.

The other drug types are not mutually exclusive. In fact, in many cases, multiple other drugs were found or investigated in addition to cocaine. In most of the polydrug cases, cocaine was found in combination with synthetic drugs. This was usually MDMA, but 2020 also witnessed a striking increase in the number of investigations relating to speed / amphetamines. In addition, cannabis and heroin (opium/morphine) turn up relatively often in cocaine-related investigations.

With respect to 2017 and 2018, only the classification of the criminal investigations was looked at; they were not individually analysed. In both years, 132 investigations were conducted. They had one of the following classifications: import, export and transit of cocaine; trade cocaine; and laboratory cocaine.

Indication of the market size in the Netherlands based on the mutual legal assistance requests in LURIS

It must be noted that no less than 79.4 percent of registered mutual legal assistance requests are labelled *general narcotics*[20] (refer to Chapter 2 and References). The mutual legal assistance requests registered as being cocaine-related are therefore only indicative for the actual mutual legal assistance provided in the context of cocaine. Between 2017 and 2020, a total of 1,347 mutual legal assistance requests were related to cocaine (refer to Table 5.12).. As applies to cannabis, synthetic drugs, and heroin, the number of incoming mutual legal assistance requests (1,037) is much higher than the number of outgoing ones (310). The total number of cocaine-related mutual legal assistance requests went down in 2018 and 2019, but increased again in 2020.

Table 5.12. Incoming and outgoing cocaine-related mutual legal assistance requests

	2017	2018	2019	2020	2017 through 2020
Incoming	323	243	221	250	1037
Outgoing	113	63	59	75	310
Total	**436**	**306**	**280**	**325**	**1,347**

Source: LURIS.

Table 5.13 displays the top five countries cocaine-related mutual legal assistance requests are exchanged with. As applies to other drug types, Germany and Belgium top the list and jointly exchange about 40 percent of all cocaine-related mutual legal assistance requests.

Of particular note is that Suriname only takes a tenth spot in cocaine-related mutual legal assistance requests and that this is the country in the top ten receiving more requests from the Netherlands than submitting requests to it.

Curaçao and Colombia (both just outside the top ten), too, receive more mutual legal assistance requests than they submit. This may be related to the position taken by these countries in the global cocaine trade linked to the Netherlands (refer to section 5.3).

20 The requests included in this category have been given the following labels: general narcotics, EIO illegal trade in narcotics and psychotropic substances.

Table 5.13. Top five countries mutual legal assistance requests are exchanged with

	2017	2018	2019	2020	2017 through 2020
Federal Republic of Germany	**114**	**65**	**69**	**83**	**331**
Incoming	98	57	64	77	296
Outgoing	16	8	5	6	35
Belgium	**76**	**44**	**28**	**55**	**203**
Incoming	45	36	22	47	150
Outgoing	31	8	6	8	53
France	**40**	**33**	**23**	**24**	**120**
Incoming	32	32	21	20	105
Outgoing	8	1	2	4	15
United Kingdom	**25**	**21**	**18**	**24**	**88**
Incoming	24	19	16	22	81
Outgoing	1	2	2	2	7
Spain	**14**	**16**	**16**	**15**	**61**
Incoming	8	11	11	11	41
Outgoing	6	5	5	4	20

Source: LURIS.

5.2.3 Conclusion

This section looked into the size of the cocaine market, considering both the demand and the supply side. We discussed the global picture, the situation in Europe, and that in the Netherlands.

Total global cocaine use has been on the increase since 2017. Each year, about a million new consumers aged 15 to 64 appear. In 2019, 20 million people in total consumed cocaine. In Europe, cocaine is the second-most widely used drug, after cannabis. Estimates suggest that Europe had about 3.5 million users aged 15 to 64 in 2020. Cocaine use in the Netherlands is higher than the European average. Cocaine is consumed in combination with other drugs relatively often.

When considering the supply of cocaine, we looked at the production and seizure figures. The number of seizures can be deemed a lower limit of the total actual size of cocaine trade. Global production increased from 2017, with the highest production level ever reached in 2019. The cultivation, which mainly takes place in Andean South American countries, has become more efficient, as the yield per hectare was found to have increased. The lion's share of coca cultivation still takes place in Colombia. Peru and Bolivia take up spots two and three.

The global number of kilos seized increased over the period from 2017 through 2019, to a record 1,436,000 kilos in 2019.

In Europe, Belgium, the Netherlands, and Spain were, in that order, responsible for seizing the largest quantities of cocaine. In 2019, 213,000 kilos were seized in the European Union. The amounts seized have increased in almost all European countries. The cocaine purity level has been increasing in the past decade, both at the wholesale and consumer levels. The cocaine traded at the wholesale level over 85 percent pure. This indicates greater availability of cocaine in Europe.
To obtain an indication of the market size in the Netherlands, we looked at the seizure figures of the Netherlands and Antwerp, the number of criminal investigations by the police, and the number of mutual legal assistance requests. The number of cocaine seizures in the Netherlands has increased. In 2020, most of the cocaine seized in the Netherlands arrived from Ecuador, with Brazil being the second most common country of loading. This was the reverse of the situation in 2019, when Brazil took the top spot. In both years, Costa Rica ranked third among the countries of loading. Compared to 2019, more smaller shipments were discovered in 2020. They also arrived from a greater number of countries. This would indicate that smugglers have started more often using other routes and points of departure.
Most of the cocaine confiscated in the Netherlands was seized in the port of Rotterdam. An enormous increase in the number of shipments from the Dominican Republic was observed in 2020: the figures went up from one shipment of 15 kilos in 2019 to 10 shipments totalling 4,044 kilos in 2020.
In Antwerp, too, the amount of kilos of cocaine seized has increased significantly in the past few years. The top three countries of loading in 2020 were Ecuador, Guyana, and Brazil. With respect to Guyana, this ranking was due to one major seizure, which may distort the overall picture.
In 2019, 514 criminal investigations into cocaine were conducted in the Netherlands, and 515 in 2020. About half of them concerned polydrug investigations. In most of the polydrug cases, cocaine was found in combination with synthetic drugs. This was usually MDMA, but 2020 also witnessed a striking increase in the number of investigations relating to speed / amphetamines.
Between 2017 and 2020, a total of 1,347 mutual legal assistance requests were related to cocaine. The countries most cocaine-related mutual legal assistance requests were exchanged with, are (in order) Germany, Belgium, France, the United Kingdom, and Spain. As applies to other drug types, about 40 percent of all mutual legal assistance requests were exchanged with Germany and Belgium alone. However, Suriname only takes a tenth spot in cocaine-related mutual legal assistance requests. Moreover, this is the only country in the top ten receiving more requests from the Netherlands than submitting requests to it.

5.3 Nature of the cocaine market

We make use of a crime script to describe the nature of the cocaine market. It became apparent during the analysis and the research this report is based on that similar criminal processes are deployed for all themes detailed in this report - cannabis, cocaine, synthetic drugs, and heroin - and, therefore, that the crime scripts for all themes are similar. Refer to Chapter 2 for more information. We have therefore used the stages and names as described in Chapter 2 for the cocaine crime script. For the further elaboration, we made use of the crime script developed for and by the Cocaine intelligence cell of the Central Intelligence Division of the Central Unit (cf. Krekel, 2019). While the description focuses on the position of the Netherlands as a cocaine transit hub, we naturally also discuss the global and European perspectives, as the

trade in cocaine organised via the Netherlands is international in nature. Crime is coordinated internationally and it involves networks and subjects active in multiple countries. This means that, while many stages of the crime script do not take place in the Netherlands, they are inextricably linked to the trade in cocaine via the Netherlands. Refer to Figure 5.14.

Figure 5.14. Cocaine crime script

“Acquisition” relates to the acquisition of the semi-finished or final products and everything related thereto.
“Import” relates to the transport of the semi-finished or final product from the country of origin to the Netherlands and all related logistical processes, including the removal of the shipments of cocaine from ports and airports.
“Storage” relates to the actual storage of the semi-finished or final products in the Netherlands. This may take place in all sorts of locations, including warehouses, residences, business locations, cars, etc.
“Production requirements” relates to all hardware and chemicals required for the further processing of semi-finished products to create the final product, or for the production of the final cocaine product from basic materials.
“Production” relates to the actual processing (including extraction) of semi-finished products to create the final product and the actual production of the final product from basic materials that takes place in the Netherlands. This includes the use of cutting agents in the cutting process.
“Sales” relates to the distribution of the final product or semi-finished products in the Netherlands or, in the case of transit, the export to other countries. This includes the distributive street and, ultimately, the dealing on the streets.

5.3.1 Acquisition - stage 1

As was already noted in section 5.2.2, almost all coca plantations are located in Colombia, Peru, and Bolivia. In 2017, a full 70 percent of global coca production took place in Colombia, 20 percent in Peru, and 10 percent in Bolivia (UNODC, 2020a3). By far the majority of closed cocaine laboratories around the globe were located in Colombia, Peru, and Bolivia, as well. In addition, over the past few years, large quantities of chemical agents used to produce cocaine (such as potassium permanganate, nitric acid[21], sodium hypochlorite[22], sodium metabisulfite[23], and calcium chloride[24]) were seized in South America. 96 to 99 percent of all seized potassium permanganate in 2016 and 2017 was confiscated in Colombia (EMCDDA & Europol, 2019).

In order to produce cocaine, various chemical processes must be performed in order. First the coca leaves are converted into cocaine paste or bazooka by using calcium carbonate or other lime products and kerosine. Depending on the cocaine content in the leaves, a thousand kilos of coca leaves produces some four kilos of bazooka. The cocaine paste is then used to produce cocaine base (base coke). The chemical agents required in this process include sulfuric acid or hydrochloric acid and potassium permanganate. This process is referred to as purification. As the production of cocaine base requires more equipment, this is usually performed elsewhere. Finally, in order to convert cocaine base into cocaine hydrochloride, or snortable cocaine, crystallisation must take place using inter alia acetone or ether and hydrochloric acid. Generally speaking, four kilos of bazooka produce two kilos of snortable cocaine.

Police information indicates that the buyers of blocks of cocaine prefer blocks produced in Colombia, Peru, or Bolivia. Dutch criminal networks therefore often procure the cocaine there or in neighbouring countries.

5.3.2 Import - stage 2

A long way must be travelled to smuggle cocaine from South America to Europe. The transport can only take place by sea or air. Smugglers generally use the legal infrastructure to hide their illegal shipments (McDermott et al., 2021; EMCDDA & Europol, 2019). This section discusses the import and its substages transport & logistics and removal.

21 Nitric acid is used to replace potassium permanganate, used to purify coca paste (EMCDDA & Europol, 2019).
22 Sodium hypochlorite is the active substance in most bleaching agents used to bleach and clean home surfaces. When mixed with water, sodium hypochlorite creates a substance, hypochlorous acid, which serves as an oxidant. This means that oxygen in the hypochlorous acid reacts with the organic materials present on the surfaces to be cleaned. Examples include dirt, colouring agents, bacteria, and fungi. Due to this reaction, the organic materials are largely decomposed and can be flushed away with water (https://waarzitwatin.nl/stoffen/natriumhypochloriet.)
23 Sodium metabisulfite is a reducing agent used to standardise the cocaine base (EMCDDA & Europol, 2019).
24 Calcium chloride is a solvent drying agent (EMCDDA & Europol, 2019).

5.3.2.1 Transport and logistics

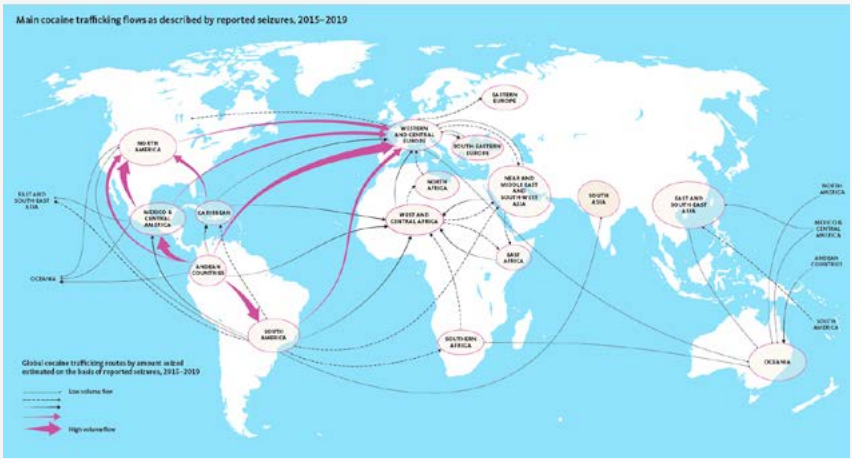
Cocaine smugglers make use of many different routes and methods to smuggle cocaine into Europe. In the following, we will discuss the primary smuggling routes and methods, at the same time providing some insight in the related logistics process.

Smuggling routes

Batches of cocaine can be exported to Europe directly from the production countries of Colombia, Peru, and Bolivia, or be routed via transit countries in, inter alia, South America, Central America, and the Caribbean. The cocaine is transported to the transit countries by land, air, or sea.

The primary transit countries in South and Central America are Brazil, Ecuador, Venezuela, Panama, and Paraguay (EMCDDA & Europol, 2019; UNODC, 2021a4; www.europol.europa.eu). Given the size of the country and its large of number of international ports, Brazil is popular among smugglers. Ecuador, too, is a popular transit country, due to its geographic position between the various production countries. From the transit countries, the cocaine is transported to other regions, in particular North America and Europe. Refer to Figure 5.15.

Figure 5.15. Cocaine transit routes



Source: UNODC, 2021

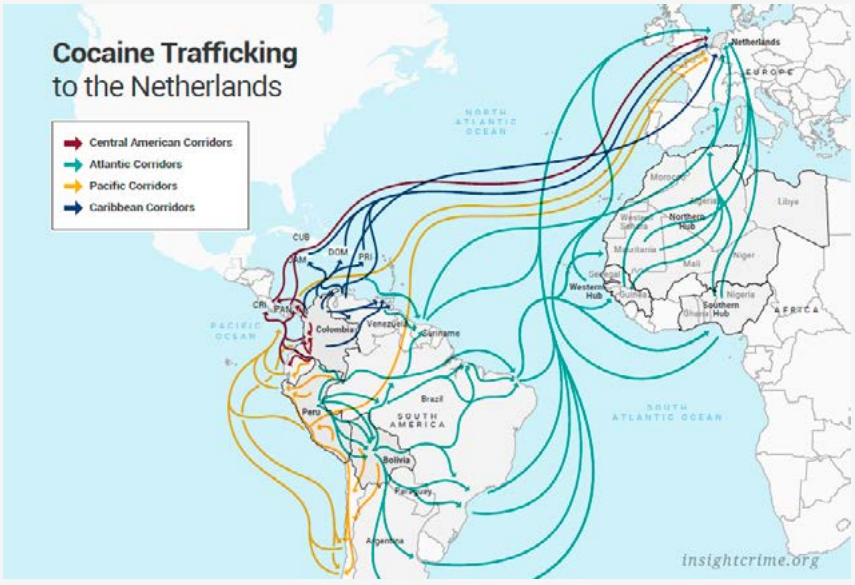
According to Europol, Central America is becoming an ever more important transit region (Europol, 2021a). Shipments of cocaine from the production countries are first transported to, inter alia, Panama, Honduras, Guatemala, and Costa Rica and from there via sea and air to Europe (Boerman et al., 2017; InSight Crime, 2020a,b; UNODC, 2020a3). Panama, in particular, is witnessing a massive increase in the quantities of cocaine seized: in the first six months of 2021 already, almost fifty tonnes had been seized (InSight Crime, 2020b; UNODC, 2021a4).

Another smuggling route runs via the Caribbean. The cocaine is first transported from the production countries to Venezuela and then to Caribbean countries, in particular Jamaica and the Dominican Republic. The drugs are next transported via sea and air from the Caribbean to Europe (EMCDDA & Europol, 2019; McDermott et al., 2021). The Dominican Republic is a popular transit country among Dutch subjects. In addition, cocaine is being smuggled into the Netherlands via, inter alia, Suriname and Curaçao (police information).

On the other side of the Atlantic, (Western) Africa, too, forms a transit region for the smuggling of cocaine into Europe. Transports to the African continent take place by air or sea (police information; Sampó, 2019; UNODC, 2021a4).
There are signs that (Western) Africa is being used more often as a transit hub over the past few years. Criminal networks and subjects may work together with certain African government officials, making these routes less risky than the direct routes to Europe (police information, Sampó, 2019). Inter alia via Western Africa, the cocaine shipments are being transported to North African countries and then imported into Europe using the old cannabis resin smuggling routes from Morocco / Northern Africa or the heroin smuggling routes from Eastern Africa (www.europol.europa.eu; McDermott et al., 2021; UNODC & Europol, 2021). Important transit countries in Africa include Morocco, Mauritania, Guinea-Bissau, Cape Verde, Nigeria, Benin, Ethiopia, and South Africa (UNODC, 2021a4). Also refer to Chapters 4 and 7 for these smuggling routes.

The routes discussed in the above are also being used for the transit and import of cocaine to the Netherlands, as is shown in Figure 5.16.

Figure 5.16. Cocaine smuggling routes to the Netherlands



Source: InSight Crime, 2021.

The majority of the cocaine is sent via container shipping and enters Europe via its seaports. The ports of Antwerp, Rotterdam, and Valencia and Algeciras in Spain have been the primary ports of import for years now. The port of Hamburg, Le Havre, and Gioia Tauro in Italy, too, are becoming ever more important for the import of batches of cocaine (EMCDDA & Europol, 2019).
It is estimated that 70 to 80 percent of cocaine transports arriving in the port of Antwerp is destined for the trade in the Netherlands (Boerman et al., 2018; Colman et al., 2018; UNODC & Europol, 2021). For example, an enormous batch of 4.3 tonnes of cocaine was seized in a warehouse in Deurne, Belgium in 2020. Various containers and firearms were present in the warehouse. Criminal investigations by the FGP led to fourteen persons holding Dutch and Surinamese nationality being arrested (FGP Antwerpen, 2020). Moreover, in early 2021, over 23 tonnes of cocaine destined for the Netherlands have been seized in the ports of Hamburg and Antwerp within the span of a week and a half (Politie, 2021c).

Cocaine destined for or transited via the Netherlands does not only arrive via the ports of Antwerp and Hamburg: Dutch networks and subjects also make use of other European ports, including Le Havre and the Spanish ports.
The Netherlands thus forms an important transit hub for the import and transit of cocaine and criminal networks and subjects often make use of the existing Dutch infrastructure and economic flows (Abraham et al., 2021). This principle is referred to as transit crime (Kleemans, 2002; Kruisbergen et al., 2012) and involves criminals making use of the same opportunity structures that facilitate legal economic activity.
It is because of this that the port of Rotterdam plays a crucial part in the import of cocaine into Europe: it is the largest European port. Using container shipping and the sound and efficient infrastructure of this port, criminals can smuggle great quantities of cocaine into the Netherlands and then distribute it. However, smaller ports are also used: 4,500 kilos of cocaine were seized in the port of Flushing in 2020 (Omroep Zeeland, 2020).

Even though the majority of cocaine is being smuggled by marine shipping and enters the Netherlands via its seaports, air routes, including commercial flights (passengers and baggage), air freight routes, and postal services, too, are being misused (Abraham et al., 2021; Boerman et al., 2017; McDermott et al., 2021).
Signals also exist that chartered flights directly from South America to Europe are being used (McDermott et al., 2021). Examples include flights from Colombia and Uruguay to the United Kingdom, France, and Switzerland (InSight Crime, 2021; McDermott et al., 2021).

According to the Royal Marechaussee, commercial flights are often used for smuggling cocaine to the Netherlands by air (KMar, 2021). Cocaine brought in by the flow of passengers at Amsterdam Airport Schiphol mainly arrives via the transit countries in the Caribbean, in particular Curaçao and Suriname. Amsterdam Airport Schiphol is the only airport with direct connections to these transit countries, which may explain why this phenomenon is not seen at other airports. Brazil and Aruba, too, are seen to be transit countries cocaine is being smuggled from to Amsterdam Airport Schiphol using drug couriers and traveler's baggage (KMar, 2021; Van Wijk et al., 2020).

The vast majority of the cocaine shipments seized from cargoes arrives from Suriname (Van Wijk et al., 2020). According to the Royal Marechaussee, organised cocaine smuggling mainly takes place via Amsterdam Airport Schiphol. Maastricht Aachen Airport, too, can be a cocaine smuggling hub, due to cargo flights arriving from South America (KMar, 2021).

Smuggling methods
Many methods exist for smuggling cocaine and the criminal networks involved in this smuggling easily adapt their methods to the activities of the investigative services (Staring et al., 2019).

Because many different methods for smuggling cocaine exist, this chapter only address new, striking, or commonly used methods. It may be that the COVID-19 pandemic formed cause for the smugglers to adjust their usual smuggling methods (EMCDDA, 2020c).

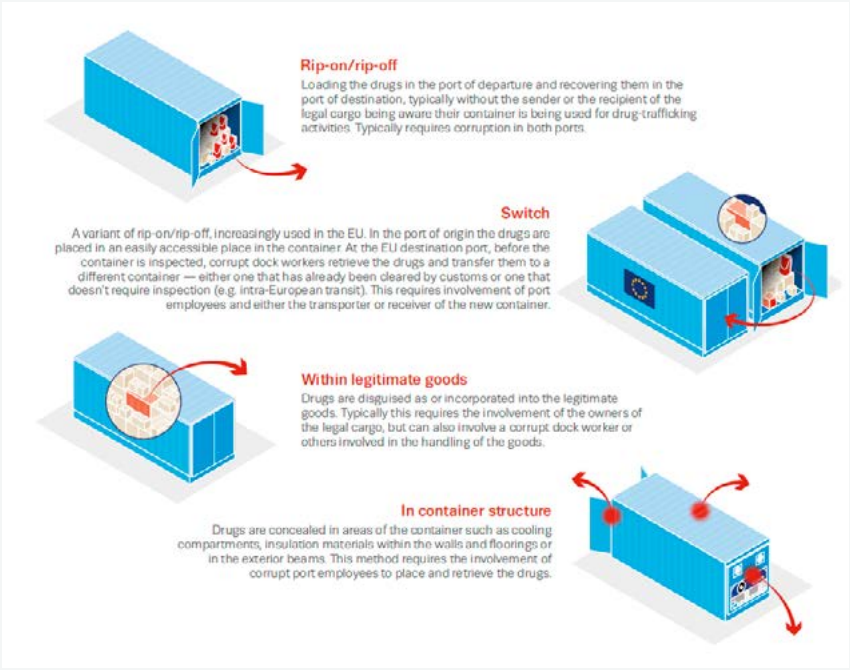
Smuggling methods in marine shipping
The most commonly used smuggling method in marine shipping is smuggling via container vessels. The cocaine is often hidden in containers. Given the many seizures of major shipments in European ports, the COVID-19 pandemic seems to have hardly affected the smuggling of cocaine in shipping containers (EMCDDA, 2020c).

Between March 2017 and April 2018, 44 percent of all cocaine intercepted around the globe was discovered on maritime routes. This amounted to a full 55 percent for 2017. While this may not seem all that massive a percentage, a major share of all cocaine seized, is seized in the producing countries already. The use of maritime routes continues to be a major problem. Every year, over 750 million 20 ft[25] containers are transported by sea. These make up 90 percent of the entire global freight trade. Worldwide, less than 2 percent of all shipping containers is subjected to an inspection (EMCDDA & Europol, 2019).

Smugglers, like legally operating transporters, must act in accordance with the regular state of affairs in the ocean freight sector when renting containers. They can either rent a full container (a “Full Container Load”, or FCL) or part of a container (“Less than Container Load”, or LCL); (www.bsf.nl). In the latter case, the container space is shared with various other (and usually legally operating) transporters, cutting costs (www.bsf.nl). In addition, various contracts may be concluded between buyers and sellers of the load (often referred as the “cover load” in criminal circles).
The most common smuggling methods using containers are explained in Figure 5.17.

25 20 ft is short for 20 feet. A 20 foot-unit represents the loading capacity of a standard multimodal container (EMCDDA & Europol, 2019).

Figure 5.17. Most common methods using containers

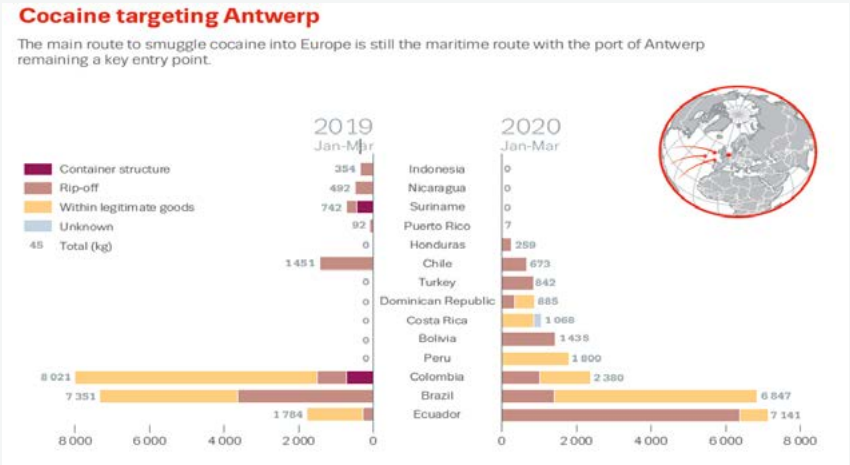


Source: EMCDDA & Europol, 2019.

When employing the rip-on/rip-off method, kit bags placed immediately behind the container door are often used. The switch method is a variant of the rip-on/rip-off method involving moving the cocaine shipment from a South American to a European container before inspection in port. The 'within legitimate goods' method involves placing the cocaine in the legitimate load itself or hiding it between the legitimate goods. Finally, the structurer method involves hiding the cocaine in the container structure itself, such as the container roof or walls (Staring et al., 2019).

As is shown in Figure 5.18, in the port of Antwerp, most shipments in 2019 and 2020 were smuggled using the rip-on/rip-off or 'within legitimate goods' methods (EMCDDA, 2020c).

Figure 5.18. Kilos of cocaine seized from containers in or en route to Antwerp, distributed by modus operandi, in the January-March 2019 and January-March 2020 periods



Source: EMCDDA, 2020c.

According to the HARC team, the switch method is by far the most commonly used method in Rotterdam. Under the switch method, containers with batches of cocaine enter the Dutch (or other European) ports from South America. As soon as the containers enter the Dutch port, a rip-off team will swiftly transfer the batches of cocaine to European, or switch, containers. In fact, this transfer of the bags is a variant of the rip-on/rip-off method. Criminal networks employ this method to minimise the odds of discovery, as South American containers are more often sent to customs scanners for inspections. The principle of free movement of goods within the European Union applies to European containers. Once the switch has been completed, a lorry driver is given green light to retrieve the European container with the batch of cocaine and deliver it directly to clients or to a warehouse, where the cocaine can be offloaded (HLN, 2019).

Multiple operational variants of the switch method exist. Police information shows that the aid of, inter alia, straddle carrier operators can be engaged to move the containers and ease the switching process.[26] It also happens that the European container used to perform the switch is rented by associates of the criminal organisation. These European containers often feature loads of charcoal or wood pellets. Once the switch is completed and the cocaine is removed, little effort is often made to sell this cover load. Instead,

26 A straddle carrier is a vehicle in transshipment terminals used for moving ISO standard containers. The machine is capable of using a straddler to lift a container, transport it and then place it on the ground, a trailer, other containers, or a railway station, using a hydraulic or electrical lifting mechanism (www.definitions.net).

the container is returned, ostensibly because the quality of the load was inferior. The organisation in this way tries to be less conspicuous (PZC, 2020).

The HARC Rotterdam unit has found that the switch method is often combined with PIN number fraud, as detailed in section 5.3.2.2.

Apart from smuggling the cocaine on container vessels, criminals also use other marine shipping methods: smuggle by drug subs, torpedoes and parasites, and pleasure crafts.
Drug subs are handmade constructs painted in ocean colours, making them difficult to detect. They are hermetically sealed, contain diesel or electric engines and are either self-propellant or carry people who make sure the drugs reach their destination (Louisville Courier Journal, 2021). Drug subs are mainly used for the smuggling of cocaine in the waters of Colombia and Ecuador in the Pacific Ocean (InSight Crime, 2021). The first discovery and confiscation of a drug sub in Europe took place by the Spanish authorities in Málaga, in 2019. This drug sub had crossed the Atlantic Ocean carrying three tonnes of cocaine, representing a current trade value of about 90 million euros (McDermott et al., 2021). The Spanish police suspects that such vessels have been used to smuggle cocaine for years now. Recent discoveries suggest that Self-Propelled Semi-Submersibles (SPSS) - made of glass fibre and able to carry up to ten tonnes of cocaine - are also used to cross the Atlantic to Europe from Suriname and Brazil (InSight Crime, 2021; McDermott et al., 2021).

It is also possible for cocaine shipments to "hitchhike" along to Europe under water: sealed packets of cocaine are affixed to the hull or the rudder of a ship, as a sort of "parasites" (InSight Crime, 2021). Or they can be placed in metal tubes (torpedoes) and be dragged along from the back of a boat, just below the water level. Should any authorities approach the ship, the torpedoes are cut loose and localised and retrieved later with the use of GPS equipment (InSight Crime, 2021).
Both the parasite and torpedo methods have been discovered in the Netherlands. The O-51 investigation by the Rotterdam HARC team reports that inspection company divers found a bag with 35 parcels containing 43 kilos of cocaine underneath a motor vessel. This bag was affixed to the so-called bilge well using a rope and a karabiner. Another investigation by the HARC Rotterdam unit (O-52) involved an underwater inspection of a motor vessel in the port of Rotterdam. A metal construct was found on the port-side bilge-keel of the motor vessel. This turned out to be a torpedo, containing 20 parcels of 23 kilos.
Finally, cocaine is smuggled using pleasure crafts, such as yachts and sailboats. Such vessels sail for Europe mainly from Brazil and Suriname, but also from Venezuela and the Caribbean (InSight Crime, 2021; McDermott et al., 2021). Yachts and other recreative sailboats can carry up to one tonne of cocaine and are difficult to detect between the thousands of pleasure crafts cruising through the Caribbean and the Atlantic Ocean each year (InSight Crime, 2021).

Smuggling methods in air shipping

In 2017, fifteen percent of all cocaine seized around the globe was confiscated at airports (EMCDDA & Europol, 2019). The smuggling methods used in air shipping vary considerably. Cocaine is smuggled by passengers, in baggage, in freight, and in mail. In all cases, flights from South America, the Caribbean region, and Africa to Europe are used (InSight Crime, 2021).

When smuggling cocaine via the flow of passengers, couriers will illegally transport cocaine in or on their body or in their carry-on baggage (Van Wijk et al., 2020).
When using the baggage flow, the cocaine is smuggled inside the courier's baggage. Suitcase labels play an important part in this connection, as they indicate the suitcase's planned route and final destination. One possible smuggling method involves deliberately affixing a wrong label, stating a different destination, to the suitcase, allowing for surreptitiously removing the suitcase from the logistics process in the actual destination country (Van Wijk et al., 2020).
In addition, suitcases may be provided with a label causing it to end up in the belly of the airplane, allowing for quickly removing it at the airport. In the past few years, the modus operandi of smuggling drugs in the flow of baggage has been refined. Where, previously, one person would be responsible for all actions and would individually go through all the stages, these tasks are ever more often distributed among multiple persons. A clear division of duties is visible and non-official corruption plays an important role in this process (Van Wijk et al., 2020).

When smuggling drugs via the flow of air freight, the smugglers will hide the drugs in the cargo, but also in the freight equipment, such as AKE containers or the metal pallets used for transporting these containers (InSight Crime, 2021).[27] While the official figures indicate that this does not happen often, police information shows that criminal networks and subjects do in fact make use of this smuggling method.

The Amsterdam Airport Schiphol HARC team in 2016, 2017, and 2018 registered 1,100, 1,527, and 1,432 cases, respectively, of drugs being discovered in mail.[28]
The drugs are smuggled in gift consignments, postal items, and courier consignments[29].
In 2018, a total of 522 gift consignments, 66 postal items, and 11 courier consignments containing cocaine have been found. The vast majority - 98 percent - of the intercepted gift consignments sent to the Netherlands originates from Suriname. Even though all gift consignments from Suriname are subjected to inspection, this method is still widely used. Apparently, the perpetrators accept that these seizures occur (Van Wijk et al., 2020).
Postal items containing cocaine are sent from multiple countries. Curaçao, Aruba, and Sint-Maarten jointly represent 47 percent of the total number of shipments destined for the Netherlands. Postal items containing cocaine are also shipped from these countries to Australia and various European countries, such as the United Kingdom, Italy, Ireland, Norway, and Spain. Cocaine is not often discovered in courier consignments (Van Wijk et al., 2020).

27 "AKE" refers to an air freight container type (Van Wijk et al., 2020).
28 The Amsterdam Airport Schiphol HARC team is a partnership of Customs, t FIOD, and the Royal Marechaussee.
29 Courier consignments are shipments delivered by courier companies (https://baggage.nl).

Another example of smuggling cocaine by mail is by using document parcels. Major companies - and in particular multinationals - often send parcels containing documents by mail. Because of the sheer number of document parcels sent by companies, the posting of additional parcels by corrupt postal services staff using business account numbers does not attract notice. Document parcels are less often subjected to customs inspections than other parcels, as they often contain privacy-sensitive company documents (police information).
Other forms of smuggling cocaine via postal items, too, often rely on non-official corruption, with postal services staff making sure parcels are not subjected to scans or inspections.

Expectations are that the smuggling of cocaine via postal items and parcels will increase in the coming years, also because of the trade conducted via the dark web; refer to Chapter 9 (EMCDDA, 2019c).

Impact of the COVID-19 pandemic
The COVID-19 pandemic led to cocaine smugglers having to adapt their usual smuggling methods in both marine and air shipping (EMCDDA, 2019c). While countries around the world closed their borders and the transport of certain goods came to a standstill, criminal networks handily abused the transport movements of necessities like medical goods, facemasks, and surgical gloves to smuggle cocaine (EMCDDA, 2019c; INCB, 2021b). The same applies for the transit of cocaine within Europe. In order to cross borders, smugglers pretended to hold an essential occupation (EMCDDA, 2019c). Smugglers also made ready use of henchmen that, for example, had family living abroad when exceptions to entry bans applied to family members of EU citizens (police information).
The smuggling of cocaine via commercial flights does seem to have dramatically decreased as a consequence of the global travel restrictions, however (EMCDDA, 2019c). That said, it is likely that it was exactly the good connections of the Dutch airlines via Africa, which stayed intact during the COVID-19 pandemic, that caused an increase in the number of (intended) khat transit shipments transited via Amsterdam Airport Schiphol in 2020. Customs has identified the same trend in the context of the transit of heroin (Douane e-mail, 7 September 2021; refer to Chapters 7 and 8).

5.3.2.2 Removal
An important element of the import stage is the removal of cocaine batches from containers once they have arrived in ports like those of Rotterdam or Antwerp. The cocaine also needs to be driven out of the port site. Cocaine importers employ rip-off crews for this purpose: people who remove the batches of cocaine from the containers. Rip-off crews are sent to the site by the criminal network or the owner of the cocaine shipment and are informed of the location where the container is held or will arrive at (police information). Various methods are employed to remove the drugs from the containers at the terminals. The most commonly used methods are the switch and rip-on/rip-off methods, described previously in this section.
However, these methods do require the rip-off crew to first access the port site and be able to stay there. Methods to effect this include “Trojan containers”, “hotel containers”, and vans. PIN code fraud and “copy containers” are often used to exit the site afterwards. A combination of these methods is often employed.

The Trojan container method comprises the use of manipulated empty and/or export containers to smuggle the rip-off crew into the site. Vans are also used for this purpose (police and Customs information). It is suspected that the rip-off crew is sometimes brought into the site days before the container arrives (police information). This means there must also be facilities allowing the crew to remain on the port site. "Trojan containers" or other empty containers are often used as "hotel containers" in this connection. The same applies to the vans, which are used as accommodation for the crew (police information).
Hotel containers are empty containers used as temporary accommodation for the rip-off crew, in effect serving as a hotel. Such containers have been discovered in multiple criminal investigations conducted in 2020. Empty containers containing foodstuffs and goods allowing for a stay of multiple days were discovered in the O-53, O-54, and O-55 investigations.

Trojan containers are used when the switch method is applied, as this means the rip-off crew is on the site before the containers arrive and is able to immediately switch the load. Forged or cloned container seals are used to make it appear as if the containers have not been opened. Cloned seals have also been discovered in the context of the import of heroin using containers (refer to Chapter 7).
Another modus operandi used to remove cocaine is the use of "copy containers": containers that are exact copies of the container holding the cocaine shipment. They sport the same stickers (including the container number) and the same cover load (FGP Antwerpen, 2020). The copy container is prepared in a warehouse on the port site. The container with the cocaine shipment is retrieved by a driver and moved into that warehouse before the customs scan takes place. Both containers are then switched and the driver takes the copy container (which does not contain cocaine) to be scanned by Customs. In the meantime, the shipment of cocaine is removed from the container in the warehouse (Antwerp FGP, 2020). This modus operandi was discovered during an investigation in Antwerp where 4.3 tonnes of cocaine were hidden in a refrigerated container holding squid (PZC, 2021). Dutch subjects, too, make use of this method (police information).
In order to legally remove containers from the port site, drivers must hold a PIN code provided by the shipping company to the owner of the container contents. PIN code fraud involves rogue drivers unlawfully getting hold of this PIN code and removing the container, without the owner and legal carrier being aware of this. After the cocaine is removed from the container and forged seals are put in place, the container is as yet delivered to the lawful owner or possibly quickly returned to the port site (police and Customs information; court judgment).

5.3.3 Storage - stage 3

Once an imported batch of cocaine has left the port (site), it is brought to a stash location of safe house (InSight Crime, 2021). Various sorts of buildings are used as stash locations, including warehouses, remote farms, garages, and residential homes. These facilities are often rented by straw men (police information). Criminals prefer that the owner of the storage location is aware of the criminal activities, in order to reduce the risk of disruption (police information). This is similar to the situation concerning the lease of synthetic drug production locations, where, in almost all cases, the lessors or residents are aware of what is going on (refer to Chapter 6).

So-called stash cars, often containing large concealed spaces where drug batches can be stored, are also used. These stash cars are parked in various garages to which the criminals have access. It also seems to happen that the stash cars are moved once someone requires a bit of the cocaine batch (police information).

5.3.4 Production requirements and production - stages 4 and 5

As we detailed in section 5.3.1 (Acquisition), various chemical processes need to be completed in order to produce cocaine. The production of cocaine mainly takes place in Colombia, Bolivia, and Peru.

Nevertheless, investigations have shown that cocaine hydrochloride is refined in Europe ever more often, as becomes evident from the discovery of the required chemical substances and production locations (EMCDDA & Europol, 2019). Refinement activities include the conversion of cocaine base into cocaine hydrochloride (snortable cocaine) and the prior production process, the conversion of coca paste into cocaine base.

The conversion of cocaine base into cocaine hydrochloride is often required when smuggling methods involving the impregnation of cocaine into carrier materials, such as plastic, are used. In such cases, the cocaine base must be extracted from the carrier materials in special cocaine extraction facilities.[30]
Indications exist that some criminal networks also import cocaine base, without this having to undergo an extraction process elsewhere (police information). Such base is, for example, imported via postal items sent via Amsterdam Airport Schiphol (police information). One possible reason for this method is that corrupt postal services staff are more easily able to remove the - usually smaller - parcels from the logistics process without this being noticeable (police information). In addition, it is presumably cheaper for criminal networks to purchase cocaine in its base form, rather than as hydrochloride, even when considering the additional costs associated with requiring a “cook and kitchen” for the chemical process. We will also address this in section 5.3.7.

30 The separation of the cocaine from the carrier materials is conducted in a way that is similar to the primary extraction of cocaine from the coca leaves in the countries of origin and is therefore referred to as “secondary extraction”.

Both the cocaine imported as cocaine base and the cocaine base that has to be extracted from the carrier materials are next crystallised into cocaine hydrochloride in extraction facilities with the use of hydrochloric acid (as was also stated in section 5.3.1). The cocaine hydrochloride is then often cut and pressed into the familiar bricks of one kilo.

With respect to the conversion of cocaine paste into cocaine base, the seizures would indicate that this process, too, is performed in Europe, albeit possibly on a smaller scale.
In 2016 and 2017, the quantities of potassium permanganate seized in Europe were very small: a total of 13.5 kilos was seized, almost all of it in Spain (EMCDDA & Europol, 2019). As was described in section 5.3.1, potassium permanganate is used to convert cocaine paste into cocaine base. Even though the quantities seized in 2016 and 2017 were very small, Spain did already intercept many incoming shipments before they were sent, with these shipments totalling over 54,000 kilos of potassium permanganate (EMCDDA & Europol, 2019). In addition, substantial quantities of sodium metabisulfite (also refer to section 5.3.1) were seized in the Netherlands in 2016 and 2017. Finally, quantities of calcium chloride (refer to section 5.3.1) have been seized in Europe. In 2016, an unspecified quantity was seized in Spain, and over 1,000 kilos were seized in the Netherlands (EMCDDA & Europol, 2019). In all, these seizures indicate that the conversion of cocaine paste into cocaine base at least partly takes place in Europe, including in the Netherlands (EMCDDA & Europol, 2019; INCB, 2021a).

This also becomes evident from the fact that, apart from chemicals, cocaine in cocaine paste form was also seized, in the following quantities: 377 kilos (2015) and 86 kilos of cocaine paste (2016) in Spain and Italy. Moreover, the media sometimes report about seizures of cocaine paste destined for Europe in Colombia and about seizures within Europe, like the 210 kilos that were seized in Barcelona in 2016 (EMCDDA & Europol, 2019). There are also signs that Dutch networks and subjects sometimes purchase cocaine paste from South America, in addition to kilos of cocaine hydrochloride (police information).

Even though impregnating carrier materials with cocaine is one of the smuggling methods applied by smugglers, the number of “secondary extraction” laboratories dismantled in Europe appears to be small. According to the EMCDDA, only ten facilities were reported (by five countries) via the European Reporting on Illicit Cocaine Extraction-Conversion Sites (ERICES) tool in the 2014-2019 period. Media reports would however suggest that many more secondary extraction facilities were discovered than were reported via ERICES (EMCDDA & Europol, 2019). For example, the Netherlands did not report any facilities in the 2014-2019 period, as it only started reporting using the ERICES tool in 2021, as is also shown in Table 5.19. The Dutch figures until 2019 alone show a greater number of facilities than the ten reported by the EMCDDA.

The number of facilities for the storage of chemicals or the processing (or extraction from carrier materials) of cocaine semi-finished products into cocaine hydrochloride discovered in the Netherlands has increased in the past two years. The number of cocaine extraction facilities, in particular, went up, as is also shown in Table 5.19. The number of cocaine extraction facilities in 2020 was double that of the 2017 figure. The number of storage sites discovered sharply increased, as well. In 2017, one laboratory was discovered where synthetic cocaine was produced. It is unknown whether the term "cocaine extraction facility", as used in Table 5.19, was also applied to cocaine laboratories where other processing activities took place in addition to extraction.

Table 5.19. Number of cocaine extraction facilities, synthetic cocaine laboratories, and storage sites in the Netherlands

Facility	2017	2018	2019	2020	Total
Cocaine extraction facility	9	8	10	19	54
Synthetic cocaine laboratory	1	0	0	0	1
Storage site	2	4	5	11	22
Total	**12**	**12**	**15**	**30**	**77**

Source: LFO & BVH.

Data set compiled on the basis of data from the National Dismantling Support Unit (LFO) of the National Operational Cooperation Unit (DLOS) and from BVH.

Investigative authorities in the Netherlands seize great quantities of chemicals used to produce drugs each year. Table 5.20 present the figures of a number of chemicals seized in the years from 2017 through 2020, which may be indicative of the conversion of cocaine paste into cocaine base, and of cocaine base into cocaine hydrochloride, taking place.[31]

31 No figures are shown here of the seizures of other chemicals that may be relevant to the production of cocaine, as these chemicals are also often used in the production of other types of drugs and it therefore cannot be ascertained whether they actually relate to cocaine production. The same applies to a number of chemicals that are listed in the table, however. These chemicals are marked with an *.

Table 5.20. Figures of chemicals relevant for cocaine discovered, in liters (unless indicated otherwise)

Chemicals	2017	2018	2019	2020
Acetone*	9,272	21,226	11,227	21,482
Ammonia*	-	3.153	433	-
Benzocaine	-	-	-	75 kg
Boric acid	-	-	-	7 kg
Calcium chloride	-	170 kg	325 kg	1,586 kg
Inositol	-	-	-	17 kg
Potassium permanganate	-	23 kg	25 kg	201 kg
Lidocaine	-	0.5 kg	25 kg	50 kg
Sodium hydroxide*	26,929 kg	31,474 kg	29,330 kg	5,250 / 33,028 kg
Sodium hypochlorite	40	-	-	10 kg
Sodium metabisulfite	50 kg	20	50 kg	50 kg
Sodium sulphate	325 kg	-	-	250 kg
Procaine	0.9 kg	-	125 kg	30 kg
Tetramisole	-	345 kg	-	1,946 kg
Hydrochloric acid*	28,966 / 47 kg	34,786 / 1,280 kg	28,861	37,551 / 2,551 kg

Source: FIOD

The quantity of potassium permanganate discovered in 2020 (201 kilos) is strikingly more than the quantities found in previous years. Large quantities of the chemicals sodium hydroxide and sodium sulfate, too, have been seized in the 2017-2020 period. However, these chemicals are also used to produce other types of drugs (court judgment).[32] These chemicals are often used in the process of converting cocaine paste to cocaine base.

Significant quantities of the chemicals that may be used in the cocaine crystallisation process - i.e., the conversion of cocaine base into cocaine hydrochloride (EMCDDA & Europol, 2019) - have also been seized: 21,482 liters of acetone in 2020; 37,551 liters of hydrochloric acid in 2020; and 3,153 liters of ammonia in 2018 (refer to Table 5.20). Acetone is also used for the production of synthetic drugs, though (refer to Chapter 6).

In addition, sizeable quantities of other chemicals specifically used to process cocaine have been seized, including boric acid, calcium chloride, sodium hypochlorite, and sodium metabisulphite. These are often used in combination with - or as alternatives of - the chemicals described in the above (EMCDDA & Europol, 2019).

32 Rechtspraak.nl: ECLI:NL:RBOBR:2016:2235.

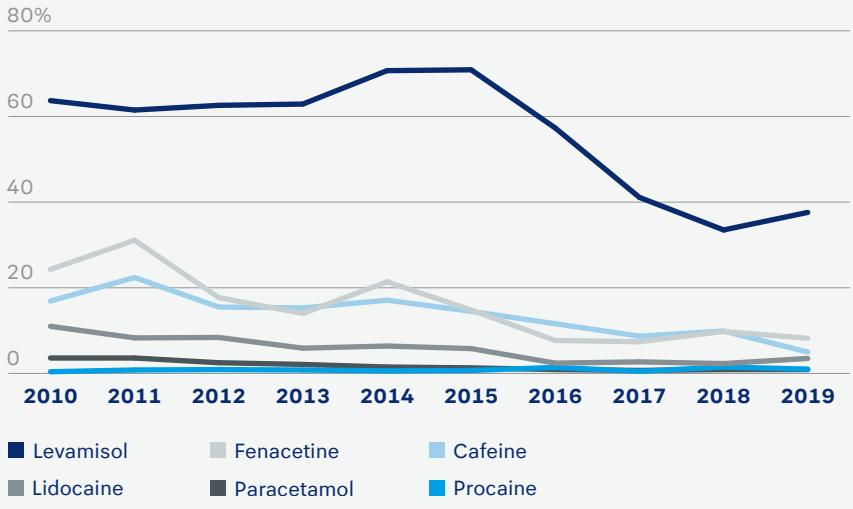
Police information shows that Dutch criminal networks often have a “cook” (someone familiar with the chemical process) brought over from South America to the Netherlands in order to have cocaine paste or cocaine base converted into cocaine hydrochloride here. This also became apparent in the course of investigation O-56, when multiple suspects holding, inter alia, Colombian nationality were found in a cocaine extraction facility.

The purity of cocaine has increased in the past few years. The average concentration, at 68.9 percent cocaine base in 2019, has currently reached record highs. The cocaine available in the Netherlands is very pure, also in comparison to other European countries (Van Laar et al., 2020). Snorting cocaine can have a maximum cocaine base volume percentage of 89 percent (Van Laar et al., 2020).

Finally, the investigative services have also found chemical substances used to cut cocaine hydrochloride (refer to Table 5.20), such as 1,946 kilos of tetramisole in 2020; 75 kilos of benzocaine in 2020; 50 kilos of lidocaine in 2020; 125 kilos of procaine in 2019; and 17 kilos of inositol in 2020. With respect to almost all these cutting agents, quantities seized peaked in 2020.

Cocaine hydrochloride is cut in order to sell more cocaine to buyers. This means that the cocaine hydrochloride is always mixed with cutting agents before reaching the end users (Van Laar et al., 2020). Figure 5.21 displays the cutting agent percentages found in powder cocaine purchased in the Netherlands in the period from 2010 through 2019.

Figure 5.21. Percentages of powders purchased as being cocaine containing cutting agents in addition to cocaine



Source: Van Laar et al., 2020.

Figure 5.21 shows that levamisole[33] is the cutting agent most often discovered in powder cocaine. While the number of cocaine samples containing this cutting agent decreased after 2015, it rose again from 2018 onwards. In 2019, 39.2 percent of powders purchased as being cocaine contained levamisole, as opposed to 74.1 percent in 2015. Multiple reasons exist for using levamisole as a cutting agent. It is cheap, it greatly resembles cocaine, it goes unnoticed when making crack, it is widely available, and it may possibly increase the stimulating effect of cocaine. Apart from levamisole, the most common cutting agents found in cocaine are phenacetin[34] (8.6%), caffeine (5.2%), and lidocaine[35] (3.7%) (Van Laar et al., 2020). Strikingly, the cutting agents levamisole, phenacetin, and caffeine did not appear in the list of chemicals discovered by investigative services, as present in Table 5.20. The cutting process is possibly still performed at sites other than the production locations.

Criminal networks and subjects also commonly use a sort of "super mix" as a cutting agent. This is a combination of caffeine, manitol, and lactose. Other cutting agents include tetramisole and home-made mixes of various substances on the market. Signs exist that criminal networks sometimes prefer certain cutting agents, as these would benefit the quality of the cocaine bricks (police information).
Often, multiple cutting agents are used at once, as also becomes visible from the percentages of the various cutting agents listed in Figure 5.21: when adding these percentages, the total often exceeds 100 percent.

In addition to chemicals required for the production or processing of cocaine in a laboratory or extraction facility, other production requirements often exist. This has also become clear over the course of investigation O-56, when items including a distilling boiler, concrete mixers, intermediate bulk containers (large plastic vats able to hold a 1,000 liters), a hydraulic press, a heating unit, and multiple microwaves were found in a cocaine laboratory / extraction facility. Multiple logos / stamps used to mark the kilo bricks of cocaine were also found (investigation O-56). In addition, the cocaine laboratory was found to contain large quantities of carrier materials and remnants of big bags. Sleeping facilities were installed for the persons working in the laboratory (investigation O-56).

5.3.5 Sales - stage 6

The next step in the cocaine trade is the sale of cocaine (hydrochloride). The sales process can be divided into multiple components: the wholesale trade, the distributive trade, and the retail trade (InSight Crime, 2021; police information).
Once the cocaine has been stored at the stash location, various options are open: directly exporting the cocaine abroad; making the cocaine available for distribute trade; or distribute the cocaine within the network or subject's own territories within the Netherlands (Olde Kalter, 2021). At the stash locations, the cocaine shipment is often split up in smaller batches, destined for multiple buyers. In addition to smaller batches consisting of kilo bricks, cocaine cylinders are also often sold to distributors. Such cylinders contain 250 grams and are also sold by the kilo. Presumably, such

33 Levamisole was once used to treat cancer. It has not been used since 2004. The substance is still used as an anthelmintic drug in veterinary medicine (www.jellinek.nl).
34 Phenacetin is a painkiller and may cause kidney damage (www.jellinek.nl).
35 Lidocaine is a local anaesthetic (www.jellinek.nl).

cocaine cylinders are procured for export abroad, as they exactly fit pipes, allowing for surreptitiously transporting them (police information).
The stash location itself sometimes functions as a wholesale market. The stash location may be the site where cocaine switches hands between suppliers and procurers (InSight Crime, 2021; police information).

Distribution within the Netherlands
A small share of the cocaine entering the Netherlands is destined for the internal market. Middlemen trading in kilo bricks distribute the cocaine throughout the Netherlands, supplying the retail market. Retailers focus on the consumer markets for crack cocaine and snortable cocaine; they are the dealers selling amounts on the level of the individual user. The retail trade in the Netherlands is concentrated in the urban centres, with Amsterdam forming the biggest market (InSight Crime, 2021; Tops & Tromp, 2019). The cocaine is often sold at distribution points like nightclubs and other nightlife venues. However, an increase is also notable in the use of delivery services, organised using secure communications or social media like WhatsApp, Telegram messenger, and Signal. The cocaine is then delivered to consumers by scooter, car, or taxi (InSight Crime, 2021; Roks & Hendriksen, 2021; Tops & Tromp, 2019). Street-level dealers selling cocaine to consumers on the streets are also active. The retail trade is characterised by polydrug supply. Consumers also procure multiple types of drugs. Heroin is often bought in combination with cocaine, for example - the so-called "coffee with milk" package (Summ-IT; also refer to Chapter 7).

Cocaine is also distributed via the dark web. This mainly takes place at the retail level. In Europe, such sales account for about 6 percent of the total (EMCDDA, 2020a). Refer to Chapter 9 for more information on the trade of drugs via the dark web.

Transit
The Netherlands functions as one of the primary cocaine distribution hubs in Europe (UNODC & Europol, 2021). The majority of the cocaine imported into the Netherlands is exported again as quickly as possible. The primary markets for the cocaine traded via the Netherlands are in Europe, and in particular the United Kingdom, Germany, and Scandinavia. However, the Russian Federation, Türkiye, the Middle East and Australia, too, procure cocaine via the Netherlands (police information; Vermeulen et al., 2018).
To realise the transit of cocaine and other drugs via the Netherlands, use is made of the options provided by the legal flows of persons and goods. The transit abroad is systemic in nature and can take place at all levels, from the wholesale level (with batches of dozens of kilos transited at once) to the retail level (with smaller quantities of a few grams being transported). The free movement of goods and persons within the EU means that the cocaine is transported within Europe relatively easily. Various means of transport are employed. These are often equipped with hidden spaces. While most of the transport takes place by road, some cocaine is also transported by water, air, and rail (Vermeulen et al., 2018).
Criminals often place the batches in all sorts of legal goods destined for wholesalers and retailers in Europe, hiding the drugs underneath cover loads of foodstuffs, for example. Use is made of the bona fide road carriage movements some companies perform every day between various locations within and outside the Netherlands (Vermeulen et al., 2018). In addition, rogue service providers are active organising the transit of cocaine and other drugs, employing the services of both bona fide and rogue

transport companies (Vermeulen, 2019). Police information, too, shows that transport company lorries are often used to export drugs abroad. One example is the criminal investigation O-57, during which it was found that a lorry was used to smuggle cocaine and other types of drugs abroad on multiple occasions. It became apparent over the course of the investigation that a Dutch lorry driver went out to Sweden with a legal cargo, making multiple stops in Sweden along the way to supply "parcels" to multiple buyers. Those buyers were ultimately found to possess drugs. In addition to polydrug shipments to Scandinavia, transports to the United Kingdom were also organised.

Lorries and cars are often equipped with hidden spaces to hide cocaine and other drugs during the transport. Campers, too, are used and are also sometimes fitted with hidden spaces. What hidden spaces can be fitted in cars or campers depends on the model and size of the vehicle. Criminal networks and subjects therefore often prefer the use of larger vehicles that allow for larger hidden spaces and, thus, for the storage of more cocaine bricks. A whole series of actions is often required to open such hidden spaces. For example, the rear window demister must be turned on, some part of the vehicle must be tapped, and a telephone charger must be tampered with (police information).

Like cars and lorries, campers travel through multiple European countries to supply drugs, including cocaine, to multiple locations. The drivers often spend the nights at a camping while en route. To be less conspicuous, they prefer for a man and a woman to ride the vehicle, acting as a couple. Both receive a reward for driving or being a passenger. The money paid on the locations for the supplied drugs is taken back in the hidden space. During the COVID-19 pandemic, this smuggling method was made more difficult due to closed borders or the requirement to submit negative corona tests at border crossings (police information).

Though little is information is available, we do know that cocaine is also transported within Europe on cargo vessels and coasters plying the waters between the Netherlands and other European countries, and possibly also on fishing boats and pleasure craft (Boerman et al., 2017; Vermeulen et al., 2018). Every now and again, cocaine is discovered on inland vessels in the Netherlands, including vessels conducting inland waterway shipping within Europe (Vermeulen et al., 2018).

The transit of cocaine by air is inter alia conducted by helicopter and airplane (Vermeulen et al., 2018). It was found that smuggling by charter plane or private plane often requires corrupt contact persons at the foreign airports. Such contacts work together with the charter companies. The following smuggling method is used: the cocaine is removed from the airport by transport companies internally active on the airport, while the passengers spend the night somewhere in the city concerned (police information).

The impact of the COVID-19-related restrictions seems to have had more of an impact on the distributive than on the wholesale trade. While major quantities of cocaine remained available in Europe, organising the logistics of transiting smaller batches was rendered more difficult due to the travel restrictions (EMCDDA, 2020c; police information). Nevertheless, the criminal networks continue to adapt their methods to the situation, with smugglers for example passing themselves off as persons working

an essential profession in order to more easily travel freely within Europe (EMCDDA, 2020c).

5.3.6 Conclusion on the crime script stages

This section addressed the six cocaine crime script stages. What becomes apparent in all stages is that criminal networks are very flexible as concerns their modi operandi. They for example make use of multiple smuggling routes, in both marine and air shipping, and are able to switch to using different routes should this turn out to be necessary. This became very apparent during the COVID-19 pandemic, when certain borders were closed and passenger aircraft were not allowed to take off. Throughout the past few years, new smuggling methods have been identified, each one being ever so slightly more refined than the known methods. Examples of such more advanced methods include the switch method, hotel containers, and copy containers that were identified in multiple criminal investigations, as well as the stash cars that can be flexibly moved around and the use of campers when transiting the cocaine to other countries. It seems that these modi operandi are conceived in order to have the risk of disruption be as small as possible. The same applies to arranging storage locations, as the criminal networks seem to prefer working with owners who are aware of what is going on at the site.

Certain Caribbean countries appear to be highly interesting transit countries to Dutch criminal networks. These countries are located near to the South American countries where most of the cocaine is produced and which are still responsible for most of the cocaine that ends up in the Netherlands. However, signs have been identified in the last few years that would indicate that a small part of the production process is currently also taking place in the Netherlands, albeit sometimes with the aid of South American specialists.

In all, it is important to take account of the high degree of flexibility and the capacity to innovate possessed by the criminal networks.

5.3.7 Other aspects

A number of aspects of organised cocaine crime relates to multiple stages of the cocaine crime script: misuse of legal entities; corruption; financial aspects; counterstrategies; cocaine quality; use of violence; and polydrug trade. These aspects are addressed individually in this section.

Misuse of legal entities and corruption

Police information shows that the smuggle of cocaine often requires the use of legal entities in order to be able to import the cocaine. This in the first place concerns legal entities trading in goods in both the source or transit countries and the Netherlands. These legal entities must also have a relation as sender and receiver of these goods. The goods imported by the company are used as a cover load. In many cases, use is made of companies trading in fruit or fresh products, as the perishability of these goods means that they are subjected to an accelerated inspection process. Companies importing bulk products, too, are often used.

In addition, the aid of legal entities like transport companies is required, as they are able to remove the cocaine shipments from the port or airport site and arrange for their transport to the stash locations. Finally, legal entities can be engaged to arrange for the storage sites. While already existing companies can be engaged for these tasks, criminals sometimes establish or acquire a company themselves and use it to conduct

their smuggling activities. When existing companies are used, these companies may be acting in good faith, meaning that they are unaware that their company is misused for the export or transport of cocaine. However, they might also be aware of the criminal activities (police information).
Whenever the owners or employees of the legal entities are aware of the criminal activities, they usually want to as yet be able to sell the imported cover load, both to garner income and to protect their reputation, making it appear on paper as if they have not made any peculiar purchases and making it seem as if they have nothing to do with the smuggling of cocaine (police information). In such a case, negotiations must be conducted with the company about the quality / price of the cover load that is still acceptable in the context of the sale to potential customers of the company. On the other hand, some companies cooperate with the shipping of cover loads impregnated with cocaine and therefore no longer sellable (police information).

Whenever a legal entity is aware of the criminal activities, they are guilty of non-official corruption. It does appear that many subjects prefer working with companies the director or other senior manager of which is aware of the import of cocaine (police information). This saves time and prevents hassle when arranging import documents and allows them to maintain greater control over the batch of cocaine they shipped. The employees of such companies can make a lot of money helping out in this way and they are often advised to simply deny knowing anything about the cocaine shipments should these be discovered. This limits the risk run by companies. Apart from such employees, port workers or ship's crews, too, can be corrupt (police information). The degree of non-official corruption is therefore probably higher than is estimated.

In addition to non-official corruption, the successful import of cocaine into Europe often expressly also requires official corruption (EMCDDA & Europol, 2019). Corrupt officials include police or customs officers. This type of corruption can take the shape of providing information, such as checking up on companies, investigating the risks associated with smuggling a batch of cocaine using these companies, or providing information about the procedure at port. It may also concern performing specific actions, like allowing a specific container to pass through (police information). Corrupt officials receive ample reward for their services. Examples are included in section 5.3.7.

Cocaine smugglers apparently rely more on corruption than on violence. Without access to corrupt port staff or officials, customs officers, police officers, ship's crews, and other, smuggling would be virtually impossible (InSight Crime, 2021; McDermott et al., 2021).

Current insights indicate that the various criminal networks prepare everything up to the most minute details (police information). One example is formed by the selection of a company to import the goods from South America. Police information shows that the credibility of an import company is already considered when starting up cooperation with this company. The criminals check whether the company has an active VAT or

EORI number[36], whether payments are effected by bank transfer, whether the company is in debt, whether its website and documentation are in order, and whether the company can be reached in standard ways, all to make sure the company opted for is not suspicious in the eyes of Customs. A high level of professionalism thus exists.

Financial: costs versus benefits

Like other forms of (illicit) trade, the trade in cocaine is an example of a market-oriented profit model: it takes advantage of the demand for cocaine and profits are based on the difference between the procurement and sales price (Kruisbergen et al., 2012). The earnings are used to finance the trade, for reinvestment in the procurement of new batches of drugs, and as a source of illegal income. In this section, we will address the cocaine earnings model, or the costs versus the benefits.

A conservative estimate of the 2017 European drug market indicated that it would be valued at about 30 billion euros. Cocaine was thought to be responsible for 31 percent of this total, or about 9.3 billion euros (EMCDDA & Europol, 2019).

Cocaine is almost always procured in South American countries (refer to section 5.3.1). As was described in section 5.3.4, cocaine can be purchased in various forms: cocaine paste, cocaine base, or cocaine hydrochloride (the kilo bricks).
The purchase price often depends on multiple factors, including the country the cocaine was bought in, the quantity purchased each time, and the frequency of purchasing from the same party (police information). The COVID-19 pandemic, too, has impacted the price of drugs: the price for cocaine hydrochloride and cocaine paste in Peru had in the first quarter of 2020 dropped by 25 and 23 percent, respectively, from the 2019 figure (INCB, 2021b).

The 2019 cocaine paste procurement prices were between 1,300 and 5,000 euros per kilos (police information). This cocaine paste is next converted into cocaine hydrochloride in "kitchens" in the Netherlands (police information). The relevant prices would be about 1,000 euros per kilo for the use of the kitchen itself, including of the required chemicals. The cook converting the cocaine paste into cocaine hydrochloride costs about 1,500 euro per kilo (police information). The cocaine base procurement price is unknown.
Purchase prices for kilo bricks of cocaine hydrochloride in South American countries in 2019 ranged between, for example, 1,410 euros in country of origin Peru and 7,855 euros in a transit country like Chile (dataunodc.un.org).[37]

In addition to the purchase costs of the cocaine itself, criminal organisations have to incur many other costs to be able to actually get the cocaine in their hands, including set-up costs, transport costs, cover load costs, costs associated with official and non-official corruption, broker fees (refer to section 5.4.4), the removal of the cocaine from

36 An EORI number is an identification number allowing for the accelerated exchange of data within the EU. Companies require such a number if they do business internationally and have to deal with Customs (www.belastingdienst.nl).
37 The average 2019 USD to EUR conversion rate was: 0,8931 EUR. This average is used in this section when converting USD into EUR (www.exchangerates.org.uk).

the port, and the lease for locations to store the cocaine or further process the semi-finished products (police information).

Police information shows that it is common to agree on a flat price kilo brick covering the set-up costs (the costs of setting up a cocaine route from South America to the Netherlands) and the transport from South America. Often, the total of these costs equals the original kilo brick purchase price. Police information also shows that smugglers from South America often hitch a ride on transports, carrying a share in kilos of cocaine, paid for against the European wholesale price. This allows them to profit from the European sales margins, while the European traders are guaranteed to receive cocaine of high quality (Olde Kalter, 2021). Certain costs are also often mutually shared or set off.

The import of cocaine from South America is not possible without having access to corrupt customs officials. Corruption thus plays a very important role and takes many different guises (refer to section 5.3.7.1). The costs of bribing officials or non-official company staff vary considerably.
Corrupt customs officials receive the highest rewards. Fees amounting to between one and 1.5 million euros are often agreed on with customs officials able to ensure the containers carrying the cocaine shipment are not subjected to an inspection (police information). Other costs may include those of having a planner in the port (between 75,000 and 125,000 euros per import) and a straddler operator, who earns between 25,000 and 75,000 euros to move a container (De Middeleer et al., 2018).
It must be noted that not only the corrupt contacts receive payment. The brokers introducing the corrupt contacts or hiring them out, too, can earn a hefty fee. A broker initiating contact between a corrupt customs officials and the smuggler, for example, can earn 10,000 euros per transport (De Middeleer et a., 2018).

Fifteen to twenty percent of the proceeds of the sale of the final product is commonly charged for removing the cocaine as discussed in section 5.3.2.2 (De Middeleer et al., 2018; police information). Police information indicates that a higher percentage - 25 percent of the proceeds of the sale of the final product - is charged for removing cocaine from airports. This may be due to the fact that the loads that can be transported by air are smaller, meaning the total proceeds will be less. Another possible cause is that it may be more difficult to remove the shipment from an airport.

Once the cocaine shipment is removed, it needs to be transported to a stash location. A transport company can make 150,000 euros per transport (De Middeleer et al., 2018).
The costs of storage locations vary wildly. A warehouse costs 4,500 euros in rent per three months, plus a security, while large locations can cost 40,000 euros (police information). High amounts are also often paid for (smaller) sheds, garages, farms, houses, and other storage sites. Such payment may take the form of monthly rent or of an agreed total amount, but it is also possible for the owner or straw man to receive a percentage per brick of cocaine (police information).

Once the criminal networks avail of their cocaine, they can start selling it.
In the Netherlands, the price for a kilo of cocaine ranges between 27,000 and 29,000 euro (InSight Crime, 2021). Kilo prices of between 26,500 and 28,000 are often

reported, but kilo prices of 31,000 have also been reported. The price seems to be impacted by the demand and supply situation at the specific time, but also by the quality and origin of the cocaine. Peruvian cocaine was in high demand in 2020, but also in very short supply, for example (police information).
In addition to the kilo bricks, cocaine cylinders are also often sold to distributors (refer to section 5.3.5). The price per kilo of such cylinders ranges between 24,000 and 25,000 euros (police information).

The transit of cocaine abroad is much more lucrative at the wholesale level. For example, in 2019, kilo bricks were sold for well over 39,000 euros in the United Kingdom, and for about 80,000 euros in Finland (dataunodc.un.org). Much higher prices can sometimes even be paid in countries outside of Europe: a kilo costs between 102,548 and 130,516 euros per kilo in Australia and New Zealand; about 64,759 euros in China; and even about 190,960 euros in Kuwait (dataunodc.un.org). Police information indicates that a kilo brick could in June 2020 be sold in Hong Kong for 130,000 euros.

The higher prices paid abroad also cause the distributive traders paying the kilo price in the Netherlands to transit the cocaine abroad (police information). Given a maximum margin of 500 euros per kilo, distributing the cocaine within the Netherlands seems to be the least lucrative option (Olde Kalter, 2021; police information). However, transiting cocaine to other countries does of course come with additional risks and costs.

Police information shows that criminal networks active in the cocaine trade sometimes convert their earning into cryptocurrencies and that such currencies can also be used to pay for the cocaine at the wholesale level. For more information on cryptocurrencies, please refer to Chapters 9 and 10.

Finally, a significant amount of money can be earned dealing in cocaine at the street level, too. Percentage-wise, street-levels dealers likely earn the most per kilo. They procure cocaine for 40 euros per gram on average. They then sell it for about 50 euros per gram, but the grams sold by them are comprised of the cocaine procured by them for 0.6 grams only: the remainder is made up of other substances added to the mix. When for example buying a 100 grams of cocaine, this allows them to convert it into 140 grams, equalling 14 euros of profit per gram. Moreover, they often do no put a full gram into the package, but only about, say, 0.8 gram, as their customers will not produce a kitchen scale to weight the total when buying it in a taxi (Olde Kalter, 2021). However, because they mainly deal in ounces and grams, they are less likely to really rake in major profits.

Counterstrategies
Criminal networks and subjects active in the cocaine trade do their utmost to hide their illegal activities, both from criminal competitors and the investigative authorities. They in this connection employ counterstrategies. One of the most notable strategies is the use of encrypted communications. They also make use of various modi operandi and often vary their working methods.

In the past few years, multiple encrypted communications servers have been seized from their providers or hacked. While such communications servers are not illegal, they do seem to be used mainly by criminals, as it allows them to send encrypted messages that are supposed to be untraceable (InSight Crime, 2021; Openbaar Ministerie, 2020). Because the use of these so-called cryptophones is expensive, they are mostly used by professional criminals with money to spend, and not by the average street dealer or criminal errand boy (police information). Many of the messages concern drugs-related (organised) crime (Vermeulen et al., 2021).
The international nature of the import and transit of cocaine and the importance of being able to communicate quickly about the work should encourage the use of encrypted communications. Nevertheless, face-to-face meetings are often the preferred mode of communication. Subjects often prefer taking a walk in the park or a forest to conduct important criminal discussions. Parking lots, service stations, and roadside restaurants, too, form popular meeting places. Subjects from other countries, including South America, Belgium, or the United Kingdom, also come to the Netherlands to conclude agreements on the import, transit, or sale of cocaine, while Dutch subjects also go abroad to be able to do face-to-face business (police information).

Criminal networks and subjects try to remain one step ahead of the authorities by constantly altering their modus operandi. This inter alia means that they will be on the lookout for new smuggling methods (as detailed in section 5.3.2.1). Dutch Customs avails of multiple methods to inspect containers for cocaine. For one, it possess permanent and mobile scanning devices used to inspect the load for any irregularities (Douane, 2017, 2021). In addition, it makes use of dogs trained to sniff out cocaine and other drugs.
Criminals try to elude discovery by such inspection methods by employing all sorts of methods. They try to make the cocaine bricks less visible to scanners, for example by wrapping them in carbon paper, lead, or another metal. Cocaine is also infused in products like fish, fruit pulp, or cow skins (police information).
Vacuum packaging the cocaine bricks sometimes takes place to make it more difficult for sniffer dogs to smell them (police information).

Finally, the owners of valuable cocaine shipments often want for the batches to be monitored along the way, either in person or by using technological devices like cameras or GPS systems (police information). Presumably, this is done to prevent rip-offs and to verify where in the destination port the cocaine batch is located.

Quality
Quality forms an important and distinctive characteristic that makes foreign traders choose to procure cocaine from Dutch criminal networks and subjects (police information).

The quality, and therefore the price, of a brick of cocaine is determined by a number of factors. First of all, the origin of the cocaine is of relevance. For example, in 2020, Peruvian cocaine was preferred over cocaine from Colombia or Bolivia (refer to section 5.3.7).
The quality of a brick of cocaine is determined by a number of factors, including its hardness (a brick should not be soft), its colour (white, not yellow), a specific smell, and the glossiness (not dull) (police information). The stamp forms another quality

indicator. The stamp or print on a brick of cocaine can indicate who produced the brick, where it originated from, or who the intended recipient is. Traders often know which bricks are high in quality and specifically look for bricks featuring a specific stamp (police information).

Due to the importance of the quality of the cocaine for its trade, quality indications are tampered with. Bricks with specific stamps are forged in the Netherlands. In addition, lesser-quality bricks are sometimes mixed with cutting agents and then imprinted with another stamp. A trade in (forged) stamps for cocaine bricks even appears to exist (police information). As a result, the stamp or print does not always allow for identifying the origin or the past owners of the cocaine.

Violence

According to Europol, a majority (about 60 percent) of criminal networks in the European Union employs violence as part of its criminal activities. The trade in cannabis and cocaine, in particular, is associated with (an increase in) liquidations, shootings, kidnapping, arson, assault, and threats (Europol, 2021a; UNODC & Europol, 2021). This is inter alia related to the increasing cocaine market. A number of criminal cocaine networks uses excessive violence and the use of violence seems to be in the increase in Europe (EMCDDA & Europol, 2019; UNODC & Europol, 2021). Such use of excessive violence has also been reported in the Netherlands in the context of the trade in cocaine. Notable examples include hand grenades placed at the front door of persons involved in the cocaine business and the discovery of a torture container that was to be used by a criminal drug organisation. In addition, multiple criminal investigations are currently being conducted into the murders of, inter alia, the brother, a lawyer, and a confidant of a key witness.

Even though the above shows that criminal networks are these days sometimes willing to use excessive violence, others do understand that this has resulted in the demise of many of their predecessors. Violence, and in particular extreme violence, make headlines and draw the attention of the authorities, who wish to crack down on it. A share of criminal organisations active in the international trade in cocaine therefore seems to prefer using corruption over violence, though it must be said that the two are not mutually exclusive (McDermott et al., 2021; police information).

Polydrug trade

The import of cocaine from South America generally exclusively concerns batches of drugs entirely composed of cocaine. The shipment of so-called cocktail batches, containing multiple drugs at once, are very rare (HARC data). However, the cocaine transport routes are also used to import methamphetamine from Mexico (refer to Chapter 6). Moreover, certain criminal networks may also import heroin from Southwestern Asia in addition to cocaine (refer to Chapter 7).

As soon as the cocaine arrives in the Netherlands or Belgium, the shipment is often sold in multiple batches to, and between, distributive traders (also referred to as brick traders). The trade is usually conducted via brokers that match demand and supply (police information; also refer to section 5.4.4). Such distributive traders often trade in multiple types of drugs. Their trade may be comprised of large combined batches, for example of kilo brick of cocaine and bricks of heroin and cannabis resin. The distributive

trade in cocaine is often also combined with the trade in synthetic drugs (police information; also refer to Chapters 4, 6, and 7).

The drug-related criminal investigations by the police conducted from 2017 through 2020, as registered in Summ-IT, that we have investigated show that a major share of investigations into street-level dealers concern polydrug trade. The trade in user's quantities of cocaine is usually conducted side by side with the trade in XTC, speed, and other synthetic drugs, for example. Heroin is on the street often traded in combination with cocaine (refer to Chapters 6 and 7).

The transit and export of drugs abroad, too, regularly concerns polydrug shipments ("cocktail batches") (as referred to in section 5.3.5): investigation O-57, for example, showed that cocaine is often transported to other countries together with other types of drugs.

5.3.8 Conclusion on other aspects

Section 5.3.7 discussed a number of aspects of organised cocaine crime that relates to multiple stages of the cocaine crime script. It has become clear that criminal networks are highly professional. They for example make extensive use of legal entities and prepare every minute detail. It has also become evident that the level of non-official corruption is presumably much higher than was estimated and that official corruption plays an even more important part: without having access to corrupt port officials, the smuggling of cocaine at this scale would be virtually impossible. This degree of professionalisation is very expensive, though, as everyone providing information or services must be paid. As a result, it is important to criminal networks that the criminal activities run smoothly and stay unnoticed. They in this connection make use of encrypted communications, but expressly also of the services of corrupt staff, who cover up the criminal process. All this points to risk-averse behaviour. That said, the trade in high-quality cocaine can be extremely lucrative. The proceeds in the cocaine trade are commonly many times higher than the costs, which explains why many of the proceeds are immediately re-invested in the cocaine trade and even in the export of other types of drugs.
Money is, then, not only the ultimate objective, but also a means. Corruption is an important tool, though some criminal networks do not shy away from using excessive violence. To these criminal networks, the balance between risk-averse behaviour and the need for retaliation seems to tip towards the latter.

5.4 Criminal networks and subjects

Multiple actors operate on the global cocaine market - including Dutch criminal networks and subjects. In this section, we will first provide a general overview of suspects of cocaine-related crime in the Netherlands. We will then discuss the primary characteristics of the Dutch criminal networks and subjects active in the cocaine trade in more detail. Finally, we will address a number of important international aspects and notable roles within the cocaine crime script.

5.4.1 Cocaine-related suspects in the Netherlands

In this section, we will describe the suspects identified in cocaine-related police investigations conducted in 2019 and 2020, as registered in Summ-IT. The criminal

investigations concerned covered the entire spectrum from street-level dealing to wholesale trade.
In 2019, 1,528 persons were registered as suspects in a cocaine-related police investigation. 89 percent of them were men (refer to Table 5.22). In 2020, 1,428 suspects were identified, 90 percent of whom were men. In other words, men are far more often identified as suspects in cocaine-related crime than women are.

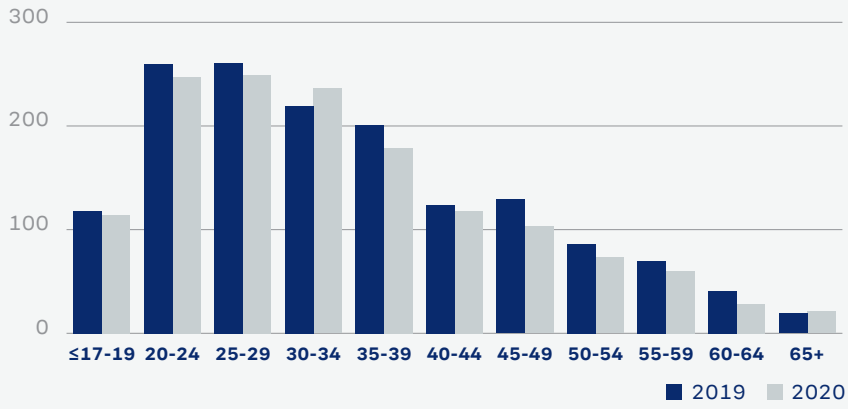
Table 5.22. Number of cocaine suspects and their gender

Cocaine	Number of suspects	Men	Women
2019	1,528	1,362 (89%)	166 (11%)
2020	1,428	1,292 (90%)	136 (10%)
Total	**2956**	**2654**	**302**

Source: Summ-IT.

Figure 5.23 provides the age categories of the suspects registered in 2019 and 2020. Well over a third of the suspects was aged between twenty and thirty. While the youngest suspects were fourteen years of age, less than ten percent of all suspects was aged below twenty. In both 2019 and 2020, over half the suspects were aged above thirty. Little difference exists between the distribution by age categories of the suspects in 2019 and that in 2020 (Figure 5.23). Compared to suspects of prevalent crimes, the average age of suspects in cocaine investigations is slightly higher (www.cbs.nl).

Figure 5.23. Number of suspects per age category in cocaine investigations



Source: Summ-IT.

Most suspects identified during cocaine investigations in 2019 and 2020 were born in the major cities. The top three for both years are made up of Amsterdam (9 and 8 percent, respectively), Rotterdam (7 and 8 percent, respectively), and The Hague (6 and 5 percent, respectively). In 2019, more suspects were found to be born in Paramaribo (fourth place) and Curaçao (fifth place) than in Utrecht (sixth place). However, in 2020, Utrecht took the fourth spot, while Paramaribo and Curaçao took up places five and six.

Almost 85 percent of the suspects identified in the investigations registered in Summ-IT that we consulted were found to at least hold Dutch nationality. This figure went up to 87 percent in 2020. In 2019 and 2020, 35 and 36 percent of suspects, respectively, held more than one nationality.
The most common nationalities held in addition to the Dutch one were Moroccan and Turkish nationality. About 18 percent of the total number of suspects in 2019 held Moroccan nationality alongside Dutch nationality. In 2020, this applied to about 22 percent of the suspects. In 2019, about 9 percent held Turkish nationality in addition to the Dutch one; in 2020, this applied to about 6 percent.

5.4.2 Characteristics of Dutch criminal networks and subjects

Dutch criminal networks and subjects active in the cocaine trade often also engage in other forms of illicit trading. It has also become apparent that their methods of cooperation are extremely fluid and flexible. The composition of these criminal groups is often dynamic and is driven by opportunities, criminal competition, or policy measures (Duijn, et al., 2014; De Middeleer et al., 2018).

Almost 50 percent of all the cocaine-related investigations in 2019 and 2020 registered in Summ-IT we investigated concerned polydrug investigations. Criminals employ their contacts and facilities to import, export, and trade other drugs too, provided the risk is not too high but the profits are. In addition to trading in cocaine, they also seem to be involved in the trade in cannabis resin and/or herbal cannabis, heroin, and synthetic drugs (police information).
Cocaine-related crime is always associated with other forms of crime. The enormous amounts of money made must be laundered, for example. In addition, cocaine trade offences are often associated with the trade in arms, theft (of vehicles or number plates, for example), fraud, and threat (police information). As was already indicated in section 5.3.7, violence is often employed in the context of cocaine-related crime. Police information shows that cocaine traders also trade in other goods, including illegal cigarettes, gold, and art objects.

Dutch criminal networks involved in the trade in cocaine are closely interwoven (police information). This corresponds to the results of the investigations by Vermeulen et al. in 2021 into the Dutch organised synthetic drug crime, which showed that three quarters of the mesonetwork studied by them was directly or indirectly connected, making the network highly robust. It is likely that - similarly to networks involved in synthetic drug crime - Dutch criminal micronetworks (OCGs) active in the cocaine trade are closely connected and, thus, interwoven with each other. This may mean that as soon as someone is removed from one of these networks, another will take their place.

In addition, the criminal networks active in cocaine-related drug crime are flexible and fluid, working together with one person one day and with another a day later. Subjects also regularly shop for work and are looking for new partners and smuggling opportunities (police information). A party smuggled into the Netherlands is often not destined for just one subject/group, but for multiple persons or groups that helped with the smuggling or contributed to funding the batch (police information).
However, long-term contacts are still very important, and persons commonly and for a long term worked together with are trusted more readily (police information). Moreover, offenders are regularly repeat offenders, who have often been active in crime for years (cf. Kruisbergen et al., 2019). A large proportion of the subjects active in the import of cocaine is highly professional. They are well aware of all rules, opportunities, contacts, and options for importing the goods and, thus, for smuggling cocaine. They have built up such knowledge for years and, in so doing, they have acquired prestige in criminal circles. Police information shows that experienced people often render advice to others or guide them (often against payment in some form or another), for example with respect to removing cocaine from the port of Rotterdam or setting up a new smuggling route. Such expertise is in high demand, as setting up a smuggling route, for example, is a complex affair requiring a lot of specific knowledge. The same applies to the brick traders: if you lack expertise, you are more likely to be defrauded.
Repeat offenders often have the more risky activities associated with cocaine-related crime performed by young, unexperienced persons; examples include the removal of the cocaine from the port and the transportation of the cocaine bricks or major amounts of money (police information; for more information on rip-off crews, refer to section 5.4.4).

The Dutch criminal networks are considered important actors on the global cocaine market. Since 2017, most persons apprehended in Europe when seizing batches of cocaine amounting to 100 kilos or over, hold Dutch nationality (UNODC & Europol, 2021).

5.4.3 International aspects

The smuggling of cocaine to the Netherlands is always international in nature: cocaine almost always arrives from South America and is transited to markets abroad via the Netherlands. The import and transit of cocaine requires international cooperation. Dutch criminal networks and subjects are active abroad, cooperate with nationals from other countries, and engage experts to arrange things for them abroad (police information).

Police information shows that Dutch subjects are in regular contact with subjects (and criminal networks) abroad on the import and sale (transit) of cocaine. Such contacts include contacts with Dutch subjects abroad and with subjects holding other nationalities.
Dutch criminal networks and subjects active in cocaine-related crime are often engaged in multiple international criminal activities and are regularly on the lookout for persons in their (direct or indirect) network that may aid them or provide information from abroad (police information).

During the COVID-19 pandemic, traders experienced problems smuggling cocaine, as some countries closed their borders. The pandemic resulted in air traffic and container

shipping figures nosediving. The flexibility of the networks became apparent from the fact that they looked for alternative working methods and routes, and for new contacts, to be able to as yet continue their international criminal activities (police information). As a result, the trade in cocaine did not come to a complete standstill.

Dutch clients abroad
Dutch cocaine transport clients and financers are found to often hide abroad, in countries like Dubai, Colombia, the Dominican Republic, Suriname, and Spain (police information). They generally do not have any direct dealings with the cocaine, but take care of the coordination of the transportation, the removal, and the sale. Prominent Dutch criminals are also regularly found to be in the cocaine-producing countries (InSight Crime, 2021).

Dutch criminal networks and subjects in South America and the Caribbean
In order to have the cocaine from South American countries end up in the Netherlands or other European countries, contacts and networks in South America possessing close links with the cocaine owners in the countries of origin are sought out. Criminals in this connection also make use of brokers (refer to section 5.4.4) in possession of sound information, who are able to bring supply and sale together (InSight Crime, 2021). The rewards received by such brokers for their services often take the shape of a percentage of the proceeds, but may also consist of a fixed amount or a share of the cocaine shipment (police information; also refer to section 5.3.7). Having a good international network or sound contacts with international brokers is crucial to successfully importing cocaine into the Netherlands (police information).

A great many subjects speaking Dutch or English appear to stay in foreign countries in order to maintain contact with the persons possessing or sending cocaine (police information). The ability to speak Spanish is a major advantage when importing cocaine. Subjects often look for people able to speak Spanish, for example to take them along to meetings (police information). This is necessary, as Dutch subjects sometimes fly to South America for meetings with the owners of the cocaine to be imported, or for such owners to come to the Netherlands.

The Dominican Republic in the Caribbean is found to be a popular transit route for Dutch subjects (police information; also refer to section 5.3.2.1). In addition, the Netherlands has strong historical and linguistic ties with countries in the Caribbean part of the Kingdom of the Netherlands and with Suriname, causing many Dutch nationals to have family connections with persons residing there. The Caribbean forms an important transit route for cocaine destined for Europe (McDermott et al., 2021). Possessing a network in the area may therefore provide a link between the supply of cocaine from South America and the demand existing in the Netherlands (Stevanovic, 2020). It does indeed become apparent from police information that Dutch subjects and subjects present in the Caribbean and in Suriname regularly work together.

Criminal interconnectedness between the Netherlands and Belgium
Dutchmen and Belgians have been working together for a long time in the context of cultivating cannabis and producing synthetic drugs (De Middeleer & De Ruyver, 2017; Spapens et al., 2016). This interconnectedness between Belgium and the Netherlands can also be seen in the trade in cocaine. According to previous investigations, 70 to 80

percent of cocaine transports arriving in the port of Antwerp is destined for the trade in the Netherlands, while the cocaine import clients and financers are often to be found in the Netherlands (Boerman et al., 2018; Colman et al., 2018; UNODC & Europol, 2021). The above information and recent media reports (Een Vandaag, 2021; Omroep Brabant, 2020; De Volkskrant, 2020) would have it seem that it is mainly Dutch criminals who are active in the trade in cocaine in Belgium and the port of Antwerp. However, police information shows that Belgian and Dutch subjects active in the cocaine trade often cooperate: the Dutch subjects require the Belgian subjects for their contacts and "ins" in the port of Antwerp, for example. The Dutch and Belgian networks are often interwoven (police information); such to a much greater extent than they are with subjects from other neighbouring countries, like Germany and France. A possible explanation is that communications between Dutchmen and (Flemish-speaking) Belgians are easy, as no language barrier exists. Findings from the investigation by De Middeleer et al. (2018), too, point to the integration of Belgian and Dutch criminal networks. They in their investigation did not discover strong indications that the problem is shifting towards Belgium from the Netherlands. Police information does show that some Dutch subjects prefer to smuggle the cocaine in via the port of Antwerp, as this is said to be easier. It is unclear why this would be easier.

Criminal networks and subjects with a Moroccan (migration) background

Already in 2013, Europol indicated that smugglers with a Moroccan (migration) background would play an important part in the distribution of cocaine in Europe, acting via the distribution hubs of Spain and the Netherlands (Europol, 2013). Belgian investigations, too, have found that persons with a Moroccan (migration) background appear to play an important role in the import and distribution of cocaine within Belgium (Colman, 2018; De Middeleer et al., 2018).

The engagement of persons with a Moroccan (migration) background in cocaine-related crime is also visible in the Netherlands. The *2017 National Organised Crime Threat Assessment* for instance notes that persons with Moroccan, Albanian, and Turkish backgrounds are active in the Dutch cocaine market and are regularly identified as cocaine rip-off crew members in the ports (Boerman et al., 2017). About a quarter of the rip-off crew members apprehended in the Netherlands in 2020 held Moroccan nationality (in addition to Dutch nationality), which figure seems to confirm the role played by persons with a Moroccan (migration) background (HARC data).

The cocaine-related police investigations covering 2019 and 2020 we have investigated show that about one fifth of all suspects held Moroccan nationality in addition to Dutch nationality. This means that, as is the case with respect to cannabis resin-related crime, the percentage of suspects holding both Dutch and Moroccan nationality is higher in the context of cocaine-related crime than in other crime contexts, as registered in Summ-IT (refer to Chapter 4). As was indicated in section 5.3.2.1, signals exist that (Western) Africa is becoming a major cocaine transit hub. After arriving in Africa, the cocaine follows the old cannabis resin smuggling routes to Europe, which may provide an explanation for the presence of suspects who hold both Dutch and Moroccan nationality.

Albanian-speaking criminal networks and subjects

According to multiple sources, Albanian-speaking[38] criminal groups form important players on the European cocaine market (EMCDDA & Europol, 2019; Europol, 2020; Saggers, 2019; Stevanovic, 2020; UNODC, 2021a4). Albanian-speaking criminal groups are said to have direct links to the Colombian cartels, allowing them to procure the cocaine from the source and passing over the middlemen (Saggers, 2019; Zhilla & Lamallari, 2016; UNODC & Europol, 2021). Moreover, members of Albanian-speaking criminal networks are said to regularly reside in Colombia (UNODC & Europol, 2021). Albanian-speaking criminal networks would in addition be involved with the distribution of cocaine within Europe and the United Kingdom and with the street-level dealing in cocaine (EMCDDA & Europol, 2019; Saggers, 2019; The Guardian, 2019; UNODC, 2021a4). An Italian criminal investigation of five years resulted in the establishment of a Joint Investigation Team (JIT) of, inter alia, Dutch and Italian authorities. This JIT broke up an Albanian-speaking network smuggling cocaine to Europe. The joint action resulted in the arrest of twenty persons, including two in the Netherlands (Europol, 2020).

Despite these signals, the cocaine-related criminal investigations conducted in 2019 and 2020 studied by us do not reveal a large number suspects that may be Albanian-speaking, when considering only the registered nationalities. In 2019, two percent of suspects held the Albanian or Kosovar nationality[39], dropping to only 1 percent in 2020. It is unclear whether Albanian-speaking criminals are less active in the Netherlands than is suggested by other European countries or whether a blind spot exists.

There are however signals that Dutch cocaine traders sometimes do business with Albanian-speaking persons. That said, they also trade with individuals from other European countries (police information).

Cooks from Colombia

A Spanish criminal investigation showed that a Colombian-Spanish network was active getting individuals specialised in performing the chemical steps associated with extracting and producing cocaine and possessing Colombian nationality to Europe. These "cocaine cooks" travelled from Colombia to Spain, and on to Bulgaria and the Netherlands (UNODC & Europol, 2021). This sign is confirmed in investigation O-56. That investigation related to the closing down of a major cocaine extraction facility where thirteen cooks holdings Colombian nationality were active. They had inter alia entered the Netherlands via Spain.

Police information, too, confirms that criminal networks are on the lookout for Colombian individuals possessing expertise in extracting and producing cocaine, as was already described in section 5.3.4. Subjects constantly try to come up with new methods to smuggle cocaine into the Netherlands. They for example have other

38 The term "Albanian-speaking" is used, as it concerns persons of various nationalities sharing the same language and ethnic background. This includes Albanian citizens, but also individuals from Kosovo, Bosnia, Herzegovina, Montenegro, and North Macedonia (EMCDDA & Europol, 2019).

39 Various countries contain communities of ethnic Albanians. This includes Greece, Italy, and North Macedonia. As suspects are not registered on the basis of their identity, but on their nationality, the file only contains Kosovar and/or Albanian suspects. Kosovar suspects are included as 95 percent of the population of Kosovo is of Albanian origin.

products impregnated with cocaine (refer to the smuggling methods described in section 5.3.2.1). Once it has arrived in the Netherlands, the cocaine must once again be extracted in a chemical process by specialists. 26 and 27 persons holding Colombian nationality were registered in the 2019 and 2020 criminal investigation studied by us. They were hired to extract and produce cocaine in the Netherlands, as the Dutch criminal networks lack this expertise. This process is comparable to the cooperation with Mexican subjects in the context of the production of methamphetamine in the Netherlands (refer to Chapter 6).

5.4.4 A more detailed examination of some roles

Cocaine traders are unable to do their work without engaging brokers, facilitators, and specialists. Criminals cooperate with each other, but also - as was noted in section 5.3.7 - with non-criminals. To highlight their crucial contributions to the trade in cocaine in the Netherlands, in this section, we discuss the roles played by distributive traders (brick traders), brokers, facilitators, and rip-off crews.

Distributive traders / brick traders

The distributive trade in cocaine forms the level between wholesale (import) and retail. The distributive trader can be included in stage 6 of the crime script: sales. No clear definition of "distributive trader" exists. In this report, we use the term to indicate: traders in cocaine bricks who procure the bricks from wholesalers and sell it on to buyers (Gruter & Van de Mheen, 2005; Kleemans et al., 2002). Unfortunately, very little scientific research has been conducted into the distributive trade level, meaning that little is known about it (Colman, 2018). Distributive traders sometimes buy great quantities of cocaine at once, then splitting the batches up and re-selling it to other parties in the Netherlands, in Europe, and even outside of Europe (police information). They are sometimes looking for high-quality bricks (refer to 5.3.7) or bricks from a specific country, because their customers only want bricks from, for instance, Colombia (police information). Police information also shows that distributive traders buy bricks of cocaine and next proceed to cut them with cutting agents before selling them on, to increase their profit margin. Sometimes, yet another layer of persons exists between purchase and sale: these are effectively brokers among the distributive traders, i.e., distributive traders selling to other distributive traders.

Brokers

As was previously mentioned in this section, the Dutch criminal cocaine networks are fluid in nature. The Dutch criminal subjects active in the cocaine trade act in true networks, all connected to each other via others and arranging their business in this fashion. In addition, they engage brokers to get things done. Brokers can be active in all crime script stages. Brokers are persons with social relations in multiple communities or networks. This person serves to bridge the gap between and connect two or more persons not mutually connected. Brokers are, therefore, persons with a strategic position within and between criminal networks, but also between criminal and non-criminal networks (cf. Duijn, Kashirin & Sloot, 2014). The position the broker has within and between networks is decisive for his importance and degree of success (Borgatti & Lopez-Kidwell, 2014; Burt, 1992). Moreover, the broker must avail of specific knowledge, skills, organisational talents and/or funds in order to actually play a strategic and crucial role within drug-related organised crime (Duijn et al., 2014; Spapens, 2012).

Brokers therefore constitute special and important links in the overall cocaine market. They can be active in all crime script stages. The matching of demand and supply is done by (international) brokers (InSight Crime, 2021). Brokers established in South America act as the contacts between the producers and owners of the cocaine and the international - including Dutch - criminal networks or subjects wishing to procure the cocaine (InSight Crime, 2021). Brokers may also connect various parties in the Netherlands, by acting as a link between, for example, rip-off crews and the owners of shipments of cocaine that need to be removed. In addition, they may provide information derived from corrupt officials to smugglers (police information).
Brokers often work together and in a sense form networks of brokers (InSight Crime, 2021; police information).
This working method also carries risks for the criminal networks, as more links and individuals are required, all of which must take up one spot in the logistics chain, increasing the likelihood of persons going to the authorities or making mistakes. Moreover, because these parties do not all form part of the same criminal network but do cooperate, they require mutual trust (InSight Crime, 2021).

Facilitators
In addition to brokers, facilitators are active in all crime script stages. While facilitators do not themselves have to deal with the cocaine, they make the smuggling of and trading in cocaine possible by providing their services. There are all sorts of facilitators, each of them offering specific services. Examples include re-sellers of encrypted communications devices, accountants, staff of businesses playing a role in the logistics process, and financial facilitators laundering criminal proceeds (InSight Crime, 2021; police information). The persons converting cars to enable the stashing of cocaine, corrupt port staff, and persons providing spaces for setting up a cocaine extraction facility, too, can be deemed facilitators.

Rip-off crews
One specific role in the cocaine trade in the Netherlands is that of “rip-off crew”. This role plays a part in stage 2 (import) of the crime script. Rip-off crews are inter alia hired or recruited to remove cocaine from the containers in port, as was discussed in section 5.3.2.2. They form a major and growing problem, especially in the port of Rotterdam (Trouw, 2021; NOS, 2021; RTL Nieuws, 2021; Zeehavenpolitie, 2021). In September 2021 alone, 110 rip-off crew members were arrested (De Telegraaf, 2021).

An analysis was made of rip-off crew members discovered in the port of Rotterdam of 2020 in the context of this National Strategic Assessment. The analysis covered the details of 201 persons labelled “rip-off crew/unloader” in Summ-IT.
They all turned out to be men aged between 17 and 48. The majority of them - about 71 percent - is aged between 20 and 29. 13 percent of the suspects was younger than 20 and only 4 percent was older than 35. Compared to the total number of suspects of cocaine-related crime identified in the investigations, as described in section 5.4.1, rip-off crew members are a lot younger. A boy of fourteen was even apprehended on the Rotterdam port site in 2021 (Algemeen Dagblad, 2021). Most rip-off crew members reside in Rotterdam-Zuid or do not have a permanent abode (Zeehavenpolitie, 2021). Presumably, many of them are recruited in Rotterdam-Zuid. The young, unexperienced boys are often paired with an older, more experienced crew member (police information). The experienced rip-off crew member is usually the only person

who has contact with the client or rip-off broker and possesses the information on the container that must be unloaded.
Whenever rip-off crew members are found on the Rotterdam port site by the authorities but cannot be directly linked to a shipment of drugs, they usually receive a fine for the unauthorised access to the site (Section 461 of the Dutch Penal Code) and/or a fine for being unable to show identification. Many of them invoke their right to remain silent or present an excuse for their presence at the port site. In many cases, the boys are let go a few hours later with a fine, only to be found having accessed the port site without authorisation a short while later. The fines therefore do not seem to deter them (Zeehavenpolitie, 2021). This is also evident from a study conducted by Abraham et al. (2021). They state that the relatively light sanctions discourages them to a very limited extent only (maxius.nl).
Rip-off crew members are regularly found on the port site multiple times a year (Crimesite, 2021). In 2020, the same person was even arrested on the port site as a rip-off suspect eleven times (Zeehavenpolitie, 2021). As the rip-off crews are usually not arrested while having the drugs in their possession, it is difficult to prove that they are on the site to remove cocaine from a container, regularly resulting in them being acquitted or being let off with a small fine (court judgment)[40]. A new "rip-off law" became effective on 1 January 2022. Section 138aa of the Dutch Penal Code provides that a more severe punishment may be imposed for being present at ports and airports without authorisation. Persons caught on these sites without having a reason to be there can be imprisoned for up to two years (www.om.nl). Moreover, Section 138aa(3) provides that, should aggravating circumstances apply, the sentences listed in subsections (1) and (2) can be increased by one third. The effects of this new provision of law still remain to be seen.

5.4.5 Conclusion

We in this section discussed the primary characteristics of the Dutch criminal networks and subjects active in the cocaine trade, also addressing the international aspects and important roles within the cocaine crime script in more detail. Compared to suspects of prevalent crimes, the average age of suspects of cocaine trade is slightly higher. This may be related to the expertise and financial resources required for the cocaine trade. In addition, it was found that 85 to 87 percent of the suspects identified in cocaine investigations in 2019 and 2020 at least held Dutch nationality. Some of them also hold another nationality, in addition to the Dutch one, most often Moroccan or Turkish nationality.

An important feature of the Dutch networks and subjects is that they are extremely flexible and fluid, and are driven by opportunity. This means that the network composition changes often. Sound international cooperation is the rule, rather than the exception. Of note in this context is the common cooperation between Dutch and Belgian criminal networks and the recruitment of South American cooks to perform part of the production process in the Netherlands. Subjects active in the cocaine trade often fulfil multiple roles within the various crime script stages and are generally active in other forms of crime as well. The roles played by brokers and rip-off crews are of note in this connection. Brokers form the most important links in the entire cocaine market.

40 Rechtspraak.nl: ECLI:NL:RBROT:2020:7501.

They connect criminal networks from various countries and thus contribute to the flexible and fluid cooperation. Rip-off crews are notable in their own way. They are crucial to the removal of cocaine from containers and form a major and growing problem for the port of Rotterdam. It remains to be seen what effects the new legislation will have on these groups.

6

Synthetic drugs

6. Synthetic drugs

Peter Jansen and Laura Moerenhout

6.1 Introduction

The Netherlands has been known as a producer of various types of synthetic drugs for years (Tops et al., 2018). International reports (EMCDDA, 2020a; Europol, 2021a; UNODC, 2021a4) all emphasise the important role played by the Netherlands with respect to the production of amphetamine and MDMA. The European Drug Report (EMCDDA, 2021a) ranks the Netherlands, Belgium, and Poland as the three most important methamphetamine-producing countries in Europe. The production of methamphetamine in the Netherlands, performed with the aid of Mexican suspects, was considered an important development in 2019 (EMCDDA, 2020a). While most amphetamine is still being produced outside of Europe, expectations are that European production will only continue to develop and grow, including in the Netherlands. MDMA (ecstasy) is another synthetic drug the Netherlands is well-known for around the globe. More MDMA laboratories were dismantled in the Netherlands than anywhere else in Europe (Europol, 2021a). The same report states that the laboratories, irrespective of the type of synthetic drugs produced there, are becoming ever more advanced and professionally run.
The foregoing underlines the magnitude of the role played by the Netherlands in the global production of synthetic drugs. Of course, we cannot consume everything produced here ourselves. Consequently, the Netherlands is a synthetic drugs exporter. The Netherlands supplies the international markets within Europe and much of the globe (Europol, 2021a).

This chapter addresses the various types of synthetic drugs. In addition to the more common types, such as amphetamine, MDMA, and methamphetamine, other drugs, too are being produced or found in the Netherlands to some extent. Examples include GHB, ketamine, LSD, and various New Psychoactive Substances (NPS's). Synthetic drug production is impossible without the use of precursors, chemicals, hardware, and suitable production sites. These developments, too, will be discussed in detail, as will the dumping of waste after completion of the production process, which has a major impact on nature and public health and is very costly to society.

In the first part of this chapter, we will briefly address the size of the synthetic drugs market by considering the consumer market. We will then discuss the subject on the basis of the synthetic drugs crime script, paying attention to the various types of synthetic drugs and/or precursors in each stage.
When we drew up this National Strategic Assessment, we found that the criminal processes relating to cannabis, cocaine, synthetic drugs, and heroin are similar and, thus, that the associated crime scripts are similar, as well. We have therefore used the stages and names as described in Chapter 2 for the synthetic drugs crime script. For the further elaboration, we made use of the synthetic drugs crime script developed for

and by the Intel & Expertise cell of the Synthetic Drugs Cluster of the Central Intelligence Division of the Central Unit.
The following stages are distinguished in the process of being able to produce synthetic drugs in the Netherlands: the acquisition of precursors and chemicals, locating storage sites, and the acquisition of the proper production requirements, including hardware and suitable productions sites. These stages are required to arrive at the actual production; the dumping of waste forms an important substage in this connection. The final stage of the synthetic drugs crime scripts concerns the sale of the drugs - within the Netherlands, but predominantly abroad. Refer to Figure 6.1.

Figure 6.1. Synthetic drug production crime script

We consulted various sources in writing this chapter, including criminal investigations, which have been included in this text in coded format: O-601 through O-654. In addition, partners like Customs (*Douane*), the Fiscal Intelligence and Investigation Service (*Fiscale Inlichtingen- en Opsporingsdienst - FIOD*), the Royal Marechaussee (*Koninklijke Marechaussee – KMar*), and foreign authorities, too, have made information available. This information is collected in the Summ-IT police registration system by the Intel & Expertise cell of the Synthetic Drugs Cluster (O-601). Interviews have been included - in coded format - as I-61 through I-63. Also refer to References.

6.2 Consumer market

This chapter addresses the consumer markets for the various types of synthetic drugs. We in this context distinguish between consumption around the world, within Europe, and within the Netherlands.

Comparing ecstasy use in Europe to global consumption levels, we find that the percentage of people using ecstasy is not the highest. The World Drug Report (UNODC, 2021a4) shows that this percentage is highest in Oceania, where consumption has

also been increasing over the past few years, while consumption levels in Europe, but also in North America, have remained stable. The consumer markets in Africa and Asia are a lot smaller. In Central and South America, too, consumer markets are relatively small, but an increase in consumption is visible in some countries (UNODC, 2021a4). According to the same report, the level of consumption of this drug in the Netherlands is the highest in Europe.

In the Netherlands, ecstasy (MDMA) is the most commonly used drug after cannabis. The Netherlands has been topping the EU ecstasy consumption lists for years now. In 2019, the percentage of adults in the Netherlands who had at some point in their life consumed ecstasy was 8.8 percent, or about 1.2 million persons (Laar et al., 2021). The EMCDDA (2020a), too, indicates that the Netherlands has the highest number of ecstasy consumers in the EU. Following the Netherlands, Ireland and the United Kingdom are presented as countries where ecstasy is commonly used in the same report.

Considering amphetamine use at the global levels, we find that its consumption is much higher in certain regions than it is in Europe. The UNODC figures shows that the user percentage is easily the highest in North America, followed by Oceania and Central America. In absolute number, consumption is most prevalent in East and Southeast Asia. According to these figures, the market for this drug is, then, located mainly outside of Europe (UNODC, 2021a4). In the Netherlands, one in twenty adults has used amphetamine once in their lives; a third of them had consumed it in the past year. These percentages have not changed much between 2015 and 2019 (Laar et al., 2021). Compared to other European countries, the Netherlands did top the consumption list in 2018 (EMCDDA, 2020a).

The methamphetamine consumer market appears to be located primarily outside of Europe. While the United States form the largest market, the markets in East and Southeast Asia appear to be growing (UNODC, 2021a4). Compared to the rest of the world, methamphetamine use levels in the Netherlands are low, even though the production levels in the Netherlands seem to be on the rise. Within the Netherlands, methamphetamine use seems as yet to be limited to specific nightlife sectors (Laar et al., 2021).

The consumption of other types of synthetic drugs, like GHB and ketamine, is limited in the Netherlands. In 2019, 0.6 percent of adults had consumed ketamine in the last twelve months, and 0.4 percent had consumed GHB. While an increase in the consumption of ketamine does appear to exist among youths and young adults, the market is still small (Laar et al., 2021).

The COVID-19 pandemic impacted the consumption levels of the so-called party drugs. Nightlife venues were closed for a long time and other gatherings of large groups, such as festivals, were prohibited. According to the figures presented in the 2020 National Drug Monitor, the share of consumers in the Netherlands who consumed less ecstasy during the pandemic was bigger than the share that increased their consumption (Laar et al., 2021).

6.3 Global synthetic drug market and the role played by the Netherlands

As was briefly indicated in the introduction, the Netherlands plays an important role in the global synthetic drug production. While the Netherlands is primarily a producer of amphetamines and MDMA, methamphetamine production is on the rise, even though the country is not yet a major global player in this context.

The World Drug Report (UNODC, 2021a4) mentions a record number of seized amphetamine-type stimulants (ATS) in 2019. The UNODC uses the term "ATS" to denote various types of synthetic drugs. A total of 456 tons were seized, a 64 percent increase from the year previous and the biggest annual increase since 2001. The global synthetic drug market is still being dominated by methamphetamine (72%), followed by amphetamine (19%) and ecstasy (4%) (UNODC, 2021a4). Most seizures are conducted outside of Europe. The United States leads the pack in methamphetamine seizure figures. Amphetamine is most commonly found in the Middle East and Southwest Asia, while ecstasy is discovered most often in South America and the Caribbean.

Methamphetamine production mainly (85%) takes place in North and South America, with most production locations being discovered in the United States. Only six percent of dismantled production locations in the 2015-2019 period were located in Europe, most of which were found in the Czech Republic. However, the Netherlands and Belgium appear to be on the rise as methamphetamine producers within Europe (EMCDDA, 2020a) - albeit that their share is marginal, compared to global production. That said, the Netherlands has, in the past few years, been identified as a major transit country for the sale of synthetic drugs (UNODC, 2021a4).

A different picture exists with respect to global amphetamine production. According to the UNODC (2021a4), 571 amphetamine production locations were dismantled in the 2015-2019 period, of which 85 percent were located in Europe. Within Europe, most locations are discovered in the Netherlands, followed by Russia, Belgium, and Poland. The picture with respect to ecstasy production is similar where the role played by the Netherlands is concerned: of the production locations dismantled around the globe in the 2015-2019 period, 58 percent was located within Europe, with the Netherland and Belgium being identified as housing most of them (UNODC, 2021a4).

Mutual legal assistance requests

When considering the mutual legal assistance requests issued by and to the Netherlands, we find that 706 such requests in the 2017-2020 period have been labelled in the mutual legal assistance requests registration system (LURIS) as being related to synthetic drugs. It must be noted in this connection that the vast majority of mutual legal assistance requests concerning drugs have not received a label as to the type of drugs concerned. These figures therefore only show a part of the total number of mutual legal assistance requests involving synthetic drugs. In addition, when the requests contain information about multiple drug types, they may also have been labelled as pertaining to another type of drug.

What we can say on the basis of the data available in LURIS, is that, similarly to the other types of drugs, the number of mutual legal assistance requests received (552) is much higher than the number issued to other countries (154). The number of mutual legal assistance requests relating to synthetic drugs has been decreasing from 2017 (235) through 2020 (153).

Table 6.2. Incoming and outgoing mutual legal assistance requests

	2017	2018	2019	2020	2017 through 2020
Incoming	188	126	127	111	552
Outgoing	47	38	27	42	154
Total	**235**	**164**	**154**	**153**	**706**

Source: LURIS.

As is the case with respect to other types of drugs, Belgium (203) and Germany (202) make up the top two of countries most mutual legal assistance requests have been exchanged with in the context of synthetic drugs as well. About 57 percent of all mutual legal assistance requests concerning synthetic drugs have been exchanged with these two countries alone. Of note is that the country ranked third, France, has sent and received much fewer requests (28). Closely on France's heels is Poland (23), an important synthetic drug producer. One striking country in the top ten is Argentina, which submitted eleven mutual legal assistance requests to the Netherlands, although receiving only one.

One country not included in the top ten but often named as a synthetic drug market, is Australia (11). The United States (11), too, is just outside of the top ten, followed by Switzerland (8) and Brazil (8).

Police investigations in Summ-IT

The Summ-IT data we analysed show that the police conducted a total of 422 investigations into synthetic drugs in 2019, and 371 in 2020. Table 6.3 displays the types of synthetic drugs discovered during investigations. These do not add up to the total investigations into synthetic drugs, however, as one investigation may deal with multiple types of drugs. In 2019, 69 percent of investigations related to multiple types of synthetic drugs; in 2020, this concerned 54 percent of the cases. This means that the majority of investigations into synthetic drugs relate to multiple types of drugs and/or precursors. Of note is that the lion's share of police investigations relate to MDMA, amphetamine, or precursors. As precursors are needed for the production of drugs, it is not surprising that many investigations focus on them as well. The "other" category relates to drugs not fitting any of the other categories or investigations where the type of drugs concerned did not become fully clear.

Table 6.3. Number of police investigations by synthetic drug type

	Precursors Chemicals	MDMA	Amphetamine	Methampheta-mine	GHB
2019	127	232	137	37	35
2020	145	169	125	63	20

	Ketamine	LSD	Captagon	Other	**Total**
2019	56	22	4	50	**422**
2020	48	13	1	41	**371**

Source: Summ-IT.

In addition to various types of synthetic drugs, we also find investigations where they are combined with other types of narcotics. Cocaine is most prevalent in the investigations into synthetic drugs in 2019 and 2020. In 2019, 157 investigations into synthetic drugs led to cocaine being found as well. In 2020, this was true for 171 investigations.

Table 6.4. Other types of drugs found during investigations into synthetic drugs

	2019	2020
Cocaine	157	171
Fentanyl	6	2
Cannabis resin	54	49
Khat	0	0
Heroin	33	35
Nitrous oxide	2	10
Cannabis	82	78
Total polydrug investigations*	**203**	**205**

* The table totals do not add up, as an investigation may cover more than two types of drugs.

Source: Summ-IT.

6.4 Precursors

Synthetic drugs are created by producing one or more chemical reactions. This process requires essential raw materials, dubbed "precursors". Without acquiring these materials, no production process can be started up. Various types of precursors exist, used to manufacture various final products. Precursors like benzyl methyl ketone (BMK), required for the production of amphetamine and methamphetamine, and piperonyl methyl ketone (PMK), required for the production of MDMA, have been banned on the (inter)national level for years now, for example. Criminals therefore started looking for alternatives to as yet be able to produce drugs, resulting in materials like APAAN, APAA, MAPA, PMK/BMK methyl glycidate, and PMK/BMK glycid acid entering into use. Using these so-called pre-precursors and additional chemical process, BMK and PMK and, ultimately, the desired final product are produced. The advantage of using these pre-precursors is that they were non-regulated substances, resulting in many countries being unable to act against the trade in them. "Regulated" in this context means that certain substances may only be used and/or traded in under strict conditions. Various pre-precursors are currently internationally regulated under the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (Vienna Convention). Ultimately, however, an "arms race" is being conducted, with new pre-precursors not covered by the international legal framework constantly appearing on the market. Some of these substances are referred to as "designer precursors", as they are used exclusively for the production of synthetic drugs. Other pre-precursors are common chemicals used regularly in legal industry. In the Netherlands, Section 10a of the Opium Act allows for action being taken against the use of any substance if it is used for the production of drugs included on list I (hard drugs) to the Opium Act (punishable preparatory acts). In addition, the Criminal Prosecution of Subversive Crime (Further Measures) Act has entered into force on 1 January 2022, rendering the possession, transportation, import, and export of designated (pre-)precursors punishable (www.officielebekendmaking.nl). This legal cause for action is not in force on the international stage, meaning that many countries cannot act against the trade in these substances. As a result, these pre-precursors, taking different routes across different countries, find their way into the Netherlands, where they are converted into final products.
The remainder of this section will address the presence of the various types of precursors, their development, the smuggling methods employed, and the working methods used by the criminal networks involved.

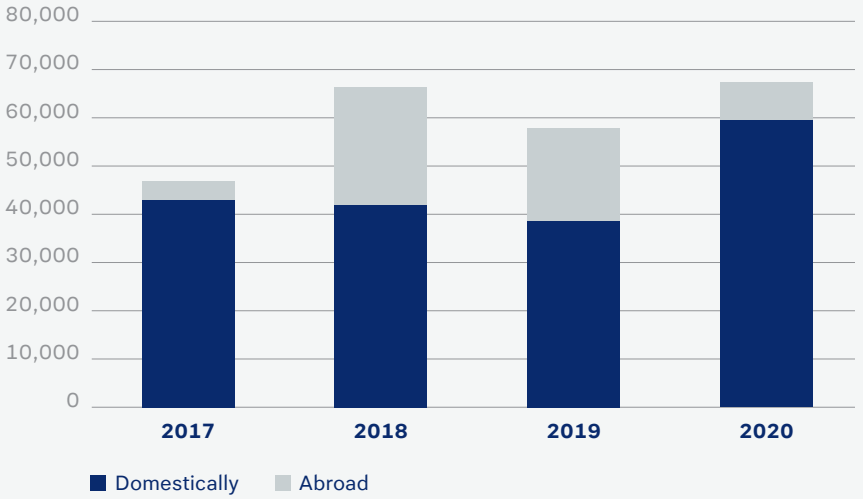
We have, in the context of this National Strategic Assessment, examined the scope of the trade in and presence of precursors and pre-precursors. We have set out incidents where precursors were discovered by Customs, the FIOD, and the police. In doing so, we based ourselves on the information gathered by the Intel & Expertise cell of the Synthetic Drugs Cluster on the national and international levels. This department collects the relevant incidents registered by the government bodies involved, such as Customs and the FIOD, and combines them with the police data, creating an (inter) national overview. In addition to counting the seizures of full (pre-)precursor packages an estimate was made on the basis of the number of empty packages found at the production, storage, and dumping sites. BMK and PMK produced in the Netherlands using pre-precursors are not included in this overview, in order to avoid batches being counted twice. In addition, (pre-)precursors destined for the Netherlands have been

discovered abroad. Where indications existed that shipments were destined for the Netherlands, these shipments have also been considered in this chapter.
Obtaining insight into the origin of these substances and the related smuggling methods and transport routes is also of value. This has been made visible for the batches of (pre-)precursors found on the basis of packaging, labels, and reports from abroad.

6.4.1 Size

The following overview arises on the basis of the (pre-)precursors found.

Figure 6.5. (Pre-)precursors found in liters/kilos, based on police information

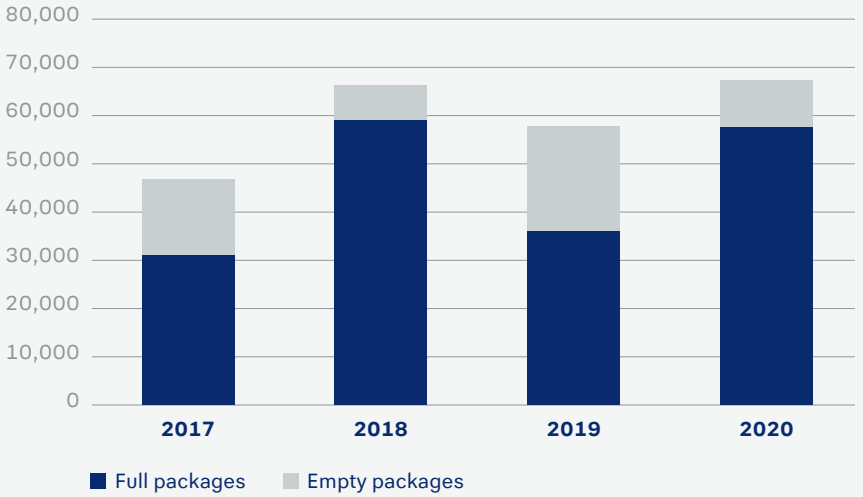


Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

Between 2017 and 2020, a total of 237,914 liters/kilos of precursors and pre-precursors were discovered, including 55,344 kilos/liters destined for the Netherlands that were found abroad. 182,570 kilos/liters were discovered in Dutch territory. The total annual amount of (pre-)precursors found in Dutch territory is around 40,000 liters/kilos. A sharp increase to around 60,000 liters/kilos took place in 2020. This difference is due mainly to a find of 21,000 liters of GBL - a GBH precursor - in Helmond in December 2020. 21 intermediary bulk containers (IBCs) of 1,000 liters were found at this site. Abroad, the amounts of (pre-)precursors discovered in 2018 and 2019 was markedly higher than in other years. In 2018, between 1,000 and 4,000 liters/kilos of (pre-)precursors were discovered in nine incidents in various European countries. In 2019, a batch of 10,000 liters of GBL destined for a Dutch company was intercepted in Belgium. A shipment of 8,000 kilos of MAPA destined for a Bulgarian company with Dutch directors was found in Bulgaria. This batch was assumed to be intended for the Dutch market (O-601).

The intercepted and seized (pre-)precursors have not been turned into a final product by criminals. However, the contents of the empty packages discovered at the production locations have been used to produce various drugs. The figure below distinguished between the full and empty batches of (pre-)precursors.

Figure 6.6. (Pre-)precursor packages found in liters/kilos



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

Over the four years examined, many empty (pre-)precursor packages were found, totalling 54,263 liters/kilos. Such packages are found mainly at production sites where production was still ongoing at the time the discovery was made. In addition, empty packages are sometimes found in dumped waste. Almost all empty packages concern precursors for the production of BMK (39,653 kilos) and PMK (13,368 kilos). Presumably, these figures form the absolute minimum amount of precursors converted, first, into BMK or PMK and then to the final product. The total number of empty packages is not known, as such waste is presumably destroyed out of view of the authorities. The figures do show that about 183,651 liters/kilos of (pre-)precursors have been removed from the market and not used to produce drugs.

6.4.1.1 Quantity of (pre-)precursors per type of drugs

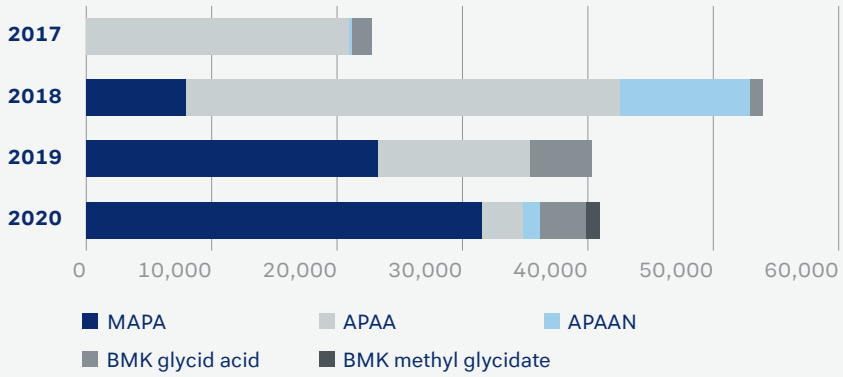
Each drug requires its own precursors and pre-precursors. In the below, we will note how many materials were found, and how they were found, for each type of drugs.

Amphetamine and methamphetamine

BMK and BMK-precursors are used for the production of amphetamine and methamphetamine. International regulation and national criminalisation have, in the past few years, led to criminals developing new pre-precursors suitable for the

production of BMK. This BMK is then used to create the final product: amphetamine or methamphetamine. The below figure provides an overview of the most commonly used pre-precursors.

Figure 6.7. Most commonly used pre-precursors for creating amphetamine and methamphetamine in liters/kilos



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

A total of 158,018 kilos of these five (pre-)precursors has been discovered - or two thirds of the total amount of (pre-)precursors found. It may be concluded from this fact that the amphetamine and methamphetamine production market share is by far the largest. The quantity of empty packages found at production and dumping sites is estimated to total 40,000 kilos. In order to estimate the total final product that was or could be made, the total quantity is assumed to have been used to produce amphetamine and methamphetamine. These pre-precursors are used to produce BMK, which, through synthesis, can be converted into both types of drugs. There are too many uncertain factors to arrive at an allocation formula for these two types of drugs. We elected to calculate the total quantity for both types. This calculation was performed upon consultation with material experts of the Expertise and Science Team of the Investigation Support Unit of the National Investigation Service of the Central Unit (I-61).

Based on the amount of empty packages found (40,000 kilos), we estimate that 52,800 kilos of amphetamine were produced. The quantity of pre-precursors seized (118,365 kilos) could have been used to produce 156,242 kilos of amphetamine.

Based on the amount of empty packages found (40,000 kilos), we estimate that 10,000 kilos of crystal meth were produced. The quantity of pre-precursors seized (118,365 kilos) could have been used to produce 29,591 kilos of crystal meth.

APAA was the most commonly found pre-precursor through 2018; this shifted to MAPA from 2019 onwards. One explanation for this shift is that APAA has been internationally regulated since 2019, causing criminals to switch to MAPA. As a consequence, MAPA was added to the international list of regulated substance in 2020. Expectations are that MAPA will slowly leave the stage and that non-regulated successor pre-precursors will become dominant. The first signs are already visible, with an increase in the use of BMK glycid acid and BMK methyl glycidate being reported. In addition, Customs discovered a new pre-precursor in October 2020. Upon examination in the laboratory, it was found to concern 150 liters of EAPA. This shipment was sent by airmail to Germany from China and thence sent on to the Netherlands. EAPA could be the successor most often found in the future.

In addition to the aforementioned common materials, a number of other pre-precursors has also been identified in the context of BMK production in the past few years. In contrast to the aforementioned designer precursors, these materials also have legal applications: they are used in a variety of products, including foodstuffs, medicine, or cleaning products. The substances benzaldehyde, benzyl cyanide, and phenylacetic acid were found in small quantities in production and storage sites.

In March 2020, during a raid of a warehouse in Uden, a metal drum containing 200 liters of benzyl acide was found among a major quantity of chemicals. The drum was labelled “bright wash” and was found to originate in Greece (O-602). Given the relatively high quantity found, it is not unlikely that this material will be used more often in the future.

Methamphetamine

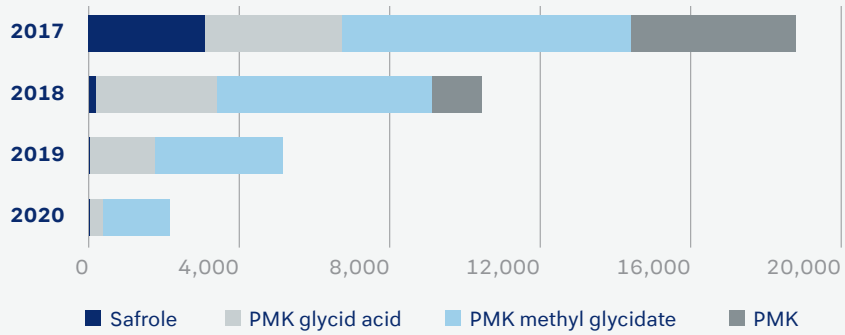
In addition to BMK, ephedrine and/or pseudoephedrine can also be used to produce methamphetamine. In the 2017-2020 period, about 93 kilos of pseudoephedrine were discovered. In 2018, a methamphetamine production site was found in Zuidlaren where this precursor was used (O-603). It would seem that most criminal networks use the precursors BMK and pre-precursors like MAPA, as the chemical process involves the use of less seriously harmful substances and much lower precursor costs. In 2020, a kilo of pseudoephedrine on average cost 3,525 euros on the illegal distributive market, while a kilo of MAPA on average cost 140 euros (Politie, 2021b).

MDMA

In order to produce MDMA, the precursor PMK is used. Once this material became internationally regulated, pre-precursors like PMK methyl glycidate, PMK glycide acid, and safrole started being used. These three substances, too, are currently internationally regulated.

The four aforementioned materials were discovered in greater and lesser quantities over the past few years. PMK has only been included in this overview when it was smuggled in from abroad. The figures do not include PMK converted from a pre-precursor, as this would lead to quantities being counted twice.

Figure 6.8. MDMA (pre-)precursors found, in liters/kilos



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

In total, about 36,500 liters of these four materials were found in the 2017-2020 period, either in full or empty packages. In order to estimate the quantity of MDMA pills that could be produced with this total amount, a calculation was performed in cooperation with material experts of the Expertise and Science Team (I-61).

Based on the amount of empty packages found (13,368 kilos), we estimate that 47,181,000 MDMA pills could have been produced. The quantities of pre-precursors (17,457 kilos) and PMK (5,675 kilos) seized could have been used to produce 101,671,000 MDMA pills.

The amount of (pre-)precursors seized clearly declines year on year. Compared to the other years, many more MDMA production sites were discovered in 2017. Many empty PMK methyl glycidate and PMK glycide acid packages were found at these sites. In addition, a quantity of 4,295 liters of PMK was seized in a warehouse in Schiedam (O-604). This shipment had arrived from Vietnam and had entered Europe via Bulgaria. During a search of a warehouse in Waspik, 2,800 liters of safrole were found in jerrycans featuring Chinese text (O-605). In 2018, foreign authorities still discovered batches destined for the Netherlands, but no more seizures abroad have been reported for 2019 and 2020. It may be that the criminals have developed a smuggling method that still goes unnoticed by the authorities. The production of MDMA seems to have stabilised between 2018 and 2020, as about twenty MDMA production sites were discovered each year. A new development is the introduction of the MAMDPA pre-precursor. This material was found ever more often in great quantities (between 400 and 2,000 kilos) at various incidents over the course of 2021. It would seem that MAMDPA is the current pre-precursor of choice for producing MDMA.

GHB

The precursor GBL is used to produce the drug GHB. This material is not internationally regulated. Research by the material experts of Expertise and Science Team shows that 1 liter of GBL produces about 1.5 liters of GHB. In 2017 and 2018, a total of about

2,100 liters of GBL was discovered. This amount quintupled in 2019, due to a single 10,000 liter seizure in Belgium. This batch was destined for a Dutch company. In addition, 21,000 liters of GBL were discovered in a warehouse in Helmond in 2020 (O-606). The seizure of such major quantities show that a sizeable market exists. This conclusion is in line with the increasing number of reports by international investigative services on intercepted GBL shipments received by the Intel & Expertise cell of the Synthetic Drugs Cluster, which shipments seem to originate from companies established in the Netherlands. A study by the Intel & Expertise cell shows that multiple companies are selling this substance in the Netherlands as a cleaning product, so as not to be punishable at law.

Ketamine
To produce ketamine, the precursor hydroxylamine can be used. This material was first found - in a quantity of 10 kilos - in a laboratory in 2019 (O-608). Later, in 2020, 50 kilos were also found at a production site in Lijnden. It is likely that, in Lijnden, this precursor was converted into the final product, ketamine (O-607). So far, the vast majority of ketamine is still being procured from abroad.

Mephedrone
The production of mephedrone (4-MMC) requires the precursor 2-bromo-4-methylpropiophenone. A total of about 2,285 kilos of this material was found over four years. 1,200 kilos of the substance were discovered in 2017 in Didam (O-609). This batch had been delivered there by a van with a Polish number plate. The suspects arrested in this connection, too, all were Polish citizens. In addition, a Polish van was inspected on the N302 in 2020 and was found to be transporting 180 kilos of this material among other chemicals and goods. The drums featured false labels stating “Chiral Auxiliary Agent 2B4M”. In addition, small quantities have been found at various production sites where other types of synthetic drugs were produced. In November 2017, Dutch Customs discovered a shipment of 500 kilos, originating from India and destined for a Polish company.

Clephedrone
Clephedrone is a New Psychoactive Substance (NPS) that is not illegal under Dutch legislation (since 25 October 2021 4-CMC is listed in the Dutch Opium Act and therefore illegal). Various precursors to produce one of its variants have been discovered in the Netherlands:
- 3-chloropropiophenone (3-cmc)
- 4-chloropropiophenone (4-cmc)
- 2-bromo-4-chloropropiophenone (4-cmc)

In total, 420 kilos have been found, divided of two production sites - in Leerdam (O-610) and in Middelharnis (O-611) - and one storage site in Aalsmeer (O-612). Only persons holding Polish nationality were registered as suspects in connection with these finds. The 250 kilos found in the storage site contained labels showing that it originated from China and was transported to the Netherlands by air.

Fentanyl
Fentanyl is causing major problems in parts of the world. In the United States alone, tens of thousands of people die due to its use (National Institute on Drug Abuse, 2021).

The drug is available in the Netherlands on a much smaller scale only. Precursors for the production of fentanyl are ANPP and NPP, which are internationally regulated under the New York Convention (United Nations, 1988). In the context of this investigation, no incidents were reported in the Netherlands where these materials were found, but two reports were received from abroad featuring a link with the Netherlands. Between October 2018 and February 2019, eight postal items containing NPP that were sent from the Netherlands were intercepted in Mexico. The total volume of the NPP seized was 7.8 kilos. The postal items were labelled as containing normal goods, like gifts, snacks, and cosmetics. An investigation by the Postal Intervention Team (PIT) showed that these postal items in fact most likely originated from China: the Netherlands only served as a transit country.

In May 2019, Belgian Customs reported that it had intercepted a postal item containing 1 kilo of pre-precursors for fentanyl production. This parcel was destined for someone in Zoetermeer. The pre-precursor in question was 4-piperidone monohydrate, which can be converted into ANPP and, ultimately, into fentanyl. The postal item originated from China. It may be assumed that the recipient intended to produce fentanyl or to trade the material on. Refer to Chapter 7 for more information on fentanyl.

2C-B

2C-B production in the Netherlands occurs on a small scale. No major quantities of precursors have been found over the past few years. A total of 3 kilos of the precursor 2,5-Dimethoxybenzaldehyde were found at two production sites searched in the same investigation (O-608). It became clear from the investigation that the laboratory technician was in contact with Chinese producers by e-mail, boosting the suspicion that this precursor was sent from China.

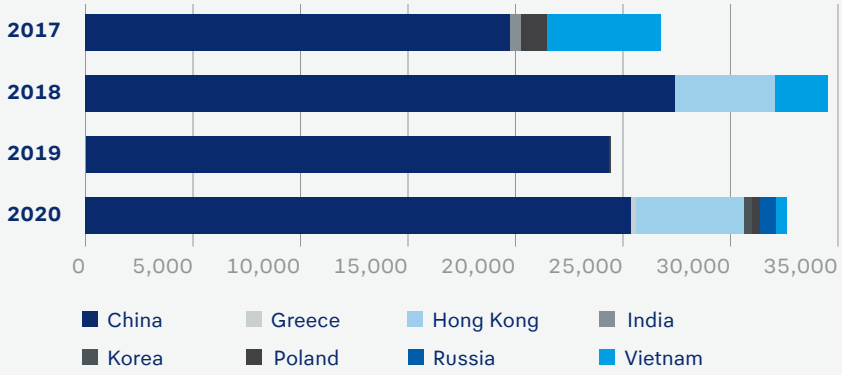
6.4.2 Acquisition and import - stages 1 and 2

The precursors required for production are imported from abroad. As many of these materials are subject to international regulation, they are being smuggled to their final destination in various ways. Countries possessing a large chemical industry sector are attractive sources of required materials. The World Drug Report 2021 (UNODC, 2021a4) identifies China as the primary country of origin for various types of (pre-) precursors. This section will address the source of these materials, their transport routes, and the methods used to conceal them.

6.4.2.1 Origin

The intercepted shipments and batches discovered at Dutch sites allow for constructing an image of the origin of the precursors and pre-precursors. The packages these materials were held in were affixed with labels, marks, and information on the transport routes, allowing for the identification of various countries of origin. The following figure shows the amount of liters/kilos originating from various countries.

Figure 6.9. Countries of origin of (pre-)precursors in liters/kilos



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

In 63 cases, China could be identified as country of origin. In total, Chinese goods amounted to 96,000 liters/kilos. In addition, major shipments were intercepted from Hong Kong and Vietnam. All other countries combined made up only a small share of the total quantity. A precursor for the production of mephedrone/clephedrone was found to have originated in Poland thrice. Customs in 2017 discovered 500 kilos in mephedrone precursors originating from India at Amsterdam Airport Schiphol. In addition, the labels of packages found in production and storage sites referred to the country of origin. In 2020, a 200-liter metal drum was found to carry the label of a Greek company (O-602). Also in 2020, bags of APAA were found at a production site in Winterswijk that, according to their label, originated in Russia (O-613). In two incidents, taking place in 2019 (O-614) and 2020 (O-615), empty packages with remnants of MAPA and PMK glycide acid were found that stated “made in Korea”. It must be noted in this connection that labels and packages may be falsified, in order to conceal the true origin of the materials.

Criminals constantly adapt their smuggling methods. They make use of air freight and, in some cases, of containers transported by sea. In addition, the materials are concealed by mislabelling them, stating a different substance on the declaration forms and packaging. Examples include “Pigment white”, “Cellulose fibre”, “Titanium dioxide”, and “Urea-Formaldehyde Resin”. Studies by the Expertise and Science Team showed that the mislabelling is performed by the Chinese producers and/or distributive traders and that all required documents are added. Another method used is that of sending a cover load, part of which contains (pre-)precursors. For example, during an inspection of a shipment of 15,000 kilos of caustic soda flakes in the port of Antwerp in 2017 it was found to also contain 2,500 kilos of APAAN destined for the Netherlands.

6.4.2.2 Import

In order to have the (pre-)precursors delivered, various transport routes within Europe are used.

Between 2017 and 2020, insight has been obtained into the transport routes via seventeen European countries. Our neighbouring countries of Germany and Belgium have identified the most transports. Belgium has seized the greatest quantity. Half of the total was made up of one shipment of 10,000 liters of GBL in 2019. Bulgaria comes next, having seized a major quantity in two major operations in 2017 and 2019. A relatively higher quantity of (pre-)precursors was found at production sites in Hungary. The labels on the packaging showed that Budapest was the destination of various batches. Also of note is that many different countries have identified batches in 2018. Moreover, elven countries only seized one shipment, often during major seizure operations. For example, 3,400 kilos of APAA were discovered in Lithuania in 2018. One possible explanation for this fact is that criminal networks easily switch to new smuggling routes once the old one has been discovered by the authorities.
Studies by the Intel & Expertise cell of the Synthetic Drugs Cluster into seizures abroad found that many shipments were destined for companies established in the country concerned. The managers of these companies may have been Dutch nationals, but in some cases they could not be identified, causing doubt about their authenticity. By establishing companies abroad, criminal networks try to import goods into Europe without being noticed, in order to then transport those goods to the Netherlands without being subjected to inspections. Once a batch of precursors has entered European territory, it is transported to the Netherlands by road. Courier services are employed, who may or may not know what they are transporting.
It seems that criminal networks avoid directly transporting major batches of pre-precursors from the country of origin to the Netherlands: in the 2017-2020 period, only two shipments with mephedrone precursors were identified in the Netherlands. It may be assumed that criminal networks expect the Dutch authorities to be more experienced in and more focussed on identifying suspect transports. In addition, goods destined for the production of drugs may be seized in accordance with Section 10a of the Opium Act. Criminal networks therefore look for options where they encounter less resistance (police information). Given the diversity of the countries where precursors and pre-precursors were found, the possibilities are endless.

6.4.3 Conclusion

China continues to be the primary country of origin for (pre-)precursors. Criminal networks use many different routes and European countries to transport these (pre-) precursors to the Netherlands. They also quickly adapt the smuggling routes by constantly using new names to mislabel the goods. The precursors most often found in the Netherlands are used for the production of amphetamine and methamphetamine. The international regulation of materials engenders developments on the precursor market: ever since APAA became a regulated substance in 2018, it was found a lot less often, its place being taken by the MAPA precursor. In 2020, MAPA, too, was added to the list of regulated substances and expectations are that criminals will replace this substance, as well, meaning it will be discovered less often in the future. The first signs are visible already, taking the form of an increase in other and possibly new substances, like EAPA and MAMDPA.

The amount of MDMA precursors found has dropped sharply in the past few years. This can on the one hand be explained by a number of major seizures in 2017, compared to fewer seizures in the years after. On the other hand, few batches of MDMA precursors destined for the Netherlands have been seized in the past few years. It may very well be that new, as yet unknown smuggling methods exist, as the number of MDMA production sites discovered has remained stable since 2018. The smuggling methods employed are not unique to the smuggle of synthetic drugs but are also used for other types of drugs, like cocaine and heroin.

6.5 Chemicals

To produce synthetic drugs, you not only require (pre-)precursors, but also other chemicals. These chemicals often have many legal applications, especially in the (chemical) industry sector, but also in daily life. Examples are acetone, used in nail polish remover, and caustic soda, used in drain unblockers. National and international legislation has laid down conditions for the trade, use and/or possession of some chemicals. At the national level, the Abuse of Chemical Substances (Prevention) Act provides that unusual transactions must be reported. The Carriage of Dangerous Goods Act lays down requirements to guarantee that these goods are transported in a safe manner. Section 10a of the Opium Act allows for removing chemicals intended for the production of hard drugs (list I to the Opium Act) from circulation. Despite these legal provisions, criminal networks are able to obtain ample supplies of the required chemicals. In this section, we will try to provide an overview of, and insight into, the presence of and trade in chemicals.

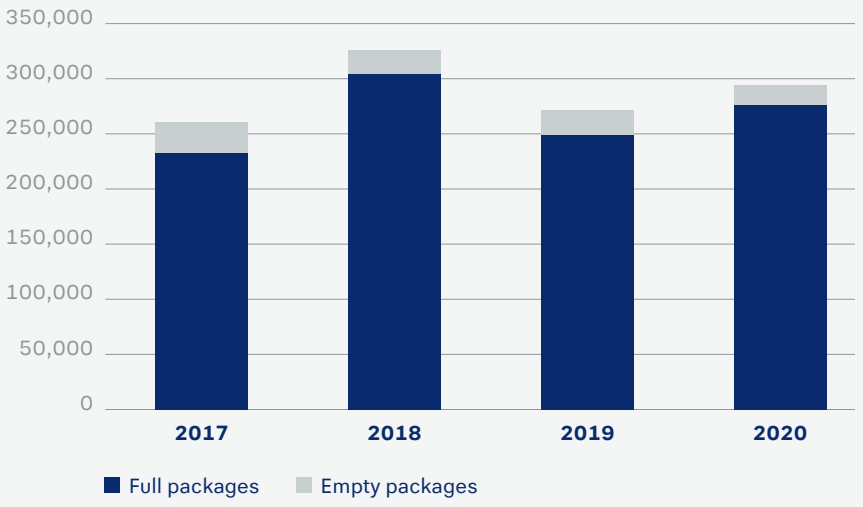
In order to clarify matters, we have examined the scope of the trade in and presence of chemicals. We have set out incidents where chemicals were discovered by Customs, the FIOD, and the police. In addition to counting the seizures of full packages an estimate was made on the basis of the number of empty packages found at the production, storage, and dumping sites. Such packaging varies from jerrycans, to IBCs, to large (lidded) barrels, to bags, to boxes, to gas cylinders. The overview only presents what is estimated to have been discovered during incidents in the Netherlands. No foreign reports have been made throughout the entire period examined of chemicals destined for the Netherlands that were seized. The overall quantity of the chemicals found must be considered an estimate only. The total quantity is likely many times higher and this number is to be considered an absolute minimum amount.

Obtaining insight into the origin of these substances and the related smuggling methods and transport routes is also of value. This has been made visible for the batches of chemicals found on the basis of packaging, labels, and criminal investigations.

6.5.1 Size

Over 120 different chemicals were found in synthetic drug incidents in the 2017-2020 period, totalling about 1,151,272 liters/kilos.

Figure 6.10. Full and empty chemical packages found, in liters/kilos



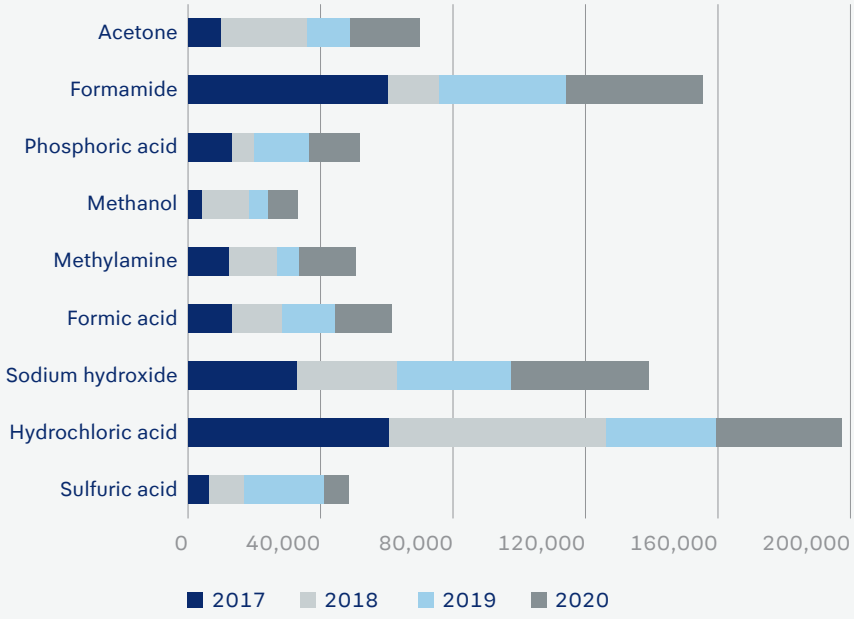
Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

The total amount in liters/kilos based on the total number of empty packages is estimated to amount to 88,600 liters/kilos. This contrasts sharply to the number of full packages found. This figure is impacted by a number of factors. Criminals get rid of empty jerrycans and other packaging by destroying them. In addition, it cannot be ascertained what many of the empty packages contained. Criminals often try to remove the labels from jerrycans to make it impossible to verify their origin. Moreover, the presence of an empty jerrycan, IBC, or barrel does not mean it used to contain chemicals, as empty versions are also procured to be used in the process of distributing bulk quantities into smaller packages, during the production process, or to store semi-finished products or waste (O-601).

Between 2017 and 2020, over 1 million liters/kilos of chemicals were seized. This concerned materials present in laboratories or storage sites, or discovered while they were being transported. A slight increase in seizures is visible in 2018, which is due to two investigations (O-616 and O-617) into the large-scale import and distribution of chemicals from Poland. Tens of thousands of liters of chemicals were found during searches of sea containers, warehouses, and sheds.

The overview of the nine most commonly found chemicals show that they make up three quarters of the total amount. Over 806,000 liters/kilos of these materials were found.

Figure 6.11. Most commonly found chemicals by type, in kilos/liters



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

In this section, we will divide the chemicals found into multiple categories, to wit:
- Essential chemicals
- Catalysts
- Other chemicals

As many ways exist to create the desired find product, a selection of essential chemicals was made.

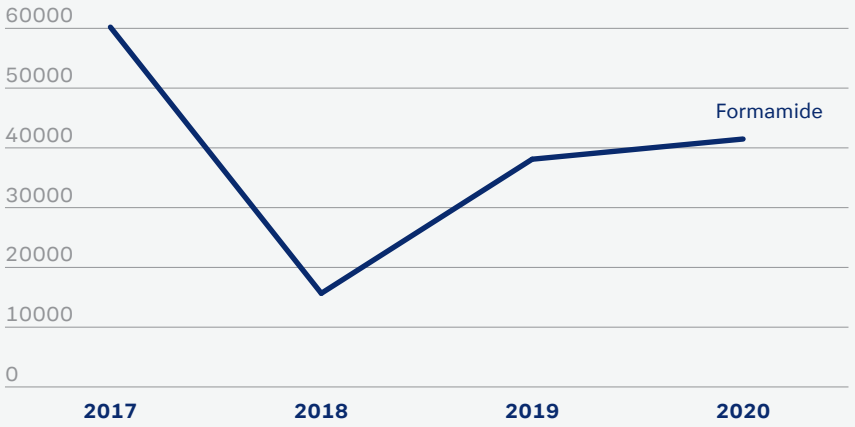
6.5.2 Essential chemicals

Amphetamine, methamphetamine, and MDMA are the drugs most commonly produced in the Netherlands. To create the final product, you not only need (pre-)precursors, but also additional essential chemicals. These chemicals make a crucial contribution to the chemical reaction, allowing for an exchange of the required atom groups with the precursor and creating the final product. Without these chemicals, it is not possible to create the desired final product using the common methods used by criminal

organisations. The most essential chemicals used in the common processes are formamide and methylamine.

Formamide
Formamide is used for the production of amphetamine. During the production process, BMK is turned into amphetamine using formamide and other chemicals.

Figure 6.12. Formamide discovered, in liters



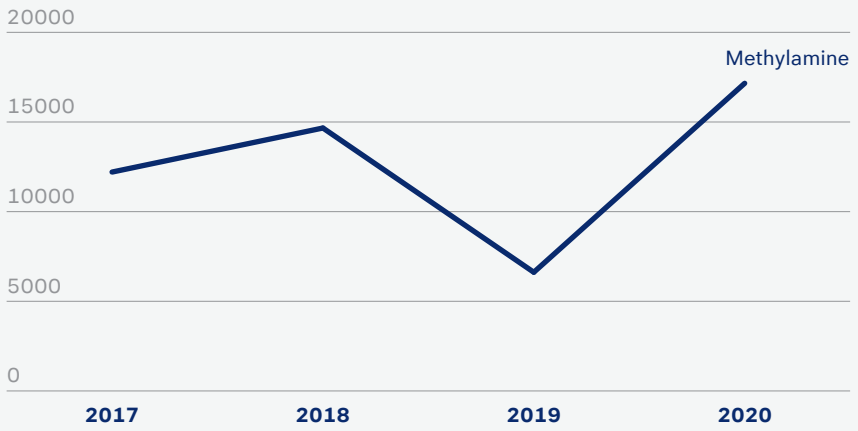
Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

The quantities of formamide discovered show that a lot of amphetamine is being produced in the Netherlands. Formamide was often discovered in 200-liter barrels. Those barrels still containing a label showed that they were marked as having a different content. The formamide was for example mislabelled as cleaning detergent analysis or ethylene glycol diacetate. Much of the formamide found originated in China.

This substance is subject to a reporting obligation under the Abuse of Chemical Substances (Prevention) Act, making it more difficult to acquire larger quantities unnoticed. Nevertheless, criminals are still able to obtain it. During a raid of a warehouse in Waspik in 2017, a sort of drug production distribution centre was discovered (O-605). No less than 42,000 liters of formamide was discovered there - or 70 percent of the total quantity found that year. The labels on the 200-liter barrels stated “made in China”. During a raid of a warehouse in IJmuiden in 2017, 16,000 liters of formamide were found (O-618). Again, the barrels had a label stating “made in China”. The contents were also marked as diethylene glycerol. These large quantities of formamide indicate that the production of amphetamine is still taking place on a large scale.

Methylamine
Methylamine is a substance that is primarily used to produce MDMA and methamphetamine. Even though methylamine is a gas in its pure state, the substance is primarily found in a liquid/dissolved state, put in 200-liter barrels and jerrycans and dissolved in, for example, methanol. It was also found in gas cylinders, albeit in much smaller quantities.

Figure 6.13. Methylamine discovered, in liters



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

Following a decrease in 2019, 2020 witnessed a sharp increase in the quantities found. In February of that year, six pallets of methylamine were delivered at a wrong address in Den Hoorn (O-619). The shipment turned out to contain 4,800 liters, provided by a Polish company. For many of the batches of methylamine found, the labels were removed from the barrels and jerrycans in order to hide its source. However, the various police investigations we have studied show that methylamine usually originated in China and was transported to the Netherlands via Poland.

6.5.3 Catalysts

In addition to the essential chemicals, catalysts, too, are required, as they initiate or accelerate the chemical process. We will discuss a few of these catalysts in the below.

Platinum dioxide
This catalyst can be used to produce MDMA and methamphetamine. While only a very small quantity of this material is required to produce the desired result, it is very valuable. Investigations show that a kilo of platinum dioxide costs between 35,000 and 50,000 euros on the black markets. Given the high price of this substance, clandestinely obtaining it is an attractive option to criminals. This for example resulted in a company in Uden having platinum dioxide stolen from their stocks in 2017 and

2018 (O-620). A total of about 1,800 kilos were stolen, estimated to represent a clandestine value of 63,000,000 euros. An additional advantage of platinum dioxide is that it is not used up during the production process. It can be reused multiple times and be recovered once it has become contaminated. The recovery of platinum dioxide appears to be a chemical process that only a few people know how to perform (material experts). Due to the increase of production of methamphetamine by a method that may involve platinum dioxide, expectations are that it will be in higher demand among criminal networks in the future.

Mercury chloride
When used jointly with aluminium pellets, this substance can be used to produce methamphetamine and MDMA by way of the aluminium amalgam method. Mercury chloride is a toxic substance requiring precautions to be taken when it is discovered. This substance was found in batches ranging from a few to a maximum of 35 kilos. One barrel containing 35 kilos of mercury chloride contained a label stating "made in China" (O-621).

AIBN/MYPC
Azobisisobutyronitrile (AIBN) is a substance used to convert weak methamphetamine (L meth) into powerful methamphetamine (D meth). This substance was mainly discovered in 2020, with a total of about 1,200 kilos being found. The packaging discovered at various sites showed that this substance usually originated in Latvia.
Another substance used for the some purposes is dimyristyl peroxydicarbonate (MYPC). This substance must be stored under specific conditions: at temperatures of 25 degrees Celsius or higher, the substance may become instable and cause an explosive reaction. A total of slightly over 200 kilos of this substance was in 2020 found at four production sites. The packaging allowed for identifying Germany as the primary country of origin.

Iodine
Iodine can be used to produce methamphetamine from (pseudo)ephedrine using the hypophosphorous acid or red phosphorus method. The number of locations where this substance is found has been decreasing since 2018, in which year a 1,000 kilos of iodine was found in a warehouse in Weert, stored in fifty 20-kilo vats (O-616). The label showed that this batch originated in China. In addition to this batch of iodine, 7,000 liters of hypophosphorous acid, which can be used in the same process, were found.

Sodium borohydride
This substance can be used to produce MDMA and methamphetamine using the cold method; refer to section 6.7. A total of 271 kilos of this substance have been found. The majority of these chemicals derived from Poland, though indications existed that a company in Spain was the supplier in one case.

6.5.4 Other chemicals
Common chemicals are often added to further support the chemical process. Such chemicals are used in large quantities in synthesis laboratories, conversion laboratories and cocaine extraction facilities.

Of these substances, hydrochloric acid was found in the greatest quantities: slightly less than 200,000 liters have been discovered. This material is used in a great many production processes, from the conversion of pre-precursors to the creation and processing of, inter alia, cocaine, amphetamine, and MDMA. Deliveries and labels showed that much of the hydrochloric acid was sent from Poland. Other acids commonly found include formic acid, phosphoric acid, and sulfuric acid. Formic acid is primarily used for the production of amphetamine. Phosphoric acid and sulfuric acid are used for the production of the precursors BMK and PMK from pre-precursors. In addition, sulfuric acid is also used to process amphetamine and cocaine.

Red phosphorus is used for the production of methamphetamine. This substance is used to convert the precursor (pseudo)ephedrine into methamphetamine. Red phosphorus was found in small quantities. This can be explained by the fact that the precursor (pseudo)ephedrine was only used to produce methamphetamine on a small scale, as is also evidenced by the fact that only a little (pseudo)ephedrine itself was discovered in the past few years.

Sodium hydroxide (caustic soda) is a substance used as an additive in the majority of production processes. A total of about 139,000 kilos of this substance has been found, generally in 25-kilo bags. This substance is procured from many different countries. China and Russia were the most common countries of origin, but countries of origin closer to home include Germany, Poland, France, and Spain.

Solvents like acetone and methanol are used in the production of MDMA, amphetamine, and methamphetamine. These substances are also used when extracting or cutting cocaine. Acetone is the most commonly found solvent. The labels on the jerrycans show that these chemicals commonly derive from Poland. Another solvent, discovered ever more often in recent years, is toluene. This material is mainly used for extracting cocaine and producing methamphetamine. The increase in the use of toluene can be explained by the rise in the number of locations were methamphetamine is being produced.

This increase in methamphetamine production also causes an increase in the use of tartaric acid. This substance is used to separate the potent D methamphetamine from the weaker L methamphetamine. Compared to previous years, the substance was found very often in 2020, in 25-kilo bags. The packaging showed that China was the primary country of origin, followed by Spain (O-601).

In October 2020, some special chemicals worth mentioning were found in a warehouse in Breda (O-602). These three substances had not been discovered before and turned out to have used in the production of fentanyl. Almost 2,000 liters of aniline, bromoethyl benzene, and propionyl chloride were found. The packages found on-site showed that they had entered Europe by air, via Hungary. Empty jerrycans, too, were found on the site. Because a pump was also found, it was suspected that the chemicals were transferred to other containers at this site. The presence of these chemicals may indicate that fentanyl is being produced in the Netherlands or that a trade in these chemicals for use abroad exists. Refer to Chapter 7 for more information on fentanyl.

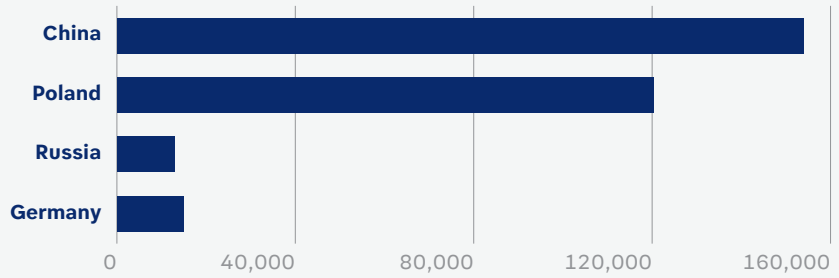
6.5.5 Acquisition, import and storage – stages 1, 2 and 3

As applies to precursors, the chemicals required to produce synthetic drugs are also mainly sourced abroad.

6.5.5.1 Origin

The intercepted shipments and batches discovered at Dutch sites allow for constructing an image of the origin of the chemicals. The packaging of these materials featured with labels, marks, and information on the transport routes, allowing for the identification of various countries of origin. Unfortunately, it is impossible to identify the origin of the majority of the chemicals found. Identifying marks like labels have often been removed from the packaging, or the contents have been removed from the original packaging. Labels are also forged, stating that the batch was shipped by a reputable chemical company to have it appear to be a legal shipment. Criminal networks in so doing try to conceal the source of the chemicals, allowing them to retain access to a trusted supply line. The below figure shows the four countries most chemicals are sourced from.

Figure 6.14. Countries of origin of chemicals, per liter/kilo



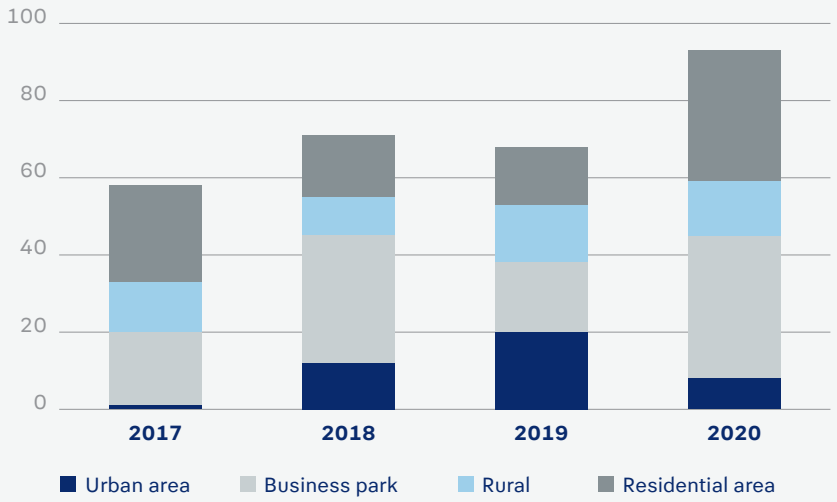
Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

Many of the chemicals that can be tracked to a country of origin are found to originate in China. Many other substances originate in Poland. In recent years, chemicals produced by various companies established in Poland were discovered in production and storage sites. Over ten different companies supplying chemicals and goods on a large scale have been so identified. Police information shows that many of these companies are to some extent aware of the intended use of the chemicals they supply to the Netherlands. These Polish companies in turn procure the chemicals from major legal chemical companies in Europe and the rest of the world. Poland is followed at quite a distance by Russia and Germany. Russia mainly supplies sodium hydroxide, in 25-kilo bags. Germany mainly supplies gas cylinders. The gas cylinders found have often been registered in Germany as being stolen. Investigations have shown that criminals expressly cross the German border in order to steal them. In addition, chemicals from thirteen different European countries were found, as well as small quantities from the United States and India.

6.5.5.2 Import and storage

A number of criminal networks has specialised in the trade in chemicals. They procure the required chemicals in great quantities, storing them in warehouses and sheds. The chemicals are then sold on to the networks that will use them at the production sites.

Figure 6.15. Number of chemical storage sites found per area type



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

Most sites where chemicals and goods are stored are located within business parks. Warehouses form the most commonly used storage solution. Strikingly, many locations where chemicals are stored have also been discovered in residential areas. The criminals used lock-up garages and sheds, but often also houses. In most cases, only small quantities are stored in residential areas. The major storage sites are warehouses within business parks and in rural areas. A major quantity of chemicals was in 2020 found in a warehouse in a business park in De Meern (O-623). The day after this was discovered, the warehouse burned down completely. It would seem that the criminal organisation concerned had put fire to this warehouse to erase their tracks.

In addition to batches being seized from storage sites, shipments of chemicals have also been intercepted on motorways or provincial roads as officers discovered them during routine inspections. In many cases, a violation of the Carriage of Dangerous Goods Act was identified, while the enclosed documents were not in order. The batches were often transported in vans by courier services. Such courier services originated in Poland, Romania, and Hungary. Dutch drivers, too, were identified. It is suspected that these persons had retrieved the batch of chemicals concerned and were to deliver them to a production location.

6.5.6 Conclusion

Many different chemicals are used to produce synthetic drugs. Many of these chemicals are also used for the production of other types of drugs. In addition, such chemicals are generally used on a large scale in legal industrial, business, and private applications. The chemicals discovered often originated in China and Poland and had usually been transported to the Netherlands by air or road. Criminal networks are in close contact with the suppliers of the chemicals, who sometimes themselves form part of the network. Labels affixed to packaging like jerrycans and barrels are often removed by the criminal networks in order to conceal the source of the goods. The chemicals are also used to produce and process drugs like cocaine and heroin.

6.6 Production requirements – stage 4

Certain production requirements are necessary for producing synthetic drugs. All materials used to produce synthetic drugs are referred to as "hardware". Different types of hardware are required. Chemical processes take place in pressure vessels or glassware specifically created for this purpose. In addition, tableting machines are used for producing MDMA pills, freezers for crystallising amphetamine, etc. In this section, we will discuss the characteristics and sources of the hardware discovered. We will also address the criminal networks involved.

6.6.1 Pressure vessels

Various types of pressure vessels are used to perform chemical processes. These concern stainless steel pressure vessels used as distilling and reaction pressure vessels and steam generators. Over 600 stainless steel pressure vessels have been found at production and storage sites in the past few years (O-601). Cylindrical pressure vessels are most common, while a few square pressure vessels have also been found. Some plastic pressure vessels have also been found. Higher-volume pressure vessels are clearly becoming more prevalent: in 2019, multiple pressure vessels able to hold 2,500 litres were discovered. Larger pressure vessels mean increased production per production cycle. When smaller pressure vessels are used, chemical processes need to be repeated to produce the same quantity of product, requiring criminals to be present on-site for longer terms and increasing the risk of being detected.

The pressure vessels found can be roughly divided into two categories: home-made and modified.

Home-made

These pressure vessels are built from individual parts by persons knowledgeable about metalworking and welding. The drug producers / clients provide the manufacturer with specifications. Depending on the size and complexity of a boiler, prices vary from a few thousands to over ten thousand euros. Criminal investigations have shown that metal construction company owners or employees construct the pressure vessels on their own company premises (O-624). The advantage of doing so is that the process is less conspicuous and all required materials and tools are available. Every boiler manufacturer has their own way of working and leaves a "callsign", such as a specific way of welding or the use of specific parts. The National Dismantling Support Unit regularly identifies pressure vessels featuring the same callsign in laboratories, creating the image that specific boiler manufacturers serve multiple criminal networks. The majority of the boiler manufacturers are located in the Netherlands.

Modification
In addition to constructing pressure vessels from scratch, criminals have pressure vessels normally used within legal (industrial) processes modified to be used in drug laboratories. The pressure vessels are procured in various ways and provided to a boiler manufacturer able to modify them according to the need. In recent years, modified beer kegs used as steam generators in the distilling process were discovered, for example. Some of these beer kegs are known to originate in Germany. In addition, large industrial pressure vessels were found. The rating plates allowed for identifying the source of these pressure vessels as companies in Belgium, Germany, France, the Netherlands, and Türkiye (O-601).
Other necessary items are provided by the pressure vessel manufacturers as well, for instance manufacturing customised double pressure vessels for heating plastic barrels or even entire IBCs.

The Intel & Expertise cell of the Synthetic Drugs Cluster on the basis of its research estimates that a group of some 30 to 40 persons aid the criminal networks in producing pressure vessels and related products.

6.6.2 Glassware
In addition to pressure vessels, glass reaction vessels, cooling tubes, and small laboratory glassware are also used. Glassware is mostly used in the synthesis processes, as it does not react to many types of chemicals. For the various forms of synthesis, refer to section 6.7. Moreover, it is transparent, allowing for easily checking actions like separation or extraction. The glass reaction vessels - so-called round-bottomed flasks - generally hold 20 litres and are often produced by factories in Germany, the Czech Republic, and China. After procurement, the round-bottomed flasks do need to be modified for use in drug production. Criminal networks in this connection employ glass tool manufacturers who are suspected to be located in the Netherlands, Belgium, Germany, or Poland (O-601). These glass tool manufacturers also make other glassware required, such as long cooling tubes, on order. They may or may not be aware they are aiding criminal networks. In addition to the 20-litre round-bottomed flasks, large 200-liter glass reaction vessels, presumably originating in China, are these days also found at production sites.

6.6.3 Heating mantles and blankets
To obtain the right temperatures for the chemical reactions in barrels and round-bottomed flasks, the criminal networks make use of electric heating mantles and blankets, meaning that no gas burners are required for heating. These materials are procured from regular companies offering a wide range of goods. The police discovered heating products of these companies in various incidents. It seems that all criminal networks use the services of the same suppliers: many of these products could be traced to Dutch companies that in turn procured the heating mantles from a supplier in the United Kingdom. Signs pointing to Sweden were identified once (O-625). A heating mantle was also found in the context of a shipment of chemicals from Poland in 2017.

6.6.4 Tableting machines
MDMA as a final product is mainly provided in the form of pills. These “XTC pills” are made using tableting machines, which come in various shapes and sizes. Next to single-punch presses, which produce up to seven pills per punch, rotary presses

containing room for up to twelve stations exist, heavily speeding up production. One of the largest machines, found in a lorry trailer in Wekerom in 2019 (O-626), was fitted with 35 stations and capable of producing 150,000 pills per hour. Such machines can be obtained in China for 8,000 to 12,000 euros. Stamps and pills featuring the "Captagon" logo were also found on this occasion. Such pills are frequently consumed in the Middle East and do not contain MDMA, but amphetamine.
A total of 83 tableting machines were discovered between 2017 and 2020, almost all of which can be traced to companies in China (O-601). These machines can be freely procured on the Internet and can be shipped to the Netherlands. In principle, buying a tableting machine is not punishable.
Material experts of the Expertise and Science Team have investigated the use of tableting machines in the legal industry. Consultations with pharmaceutical companies, candy manufacturers, and the vitamin sector resulted in the conclusion that almost no tableting machines of Chinese make were used, as these sectors opt to use more reliable machines from Germany and the United Kingdom. This has given rise to the strong suspicion that the tableting machines imported from China are exclusively destined for the production of drugs.

6.6.5 Stamps

Various stamps can be fitted in the tableting machines. These stamps give the pill its shape and impress it with the desired logo. Countless logos have been used over the years to serve as "brand names" of batches of XTC pills. Usually, the logos are those of existing brands, ranging from expensive watches (Rolex) to consoles (Nintendo) and from car manufacturers (Ferrari) to football clubs (FC Barcelona) - even the name of an American president (Trump) was misused in recent years. Boundless variety exists. The stamps are made of stainless steel and can nowadays be easily and cheaply ordered via the Internet. As a consequence, specific logos cannot be linked to a specific criminal organisation. Depending on the desires of the buyer or the "positive" repute of a certain pill, the organisations freely use and misuse each others' logos.

6.6.6 Other production requirements

In addition to the specific hardware detailed in the above, more common products are also used at the production sites. These "other production requirements" are used in various production processes.

Freezers

Freezers are used in a variety of production processes, especially in the context of crystallising the final product. Jerrycans or buckets are placed in the freezer, with the final product crystallising at low temperatures. Freezers are sometimes found at locations unused and in their original packaging. They are bought from legal hardware providers. Investigations have shown that criminal organisations buy freezers in batches of between two and five.

Centrifuges

Centrifuges are mainly used in the production of methamphetamine, but also in cocaine extraction facilities. The centrifuge process separates liquids from solids. Since 2020, more and more centrifuges are found at methamphetamine production sites. Fourteen centrifuges were in 2020 found at a site in Kerkenveld (O-627). It concerns brand

centrifuges available from online shops and hardware stores. It is suspected that the centrifuges, too, are bought in bulk.

Cool boxes / water coolers
In addition to centrifuges, cool boxes or so-called water coolers, normally used during sports matches, are found at methamphetamine production sites. They are used at these sites to create large methamphetamine crystals. Strikingly, such coolers were often found in 2020, compared to the 2017-2019 period. It concerned coolers of a specific brand, able to hold 18.9 liters.

Vacuum sealer
Vacuum sealers are used for the airtight packaging of various types of drugs, thus preventing evaporation of the solvent in amphetamine paste. MDMA pills are usually packaged in normal, non-vacuum sealed, seal bags. The machines discovered are also often used in the catering and food industries. Machines containing remnants of MDMA and amphetamine have been found at production and storage sites. Most of the vacuum sealers found are of the same brand, which can be procured from wholesalers and online shops. Vacuum sealers are also used in the context of producing other drugs, like cocaine.

Presses
Hydraulic presses are used at sites where the final product is shaped into bricks. These presses are often used to press cocaine bricks, with various logos being impressed on the bricks. This technique is also used in the context of the production of synthetic drugs. Amphetamine is pressed into bricks and then vacuum sealed. In this context, too, logos are impressed to denote the supplier or recipient of the batch. Various ways are used to procure these machines: they can be obtained second-hand from companies or bought via online markets. While pressing the drugs into bricks is as yet fairly uncommon in the context of synthetic drugs, this may become a new trend.

6.6.7 Criminal networks
The criminal networks ensure they retain access to the required hardware. Whenever a problem occurs, they easily switch to plan B, allowing for production and supply to continue unabatedly. The network is flexible enough to always remain in contact with a broker able to supply the hardware. This broker is the “gate keeper” of the pressure vessel manufacturer and forwards the work orders. The broker delivers the hardware to the client and arranges all payments. Pressure vessel manufacturers may also take up the role of broker themselves, in which case they are in contact with the entire network, delivering to multiple groups. An investigation into one such pressure vessel manufacturer in Tilburg revealed that he was providing hardware to multiple groups (O-624). He in addition invested in batches of drugs himself, in order to obtain a share of the ultimate proceeds. This pressure vessel manufacturer produced the pressure vessels within his own metal company. Pressure vessel manufacturers are sometimes also taken to the production site. In such cases, a problem with the pressure vessels exist, such as a leak of construction defect, requiring on-site repairs. These pressure vessel manufacturers are aware of the purpose of the pressure vessels, which allows for prosecuting them under Section 10a of the Opium Act.

Persons and companies active in the metal construction industry may be approached by criminal networks to produce the hardware. Both existing and newly established companies can be used for facilitation purposes. Providing information to this sector may have a preventive effect. Material experts of the police have in the past approached such companies to inform them about Section 10a of the Opium Act. As a result, the companies are aware they are liable to punishment when manufacturing pressure vessels or modifying glassware that is highly likely to be used in the drug production process.

6.6.8 Conclusion

Hardware used in the production of synthetic drugs can be obtained in various ways. Specific materials like pressure vessels and glassware are manufactured or modified by experts from the metal and glass sectors. Other hardware, like tableting machines and freezers, are procured via the Internet and from companies trading in these goods. Tableting machines discovered at production sites were often of Chinese make. Surveys in the legal sectors led to the conclusion that they do hardly use Chinese tableting machines. This allows for concluding that the tableting machines procured from China are actually mainly intended for use in the production of synthetic drugs.

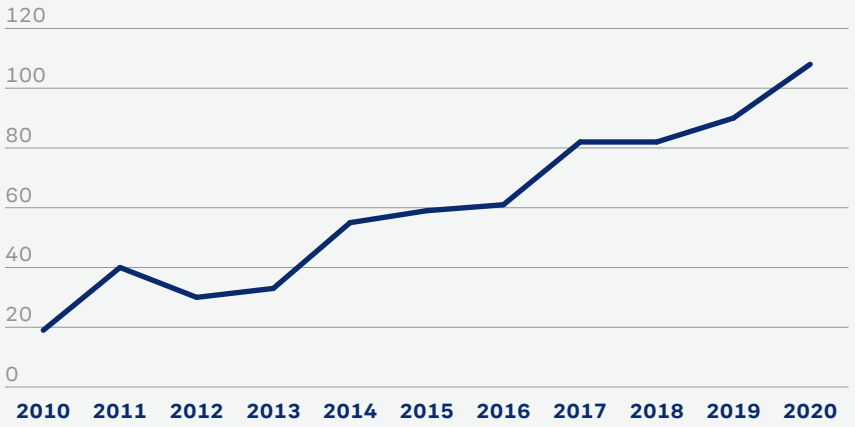
6.6.8 Conclusion

Hardware used in the production of synthetic drugs can be obtained in various ways. Specific materials like boilers and glassware are manufactured or modified by experts from the metal and glass sectors. Other hardware, like tableting machines and freezers, are procured via the Internet and from companies trading in these goods. Tableting machines discovered at production sites were often of Chinese make. Surveys in the legal sectors led to the conclusion that they do hardly use Chinese tableting machines. This allows for concluding that the tableting machines procured from China are actually mainly intended for use in the production of synthetic drugs.

6.7 Production – stage 5

The Netherlands is considered to be a country where synthetic drugs are produced on a large scale (EMCDDA and Europol, 2019). And indeed, the Netherlands tops the list of European countries in numbers of laboratories discovered. These laboratories are used by criminal networks to produce MDMA, amphetamine, methamphetamine, and various other synthetic drugs. Until 2010, some twenty production sites were discovered each year. By 2020, this number had risen to 108, constituting a 500 percent increase.

Figure 6.16. Number of production sites discovered per year



Source: Intel & Expertise cell of the Synthetic Drugs Cluster; KLPD, 2012.

In this section, we will address the number of laboratories discovered, the types of drugs produced, the locations, and the criminal networks involved.

In conducting a more thorough investigation of the nature and size of the synthetic drugs production sites, we made use of the national overview published annually by the police as the ERISSP report (Politie, 2021a). Material experts of the Expertise and Science Team in this report validate and categorise the production sites discovered around the country. "Production sites" are defined as locations where the following processes take place:

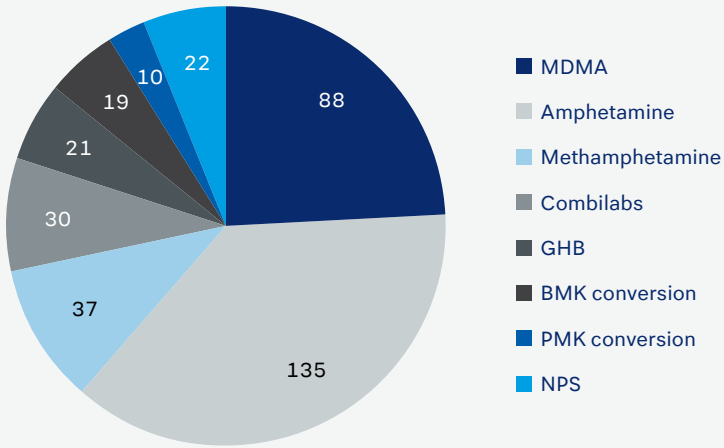
- Conversion: the conversion of a pre-precursor into a precursor
- Synthesis: the production of the final product out of the precursors
- Crystallisation: the turning of the final product into a (consumable) salt
- Tableting: the turning of the final product into pills
- Distribution: the repackaging and processing of the final product for large-scale (online) trade

The sites have also been categorised in more detail by the type of drugs produced and the processes employed.

6.7.1 Size

A total of 362 synthetic drug production sites have been discovered between 2017 and 2020. These sites can be categorised by the type of drugs produced at the site.

Diagram 6.17. Production sites by synthetic drug type, 2017-2020



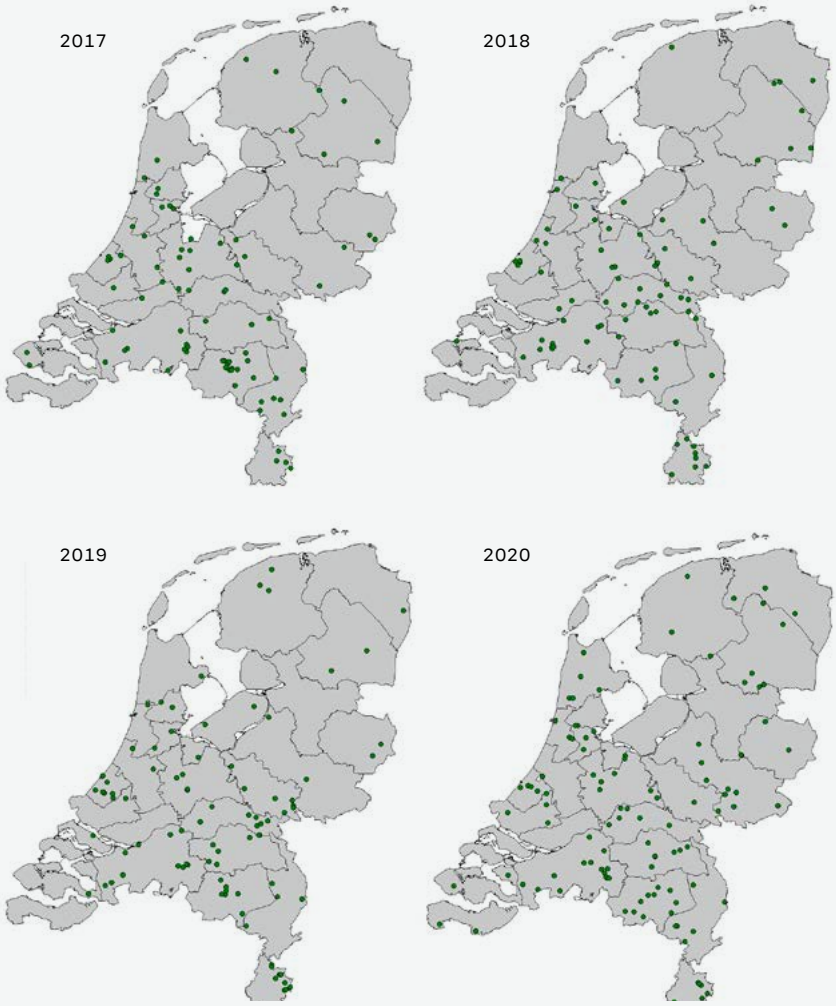
Source: Politie, 2021a. ERISSP National overview of Synthetic Drugs 2020.

Amphetamine production processes were found in most sites, making up 37 percent of the total number. MDMA comes second, with 24 percent. In 2020 alone, 24 sites were discovered where amphetamine was produced, constituting a large section of the total number of sites found where this drugs was produced. The GHB and NPS sites are virtually equally spread out over the years. The conversion of pre-precursors is subdivided in the BMK and PMK categories. While a slight increase is visible in the number of BMK sites discovered, the number of sites discovered where PMK was converted dropped to one or two a year from 2018 onwards. Combilabs are sites were at least two different synthetic drugs were produced. The number of sites where methamphetamine was produced jointly with another drug (MDMA/amphetamine) increase, whereas the prevalence of the combination of MDMA and amphetamine decreased. The GHB and NPS production sites continue to be spread out equally over the years.

Geographical spread

Over the past few decades, production sites were most often found in the southern Netherlands. Criminal networks active in this region took the lead in producing amphetamine and MDMA. This fact can still be seen in the current figures. By far the most production sites - between 25 and 30 per year - are discovered in Noord-Brabant. The number of sites discovered in Limburg remains constant over the years, at around thirteen.

Figure 6.18. Geographical spread of production sites discovered in the Netherlands



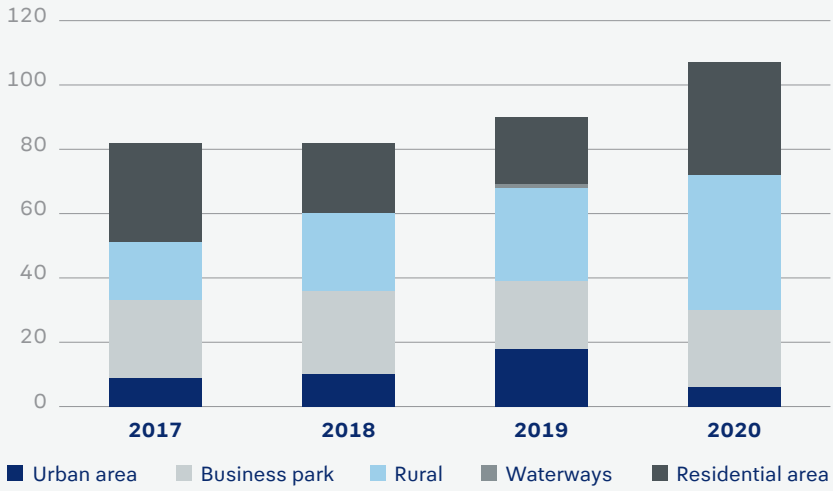
Source: Politie, 2021a. ERISSP National overview of Synthetic Drugs 2020.

For the rest of the Netherlands, the number of production sites discovered has been increasing. As production in the south has remained at the same level, this constitutes an expansion into the rest of the country and not a so-called waterbed effect. The above overview maps show that the expansion northwards continues year on year. Various investigations conducted by the Noord-Nederland and Oost-Nederland Regional Units conclude that the production sites discovered are operated mainly by criminal networks from the southern Netherlands and/or the Randstad conurbation. Expansion towards Belgium and Germany also takes place, with the number of

production sites discovered there increasing as well (O-601). Dutch criminal networks are often involved in the running of these sites.

Laboratory location characteristics
Production sites have been discovered at various locations from 2017 through 2020.

Figure 6.19. Number of production sites discovered by area type



Source: Police, 2021; ERISSP National overview of Synthetic Drugs 2020.

Most production sites discovered in the past few years were found in rural areas. These areas are preferred due to the reduced likelihood of being discovered. The second most common locations are residential areas, with business parks taking the third spot. In 2019, a methamphetamine laboratory was discovered on an inland vessel in Moerdijk, so far constituting a unique case (O-628). A notably high number of production sites are discovered in residential areas, where the likelihood of being discovered would seem many times higher. The associated dangers are a cause of concern. Because of the use of flammable chemicals, gas cylinders, and illegally tapped electricity, and also because of the lack of experience by laboratory technicians, dangerous situations may occur. Production sites are quite regularly discovered as a consequence of fires and/or explosions. In 2017, an explosion took place behind a house in Urmond, with a shed burning down to the ground (O-629). Police investigations concluded that PMK conversion was taking place there. In 2019, an amphetamine laboratory was discovered at a farm in Doornenburg following a shed fire (O-630). Casualties are also sometimes the unfortunate result. Between 2017 and 2020, four persons died due to explosions and the associated release of poisonous gases, all of whom were found to have been working in amphetamine laboratories. In 2019, three casualties were found in an amphetamine laboratory in Hechtel-Eksel, Belgium.

Investigations concluded that it concerned three Dutchmen from the Eindhoven region (O-601).

Plotting the sites against the processes taking place within them results in a highly diffuse image. No specific sites where specific processes are being conducted can be identified. Large-scale conversion and synthesis sites are generally more often discovered in rural areas. A lot of room is required to store 2,000-liter pressure vessels and all associated chemicals. Moreover, transport movements, which for example involve the offloading of jerrycans, are less conspicuous there. Processes requiring less space are generally conducted in residential and urban areas more often. Sites where amphetamine, MDM, and methamphetamine are crystallised were frequently discovered in houses and apartments. Business parks, too, are locations commonly used by criminals, as it allows their dealings to be hidden in the general bustle of the area. The transport of chemicals in vans is not conspicuous, while the goods can generally be offloaded behind closed doors.

6.7.2 Production per type of drugs

In this section, we will detail the specific characteristics of each type of drugs produced.

6.7.2.1 Conversion into PMK and BMK

The introduction of pre-precursors gave rise to a new production stage. The pre-precursors are turned into PMK and BMK. While these processes may be performed at a site in addition to other production processes, criminal networks generally opt to perform them at separate locations. For, should a site be discovered, only that bit of the process is lost, and not the remainder. Thus, they prefer to spread the risk, despite the higher costs in terms of rent and establishing a laboratory.

Between 2017 and 2020, ten conversion laboratories to produce PMK were found, and nineteen for the production of BMK. The PMK conversion laboratories were set up throughout the country. They were primarily discovered in warehouses in business parks, but also in residential areas. In 2020, a PMK conversion laboratory was found in the bathroom of a flat in a condo in Amstelveen (O-615). The required chemicals were stored in the cellar belonging to this flat.

Most BMK conversion laboratories are situated in Limburg and Noord-Brabant. They, too, are equally spread out over rural areas, business parks, and residential areas. Strikingly, a BMK conversion laboratory was in 2020 discovered in a plot of woodland near Valkenswaard (O-631). APAA was converted into BMK in double pressure vessels hidden under the soil. In the woods close to Venlo, too, a site was discovered in 2020. Here, MAPA was converted into BMK (O-632). It may be that forest sites will become more prevalent in the future. One benefit, of course, is that no expensive location needs to be rented. A disadvantage is that the open nature of a forest means that the likelihood of discovery is greater.

6.7.2.2 Vacuum B

The rise in the production of methamphetamine from BMK resulted in a demand for extremely pure BMK. BMK can be cleansed of contamination by way of vacuum distilling. Such purified BMK is referred to as “vacuum B” in criminal circles. By using this BMK, a purer final product can be obtained, which in turn leads to larger and clearer methamphetamine crystals (crystal meth or ice) that are worth more on the

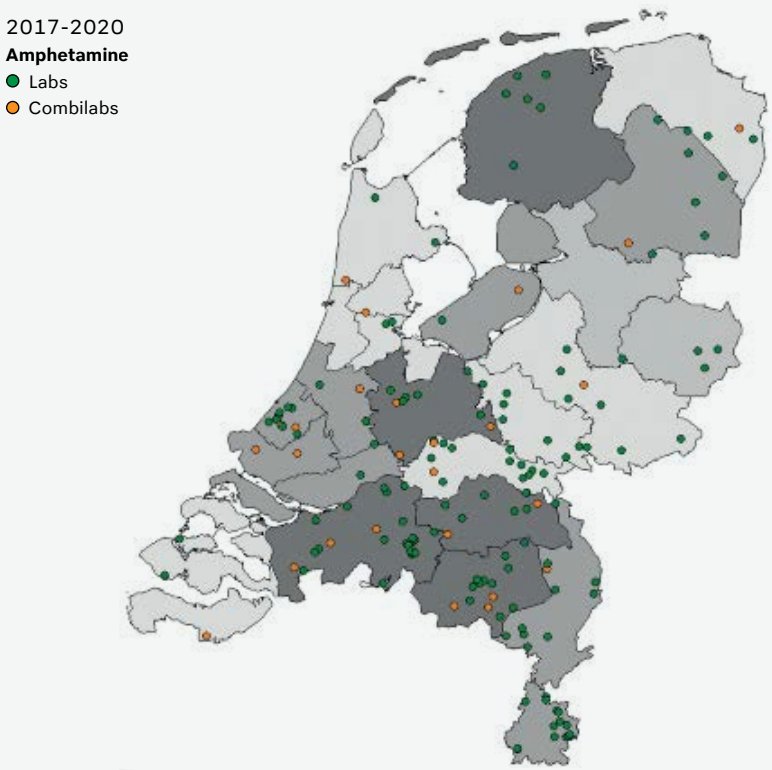
market. Vacuum B production can take place at the same site where the pre-precursors are converted.

6.7.2.3 Amphetamine

Amphetamine is the drug type with respect to which the most production sites were discovered. The conversion and synthesis processes are often found to be conducted jointly at one site. Crystallisation generally takes place at other sites.

At some sites, other drugs (MDMA, methamphetamine and/or GHB) are produced in addition to amphetamine. Geographically, amphetamine production takes place throughout the country, albeit that the heart of production is clearly located around Tilburg and Eindhoven in Noord-Brabant. Also of note are the Kerkrade/Heerlen, The Hague, and Arnhem/Nijmegen regions.

Figure 6.20. Amphetamine production sites



Production generally takes place by way of Leuckart synthesis. BMK is turned into amphetamine base using formamide and other chemicals.

The amphetamine base is subsequently crystallised to create the final product. Leuckart synthesis may result in toxic substances, such as carbon monoxide gas or hydrogen cyanide gas, being released. This type of synthesis has been in use for decades and is known to Dutch criminal networks. The laboratory technicians found in these production sites generally hold Dutch nationality. Persons holding Polish nationality were also discovered at various production sites.

Amphetamine pills - captagon

Demand for captagon pills is increasing throughout the globe. According to the UNODC, the primary consumer market is located in the Middle East. Countries like Saudi Arabia, Jordan, and the United Arab Emirates report higher numbers of these pills being seized year on year. An increase is visible in Europe, as well. The period between 2013 and 2018 witnessed a major increase in the number of amphetamine pills featuring the captagon logo seized (UNODC, 2020b).

Captagon pills generally contain amphetamine and caffeine and feature the logo. Captagon used to be the brand name of a medicine, the active substance of which was fenethylline, that has been banned since the 80s. The brand name has since been misused in the context of the production of fake pills which sometimes contained amphetamine as their active substance.

The production of these amphetamine pills is also reported in the Netherlands. Amphetamine is turned into pills by using tableting machines and excipients. In Brunssum, a large, professional tableting machine was found in 2017 that could be used to press captagon pills at a large scale (O-633). An even larger tableting machine, with a production capacity of 150,000 pills per hour, was discovered in a trailer in Wekerom in 2019 (O-626). It is suspected that these pills were destined for the Middle East and that the production was organised by criminal networks with Turkish and Arabic backgrounds.

6.7.2.4 MDMA

Within Europe, most MDMA production locations are discovered in the Netherlands (EMCDDA, 2020a). 37 sites were discovered in 2017; the number has since dropped to about 23 per year. The overview map shows that MDMA production does not take place only in the south. Most sites were discovered in Noord-Brabant, followed by the provinces of Noord-Holland, Zuid-Holland, and Utrecht. MDMA production takes place in the northeast of the country to a much smaller extent. The various MDMA production processes are performed throughout the country, with no specific region following the heart of production. Tableting machines are found everywhere, for example, while synthesis and crystallisation take place in many regions.

Figure 6.21. MDMA production sites

MDMA is produced mainly by way of reductive amination, employing the high pressure method. PMK is converted into MDMA using methylamine, a solvent, hydrogen gas, and a catalyst. As flammable substances are being used, dangerous situations may arise. Another method employed is the so-called “cold” method. This form of synthesis is conducted in large freezers, resulting in MDMA oil. The Dutch criminal networks are familiar with these methods and use them. The laboratory technicians generally hold Dutch nationality.

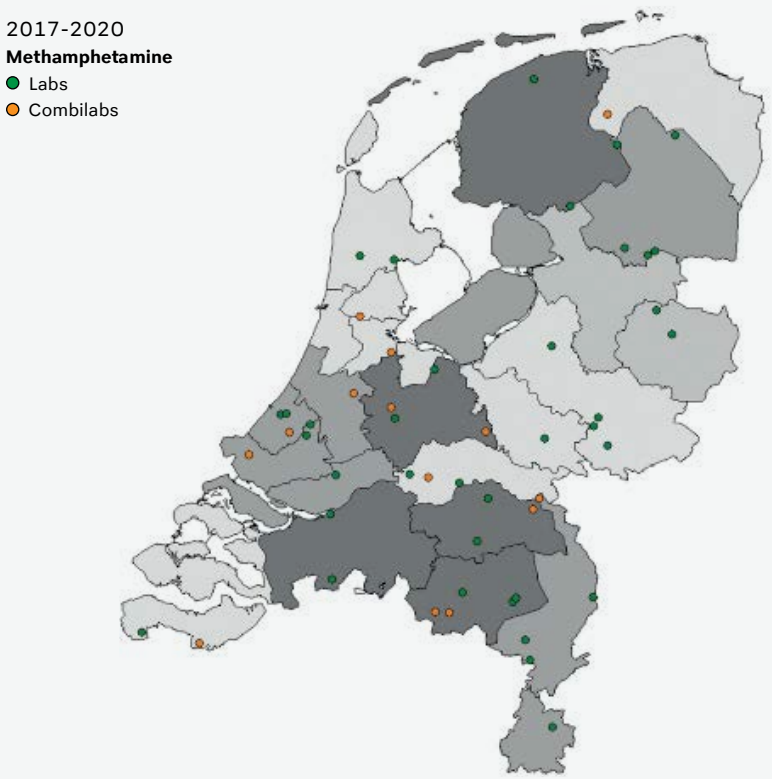
The vast majority of MDMA production sites discovered were tableting sites. Over the course of four years, an average of thirteen sites were discovered each year, even during the COVID-19 pandemic in 2020. This is of particular note, as criminal investigations concluded that the global demand for MDMA pills went down during the pandemic.
Producing high-quality pills is a specialist skill, requiring not only knowledge of and experience with mixing MDMA, colouring agents, and (various) excipients in the right proportions. It also requires experience with and insight into processing the mixture so obtained by tableting, so as to ensure the resulting pills possess the right weight and

density. So-called tableters possessing such knowledge and experience are in high demand among criminal networks. The tableters come to agreements with the client on the logo, shape, and potency of the pills, arriving at a price per single unit. Clients most often are parties that already have deals with a (foreign) buyer.
MDMA production seems to be generally controlled by Dutch criminal networks. They possess the knowledge, have access to the required chemicals and hardware, and are able to sell the drugs on the international markets. Of note is that persons holding Turkish nationality are more often involved with the production of this drug than persons holding other nationalities. One reason for this may be that Türkiye and its hinterland form a major MDMA market (O-601).

6.7.2.5 Methamphetamine

The production of methamphetamine has soared in the Netherlands in the past few years. In 2020, 32 methamphetamine production sites were discovered, eight of which were combilabs. The increasing global demand, the massive profits, and the decreasing demand for other drugs (such as MDMA) due to the COVID-19 pandemic all seem to have boosted this development.

Figure 6.22. Methamphetamine production sites



Production took place throughout the Netherlands. Because of the explosive increase in 2020, more sites were discovered over the entire country. Sites in rural areas were commonly used for the large-scale conversion, synthesis, and crystallisation of methamphetamine.

Methods

Methamphetamine is produced from the BMK and (pseudo)ephedrine precursors. Roughly speaking, three methods exist to turn (pseudo)ephedrine into the final product. These methods are not commonly seen in the Netherlands. A method that has been used, is the iodine - red phosphorus method. A laboratory where this method was employed was discovered in Zuidlaren in 2018 (O-603). In addition to Dutch nationals, a person holding Vietnamese nationality was also found there. Signs of Asian involvement have also been discovered in other laboratories where this method was found to be used.

Roughly speaking, two methods exist to turn BMK into the final product: the Leuckart route and reductive amination. The Leuckart route for producing methamphetamine was only incidentally seen. Reductive amination was by far the most commonly used method. This method can, in turn, be subdivided into three different methods. The high pressure method was most commonly used, followed by the aluminium amalgam method. The cold method was hardly seen. The benefit of using the high pressure method is that the hardware also used for MDMA production can be used. This method is widely known in the Netherlands and can therefore easily be employed by the criminal networks.
The downside of using the precursor BMK is that half of the final product is comprised of potent (D) methamphetamine, and half of weak (L) methamphetamine. General speaking, a potent as possible final product is desired. The weaker L methamphetamine is therefore often separated from the more potent D methamphetamine using tartaric acid, after which the potent variant is crystallised into large crystals. The Dutch networks do not yet master these processes of separating the L from the D methamphetamine and crystallisation to form large crystals.

Latin American involvement

The Dutch networks have started cooperating with Latin American networks in the context of the production of methamphetamine, as the Dutch networks lack sufficient knowledge about certain processes within the entire production process. This cooperation also becomes apparent from the relatively high number of Mexicans, Colombians, and Dominicans arrested at the methamphetamine production sites concerned. Studies by the Intel & Expertise cell of the Synthetic Drugs Cluster concluded that the Latin American networks are responsible for three process stages coming at the end of the production chain:

9. They separate the weak L methamphetamine from the potent D methamphetamine;
10. By employing a chemical process that inter alia involves the use of AIBN or MYPC, they are able to convert the unusable L methamphetamine into the potent D methamphetamine;
11. They are familiar with the crystallisation process that produces large “crystal meth” crystals, which are the most lucrative on the criminals markets.

Methamphetamine import

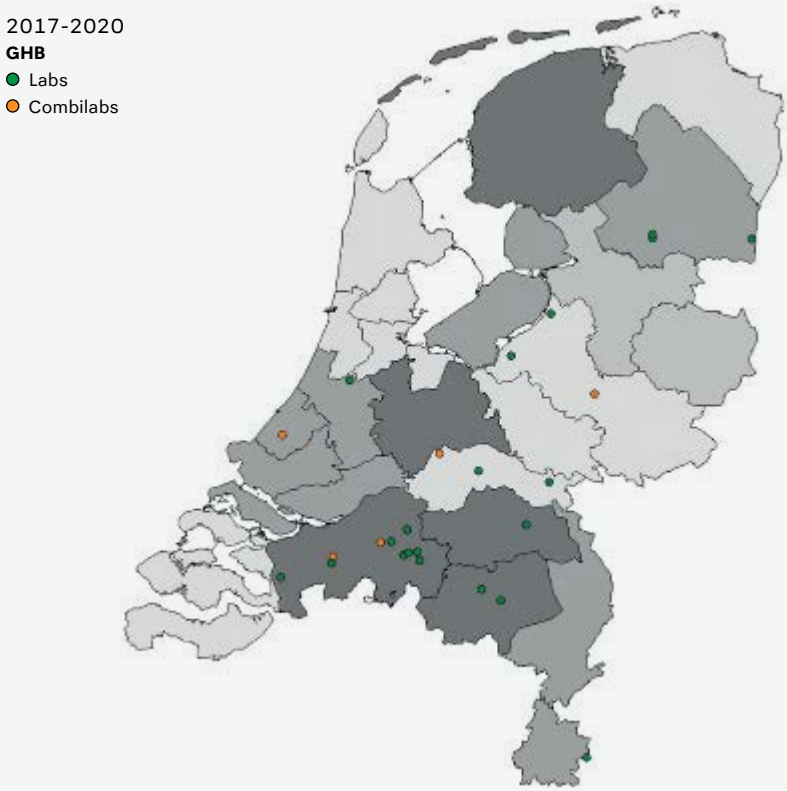
While methamphetamine is produced in the Netherlands, attempts to import it from Mexico have also been made. In 2019, a shipment of 2,500 kilos of methamphetamine was discovered in Rotterdam (O-623). This shipment had entered the Netherlands under a cover load. In 2020, another major batch was seized in Slovakia. This batch of 1,500 kilos was hidden in an abutment and was presumably on its way from Mexico to the Netherlands. Mexican networks cooperate with the Dutch ones to get the methamphetamine into the Netherlands (O-634). As is the case with respect to cocaine, it is likely that the Dutch networks order the shipments from their Latin American contacts. They, working together with the Dutch networks, arrange for the transport, with the batch switching owners at the final destination. As methamphetamine consumption in the Netherlands is very limited (Laar et al., 2021), we suspect that these methamphetamine shipments are exported in full.

6.7.2.6 GHB

A total of about 21 GHB production sites have been discovered. In four cases, the GHB was produced in combination with amphetamine.

The 21 sites are mostly located in Noord-Brabant and, more in particular, around Tilburg. The GHB production process usually takes place in a dwelling situated in a residential area. GHB is produced from the precursor GBL. Mixed with caustic soda and distilled water, it is cooked until the final product is obtained. GHB is produced in small batches, meaning little room is required. In addition, production is less conspicuous, as the criminals do not have to move around major quantities of materials and goods.

Figure 6.23. GHB production sites



Judging by the sites discovered, GHB production serves to supply the local consumer market. In some cases, the laboratory technicians or residents were themselves addicted to it.

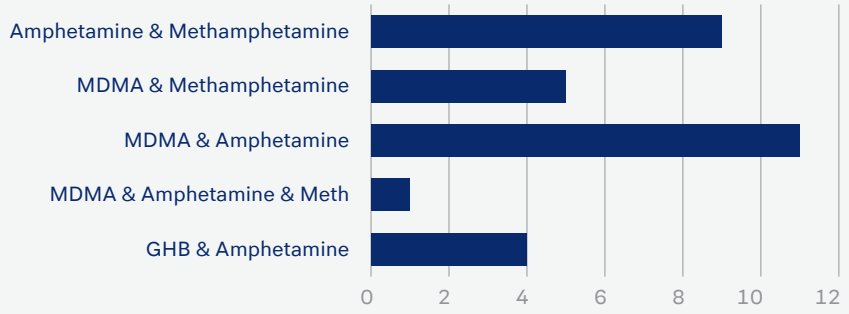
The small-scale GHB production is at odds with the major quantities - up to some thousands of liters - of GBL found. The GBL was ostensibly imported into the Netherlands for use in legal applications. Companies in turn sell the GBL on in smaller batches via websites, offering it as a cleaning agent of some sort, and regularly sending it to the buyer by post. Other countries, including the United Kingdom, have reported many interceptions of GBL shipments sent from the Netherlands (O-601).

Criminal networks seem to be less involved with domestic GHB production, but all the more interested in the large-scale trade of the precursor GBL. They use companies to import GBL in major quantities, selling it on around the globe against a profit.

6.7.2.7 Combined laboratories

As was indicated in the above, in recent years so-called combined laboratories (or "combilabs") have been discovered at a number of sites. These are sites where more than one type of synthetic drug is being produced. In total, 30 of these laboratories were discovered. The most prevalent combination is that of MDMA and amphetamine. Due to the rise in the production of methamphetamine, a combination with the production of this drug was more often found in 2019 and 2020.

Figure 6.24. Number of combilabs discovered per year



Source: Police, 2021; ERISSP National overview of Synthetic Drugs 2020.

To produce methamphetamine and amphetamine, the same precursor, BMK, is often used. When methamphetamine is produced using the high pressure method, the same hardware is used that is applied in MDMA production. The chemicals used for MDMA production, too, can be used to produce methamphetamine. Because of these similarities, criminal networks can easily switch to producing another drug, should a demand therefor exist.
Where MDMA is combined with amphetamine, major quantities are sometimes produced. In Leende, Noord-Brabant, for example, a very big and professional combilab was discovered in 2017, with separate rooms having been set up to produce these two types of drugs (O-635).

In addition to combinations of various types of synthetic drugs, sites where cocaine, heroin, or herbal cannabis are produced, processed, cultivated and/or found in addition to synthetic drugs, have also been discovered. In 2020, a cocaine extraction laboratory was discovered in Poortvliet, Zeeland (O-636). The discovery was made after a major fire had destroyed the shed concerned. The container next to was found to contain materials, hardware, and waste associated with the large-scale production of MDMA. In 2017, a heroin production site was discovered in an industrial building in Veenendaal (O-637). A tableting machine to create MDMA pills and a herbal cannabis packaging line were also found there. Also refer to Chapters 4, 5 and 7.

The above allows us to conclude that criminal networks are polydrug-oriented. Production is started up once demand exists, using any available sites.

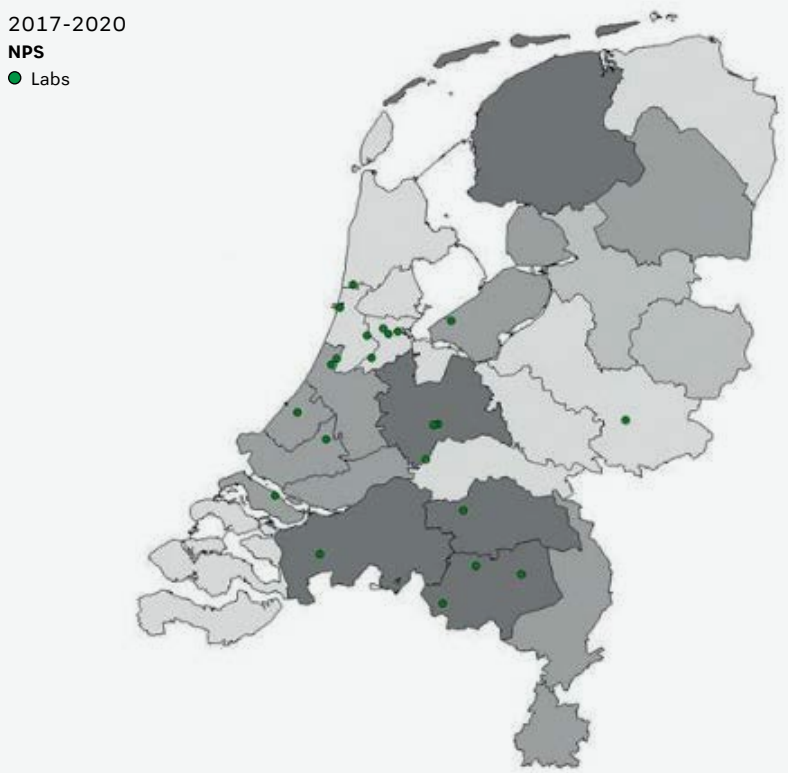
6.7.2.8 Other synthetic drugs – NPS

Every year, sites are also being found where other drugs than the aforementioned "big four" are produced. Generally speaking, these production locations are situated in the west and south of the country. The vast majority was located in an industrial building or warehouse.

Mephedrone

Mephedrone (4-MMC) is a drug belonging to the category of synthetic cathinones. It is also called "meow meow" on the streets. Mephedrone is included on list I to the Opium Act, meaning that production and use are criminal offences. Three mephedrone production sites were discovered in the past few years. In general, the suspects identified were Dutch nationals. Large-scale production was also discovered at production sites in this period. Studies have shown that the United Kingdom is a major mephedrone market.

Figure 6.25. NPS production sites



DMT

In 2020, two locations were found where DMT (N,N-dimethyltriptanine) was being produced. This drug belongs to the tryptamines (hallucinogenics) family and is included on list I to the Opium Act. DMT was produced on a small scale at both sites. The house of a person in Rotterdam who had studied chemistry for two years was found to contain a room where the man was experimenting with producing various types of drugs (O-638). A DMT production site was discovered in a house in Amsterdam after a fire, with the resident stating he was producing the drugs for personal consumption (O-639).

2C-B

2C-B is included in list I to the Opium Act. Two sites where this drug was being produced were found in the 2017-2020 period. Both sites belonged to the same criminal network. The laboratory technician received instructions from a person who was incarcerated (O-608). Materials and hardware required to produce the drug were imported from China.

Ketamine

Ketamine is a regulated substance under the Medicines Act. Studies have shown that criminal networks have a lively ketamine trade going on. In general, they try to obtain ketamine from the India/Pakistan region and from China. They also try to procure ketamine from pharmaceutical companies in Europe using opaque company structures. In addition, two sites were discovered where criminals had tried to produce ketamine in two different ways. A ketamine extraction site was discovered in Den Bosch in 2019. The ketamine present in *Ursotamin*, a veterinary medicine, was extracted by way of evaporation (O-640). In 2020, a warehouse in Lijnden, Noord-Holland, was found to contain a site where ketamine was produced on a large scale from the precursor hydroxylamine hydrochloride (O-607). Should it become more difficult to procure ketamine internationally, the aforementioned processes could be used more often by the criminal networks. Global demand appears to be massive. Police information shows that ketamine is the second-most traded synthetic drug by criminal networks, trailing only methamphetamine. The drug therefore seems to have take a prominent position on the Dutch drug market. The vast majority of the trade is focused on export to other countries.

Clephedrone

Clephedrone is a drug belonging to synthetic cathinones family. This substance, 4-CMC, has recently (28 October 2021) been added to the list of banned substances under the Opium Act. In 2017, a clephedrone production site was discovered in an industrial building in Leerdam (O-610). The lessors of an industrial building in 2019 reported the discovery of a drug laboratory where clephedrone was also being produced (O-611). The persons suspected of involvement with these two locations all hold Polish nationality. Investigations have shown that the number of clephedrone production sites discovered in Poland is increasing. The clephedrone produced in the Netherlands seems to be exclusively created for export (sale), for example to Poland.

Synthetic cannabinoids

Synthetic cannabinoids are substances simulating the effects of herbal cannabis and cannabis resin. They are synthetic variants, mixed with consumable materials. These

materials are generally directly ordered from China and then processed further. Dozens, if not hundreds, of different types are available. Many of them are not prohibited under the Opium Act or other legislation. In the Netherlands, two sites have been discovered in the 2017-2020 period where certain synthetic cannabinoids were being processed into the final products. In Lisse, a site was in 2018 found in an industrial building where synthetic cannabinoids were being mixed and packaged in bags featuring the "Moonlight" brand name (O-641). In 2020, a site was found in Hengelo, Gelderland, where synthetic cannabinoids were mixed with a carrier material (O-642). The site was also found to be something of a growshop / smartshop, where legal NPS were being sold. They were packaged and shipped by post, mostly to Germany. Refer to Chapter 4 for more information.

Fentanyl

So far, no fentanyl production sites have been discovered in the Netherlands. However, signs exist that this substance may be produced here. A fentanyl precursor destined for Zoetermeer was seized in Belgium, for example. In addition, a total of 2,000 liters of chemicals used for the production of fentanyl were found in Breda (O-622). The ultimate intended use of these chemicals could, unfortunately, not be discovered. During a search of a shed in Eindhoven, 1.2 kilo of fentanyl was discovered (O-644), which was estimated to amount to over 700,000 doses. Upon analysis by the NFI, it was found that this batch was not created by legal pharmaceutical production, as the fentanyl was, chemically, produced in another way.

On the basis of the above signs, it can be concluded that it is realistic to assume that fentanyl is already being produced in the Netherlands or will be produced here in the future. In view of the global demand and the major profits associated with its trade, it is no stretch of the imagination that criminal networks will try to produce this drug. The danger associated with fentanyl and other synthetic opioids is that only very small quantities are required per dose. Overdoses are likely, because as little 2 to 3 milligrams can already be deadly. Refer to Chapter 7 for more information.

NPS sales

NPS is distributed on a major scale in the Netherlands. These drugs are offered via websites on the (legitimate) web and then shipped around the globe by regular mail. Customers from all over the world have various payment options available for the desired product. The reason for the trade in NPS being so large in scale in the Netherlands is that many of them are not criminalised under national legislation, as opposed to the situation in many other countries, both within and without Europe. As a result, many traders and companies have over the years moved to the Netherlands to continue doing business.

Various NPS points of sale are discovered each year, often offering over a 100 different types of NPS. The NPS have often been procured in China and India. Upon receipt, these shipments are repackaged into packages containing consumer quantities and offered via webstores. At the request of the German authorities, an industrial building in Almere was entered in 2019, resulting in the discovery of many different types of NPS (O-643).

6.7.3 Criminal networks

In this section, we will provide insight into the methods used by criminal networks to set up the production sites. This information derives from the Intel & Expertise cell of the Synthetic Drugs Cluster.

6.7.3.1 Finding a site

Criminal networks are constantly on the look-out for suitable locations to set up production sites. Certain persons within the networks - the so-called brokers - are specifically charged with finding these sites. They in this connection actively approach the residents of farms, company owners, and warehouse lessors. Once a suitable site has been found, the client will be informed. In turn, the client will, often in consultation with the laboratory technicians and depending on the process to take place there, accept or reject the location. In some cases, the location is not suitable for the intended process, but may be suitable for, for example, the cultivation of herbal cannabis. In such a case, the network will try to use that location for such different purpose. In almost all cases, the lessors or residents are aware of what is going on. Agreements are reached on the amount of rent paid and the site access moments. Some clients require that the lessor or resident is aware of the fact that the network will use the site as a laboratory. The amount of rent paid varies between EUR 5,000 and 15,000 per week; higher rents are paid for a methamphetamine production site than for a BMK conversion site. In some cases, a resident may actively assist with the construction of the laboratory and the disposal of waste. Criminal networks employ real estate agents to find suitable sites. The agent will also arrange for a tenancy agreement signed in the name of a straw man. Many investigations conclude that tenancy agreements are held in the name of Eastern Europeans, who are very likely not to have any further involvement with the process. The residents or lessors of the sites are presumably paid in cash. Cases of farmers prohibiting access to their grounds until the criminal network had paid the agreed fee are also known.

6.7.3.2 Setting up a site

Once the site is ready for use, the laboratory is constructed. The production sites are in many cases the property of multiple cooperating networks. Each network provides certain goods or services and receives a share of the proceeds or the final product in proportion to their input. One network may provide a suitable location, for example, while another will provide the materials, and third the laboratory technicians. The division of tasks is agreed beforehand. In some cases, up to four or five parties are involved with a single laboratory. The laboratory is set up by the laboratory technicians themselves, or by “builders”: people specifically engaged for this purpose. The laboratory technicians provide the specifications and the builders construct the laboratory in accordance with those specifications. Only once the laboratory technicians approve of the setup will they start production. The likelihood of being discovered are larger when an exhaust is improperly connected or the site is not concealed properly. It is the laboratory technicians who run the risk of being discovered and prosecuted, meaning they want to reduce the risks to a minimum.

6.7.3.3 Production

A site is used for a specific span of time. The length of this term depends on various factors. The owner of the location may decide to halt activities, for example, or the public authorities may conduct inspections, or the criminal network may feel the site is

no longer safe. In addition, a lack of pre-precursors, chemicals and/or laboratory technicians may cause a laboratory to be dismantled. It may also be that no demand exists for a certain product, meaning no production needs to take place.
As quickly as a laboratory is set up, it can also be dismantled again. The goods that can be reused (pressure vessels, chemicals) will be retrieved. In case a site is only used once, the criminals will generally leave the building owner with waste, forcing the duty of removing it on them. In doing so, the criminal networks are rid of the problem, while they know the owner will not betray them: they have received enough payment to dispose of the waste. Certain criminal networks also rotate the use of sites in order to prevent detection. They for example clean up everything after four weeks, only to set the entire laboratory up somewhere else again. Strikingly, they will reuse sites where the authorities have previously discovered a drug laboratory or cannabis farm. The term for which a production site is used varies from a couple weeks to multiple months.

Drugs are produced in various steps. Depending on the site, all these steps could be performed in a single location. However, the criminals often opt to break up the process and have the various steps conducted at different locations. In this way, should one site be lost, their losses are limited. Specific “departments” within the network are responsible for part of the process. One department will take care of converting the pre-precursors, receive payment, and provide the converted product to the next department. This will, in turn, perform the synthesis process and provide the synthesis product in oil form to the next party in the chain. Crystallisation and tableting form the final steps, with the final product then being supplied to the initial client in the desired and agreed form. The client will then take care of the sale of the product. Another department will provide the pre-precursors and chemicals required for performing these steps. It procures the required materials from criminal networks specialised in the trade in these goods. Certain persons are engaged to supply goods to the laboratories or take them away. Whenever these persons form part of the criminal network, the goods are delivered directly on-site. Another method employed is transferring the vehicle containing the goods and having the laboratory technician drive it to the site themselves. The vehicle will then be returned at the same location.
Once a product is finished, it will be immediately retrieved and delivered to the buyer. In this way, the networks reduce the likelihood of a batch being seized by the police or ripped by other criminals.

Laboratory technicians
The persons serving as laboratory technicians in a laboratory can in the main be divided into two categories. Certain persons possess limited knowledge of the chemical processes. These technicians are sent to the laboratory in possession of a written recipe. They will receive assistance from a so-called “super technician”, either on the site or remotely. Due to their experience or education, such super technicians are knowledgeable about the chemical processes to be performed. They know how to solve problems and how to coach people. This means a super technician is a highly valuable asset to criminal networks. “Ordinary” technicians, on the other hand, can easily be replaced.
Super technicians often work independently and are “hired” by the various networks. Investigations have shown that super technicians provide knowledge and physical laboratory services to multiple networks at the same time. Laboratory technicians can get paid up to 10,000 euros for a few days work.

6.7.3.4 Latin American involvement

The rise of methamphetamine production has also caused increasing Latin American presence in the Netherlands (EMCDD, 2020a). Mexicans formed the largest group of Latin American laboratory technicians discovered (about 20). Seven persons from the Dominican Republic, three persons from Guatemala, and one person from Colombia were also apprehended. A United States citizen was discovered at the Drempt production site in 2020 (O-645). This person had a Mexican background.

Cooperation between Mexico and the Netherlands

Studies by the Intel & Expertise cell of the Synthetic Drugs Cluster concluded that the Latin American involvements is controlled by Mexicans. These persons are in direct contact with the Dutch criminal networks. Methamphetamine is produced in close cooperation between them. The exact nature of this cooperation, the agreements made, and the division of the final product, differs per individual or group. Three main categories can be distinguished on the basis of police investigations:

1. Individual

Some Latin Americans are approached in person by various criminal networks to produce methamphetamine. These super technicians in essence operate freelance. The laboratory is set up in accordance with the wishes of this technician. Next, all required goods and chemicals are supplied and this technician performs their part of the process. The technician is paid a sum agreed in advance. This may be a fixed price or a price per kilo of final product provided. Investigations have shown that, in the context of methamphetamine, about one-fifth of the sales price is paid to the technician "ex lab", i.e., immediately after it leaves the laboratory.

2. Criminal networks

Investigations have shown that Dutch and Mexican networks cooperate intensively in the context of producing methamphetamine. Bosses within the Dutch network keep in contact with bosses within the Mexican network. The Mexican network takes care of supplying skilled laboratory technicians. These technicians are mainly deployed for the three process stages the Dutch technicians lack the expertise about. The Mexican organisers either deploy technicians already present in Europe or have technicians flown over from Latin America, mainly from Mexico. Such technicians can easily enter Europe, as they do not require an entry visa. They generally declare to be visiting Europe as a tourist and to intend to travel around. Various travel routes are in use, including via Spain, France, the Netherlands, and Türkiye. Once the technicians have arrived in the Netherlands, they are given accommodations. Engaging the Dutch network or their own brokers, the technicians receive accommodation in apartments in the Randstad conurbation. Because of the international nature of these cities and the many tourists, these persons are not out of place in the streetscape.

Working together with the Dutch network, the Mexican organisers take care of setting up the laboratory. The Dutch network provides a suitable site, hardware, chemicals, and the required vacuum BMK. Once the site is approved of by the Mexican organisers, the technicians are retrieved by the Dutch network and brought to the site. The technicians will stay at the laboratory for a few weeks. The sites therefore generally have sleeping areas and room for cooking and eating. The processes they perform take over 48 hours. As the processes are performed in a sequence, they can continue working. Once the first stage is completed, they can start it up again. In time, this

allows them to deliver a certain amount of final product every day. The Dutch network will, in the meantime, take care of supplying vacuum BMK, chemicals, and necessities like food and drink. The Dutch will also remove the waste once this is requested for. The technicians stop production when no more vacuum BMK can be supplied or once enough product is manufactured. They are then retrieved again and brought to their accommodation.

Generally, the technicians will keep records of the quantity of final product supplied to the Dutch network. The Mexican and Dutch networks have agreed on the division of the product in advance. The Dutch network either pays a fixed amount per kilo of final product supplied or hands a share of the final product, in kilos, over to the Mexican network. When the latter option is chosen for, this would mean that the Mexican network will have created its own sales market. One Mexican organiser, who has been residing in Europe for some time now, is known to supply the German market.

3. Import
Mexican and Dutch networks not only cooperate in producing methamphetamine but also in the large-scale import of the drug. Large shipments of methamphetamine are smuggled from Mexico to Europe. The methamphetamine is smuggled via routes that have been in use for smuggling cocaine for a long time now. Mexican networks arrange for the transport to Europe, while the Dutch networks take care of taking receipt of the shipment. Upon receipt, the methamphetamine is generally converted into large crystals before it is brought to market.

6.7.4 Conclusion

The number of synthetic drug production sites discovered over the past decade has increased tremendously. Most sites discovered in the 2017-2020 period concerned amphetamine production sites; MDMA and, at a quite a distance, methamphetamine take second and third place. However, methamphetamine production in the Netherlands is on the rise since 2019, also in connection with the cooperation with Mexican criminal networks. The Mexican criminal networks provide expertise not yet possessed by the Dutch criminal networks, especially by providing laboratory technicians. Investigations have shown that the networks cooperate closely, also on the level of the bosses. An open question is whether this Mexican-Dutch cooperation will continue to exist on the future, or whether the Mexican criminal networks will leave the stage once they have exchanged their knowledge.
While the southern part of the Netherlands is still a popular region to base production sites, sites are becoming more common in other parts of the country, as well. This does not seem to be a shift of locations as an expansion.

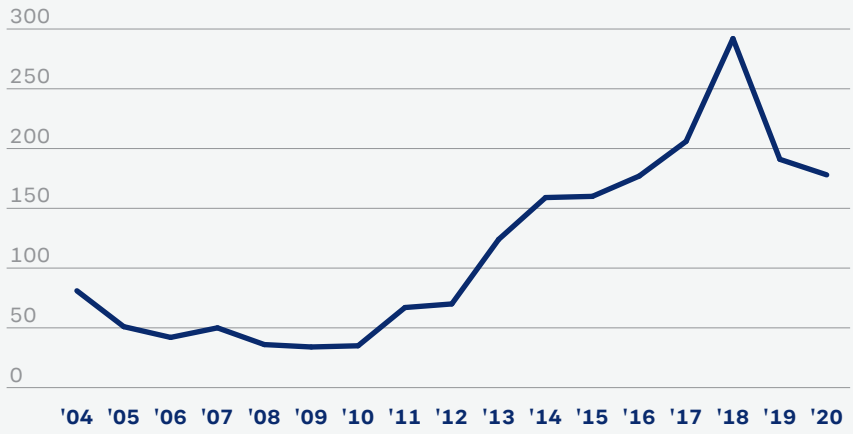
6.8 Waste dumping

The production of synthetic drugs not only result in the final product, but also in major quantities of chemical waste. Such waste is a side effect of production. Week on week, the media report about barrels and jerrycans left on forest tracks, public roads, or even in the midst of residential neighbourhoods. Striking examples include a van filled with waste that was torched in front of an apartment complex in Eindhoven (Eindhovens Dagblad, 2018) and the week-long disruption of the water treatment system in Baarle-Nassau (NOS, 2017). This waste can cause serious damage to people, animals, and nature. In some cases, the soil the waste had seeped into had to be decontaminated

(Omroep Brabant, 2020) while both people and animals have started to suffer health problems. Both unsuspecting citizens and police officers have over the years fallen ill after discovering waste, for instance. In addition, cleaning up the waste is costing society hundreds of thousands to millions of euros. These costs are not borne only by the government: private individuals, too, have had to pay high cleaning costs when the waste was discovered on their private premises. In response to the 2020 *drug waste dumping financing arrangement* letter to the House of Representatives by the Ministry of Justice and Security (*Ministerie van Justitie en Veiligheid – MinJenV*), private individuals nowadays receive a full refund for all costs incurred.

The number of waste dumpings identified per year have been recorded since 2004 (KLPD, 2012). While 35 instances were identified in 2010, this number had risen to 178 a decade later (Figure 6.26) (KLPD, 2012 & Politie, 2021a).

Figure 6.26. Number of waste dumpings discovered per year



Source: Intel & Expertise cell of the Synthetic Drugs Cluster; KLPD, 2012.

Following a relative decrease or stabilisation between 2004 and 2010, a strong increase has been visible since 2011. This is in line with the increase in the number of production sites discovered (refer to section 6.7). The increase in the number of production sites correlates to the number of dumping sites discovered: the higher the production, the more waste results as a residual product.
Another aspect impacting the increase in the amount of waste is the fact that criminals have adapted to the legal barriers imposed. Over the years, precursors and pre-precursors like APAAN, APAA, MAPA, and PMK glycidate have been included on lists to national legislation and international treaties (United Nations, 1988), criminalising the trade in these substances. Criminals continue to look for substances that have not been prohibited yet (like the pre-precursor EAPA) and can, thus, freely be bought, for example in China. The problem associated with using these substances is that more

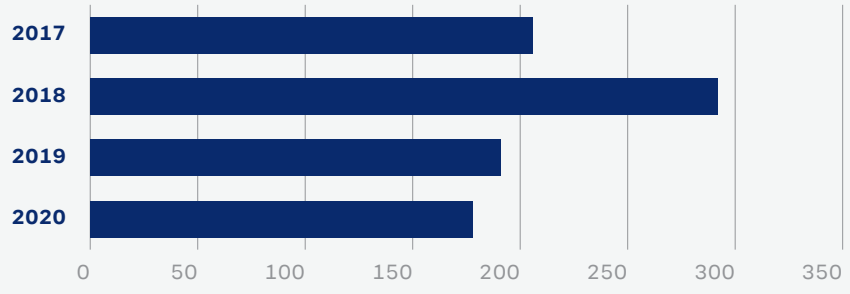
steps are required to create the final product. These additional steps not only result in more production sites, but also in significantly more waste.

In this section, we will discuss the estimated quantities of waste discovered and the characteristics of the locations where it was found. Finally, we will discuss how criminals treat this waste and their dumping methods.

In conducting a more thorough investigation of the nature and size of the synthetic drug waste, we made use of the national overview published annually in the ERISSP report (Politie, 2021a). Material experts of the Expertise and Science Team in this report validate the synthetic drug incidents as registered by the Intel & Expertise cell of the Synthetic Drugs Cluster. A problem that often occurs when validating drug waste dumpings is that little information is available to properly interpret incidents. The waste discovered is often immediately removed and destroyed, without it being known exactly what it is comprised of. The ways of reporting incidents - mainly done in the national law enforcement database BVH - vary considerably, while the scope of the dumping can often not be exactly determined.
Because of the significant increase in the number of laboratories, the Netherlands Forensic Institute (*Nederlands Forensisch Instituut - NFI*) and the LFO have had to prioritise, meaning that no capacity remains for being present at every waste dumping site and the NFI lack the capacity to analyse any samples. Only when signs exist allowing for investigating specific suspects is capacity provided from the limited quantity available to grant support and investigate the crime scene.

The material experts on the basis of the available information determine whether an incident possesses sufficient characteristics to be classified as a case of synthetic drug waste dumping. Such characteristics include observations by reporting officers, fire brigade measurements, or the circumstances of the dumping. For the 2017-2020 period, this results in the following overview:

Figure 6.27. Number of synthetic drug dumping locations



Source: Politie, 2021a; ERISSP National overview of Synthetic Drugs 2020.

The incidents covered by this overview have been further analysed in the context of this study in order to estimate the total quantity of waste discovered and the characteristics of the dumpings. The waste left at the production sites has also been tallied and included in this analysis.

So as to arrive at figures that are as reliable as possible, a number of choices have been made in making this analysis. This was necessary, as the information on drug waste is often incomplete.

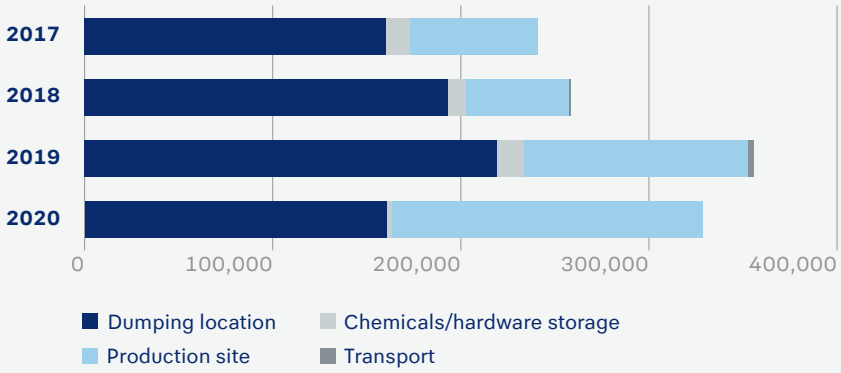
- The quantities of waste discovered has often been estimated on the basis of the number of barrels and jerrycans found. These figures have not been considered if sufficient information was lacking.
- Neither discharge into the soil, surface water, and sewer systems nor waste that has been burned have been included the total quantity, as the amount of waste dumped in these fashions can simply not be determined.
- Waste left at a production site has been qualified as waste resulting from the chemical processes conducted there.

The quantity of waste discovered between 2017 and 2020 does not provide a complete picture. It sets up a framework and provides insight into the absolute minimum total quantity.

6.8.1 Size

Using the method detailed in the above, we have listed the quantities of synthetic drug waste discovered each year. In so doing, we divided the findings by their location type.

Figure 6.28. Drug waste discovered by location type, in liters/kilos



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

In total, about 1,181,681 liters/kilos of synthetic drug waste has been found over four years. Of note is the fact that, while far more dumpings were discovered in 2018, the total amount of waste found was less than expected. One reason for this finding is that

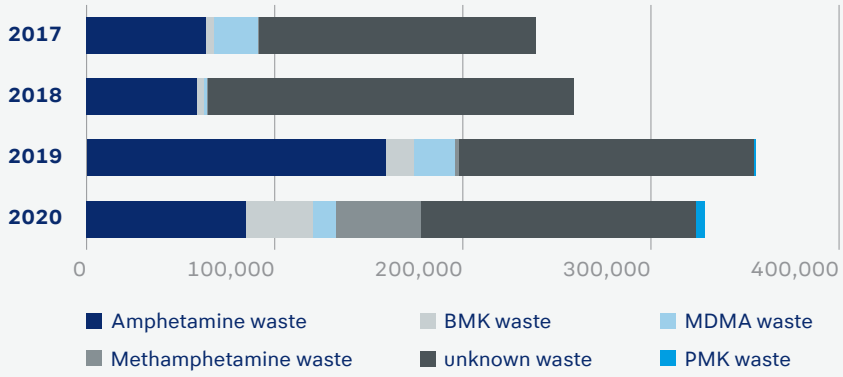
more dumpings where only empty jerrycans and barrels were identified have been discovered in 2018. The number of dumpings where no figures exist on the scope and quantities in 2018 was higher than in other years as well. The increase in 2019 can also be explained by the discovery of 45,000 liters of waste in a warehouse near Voorthuizen (De Gelderlander, 2019). Furthermore, more waste is constantly being found at production sites. In 2020, 10,000 liters of waste were found at six sites.

The *Synthetic Drugs and Precursors Crime Picture Analysis 2012* (KLPD, 2012) reported that about 30,000 liters of waste were found in 35 drug waste dumpings in 2010. Ten years on, about 151,000 liters were found in 178 dumpings. These figures show that the drug waste dumping problem has quintupled in size in the span of ten years - a fact that is in line with the fivefold increase in the number of production sites discovered between 2010 (19) and 2020 (108).

6.8.2 Types of waste

Various types of drugs are produced on a large scale in the Netherlands. The resulting waste can, when tested, be traced back to the process it derives from.

Figure 6.29 Drug waste discovered by type, in liters/kilos



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

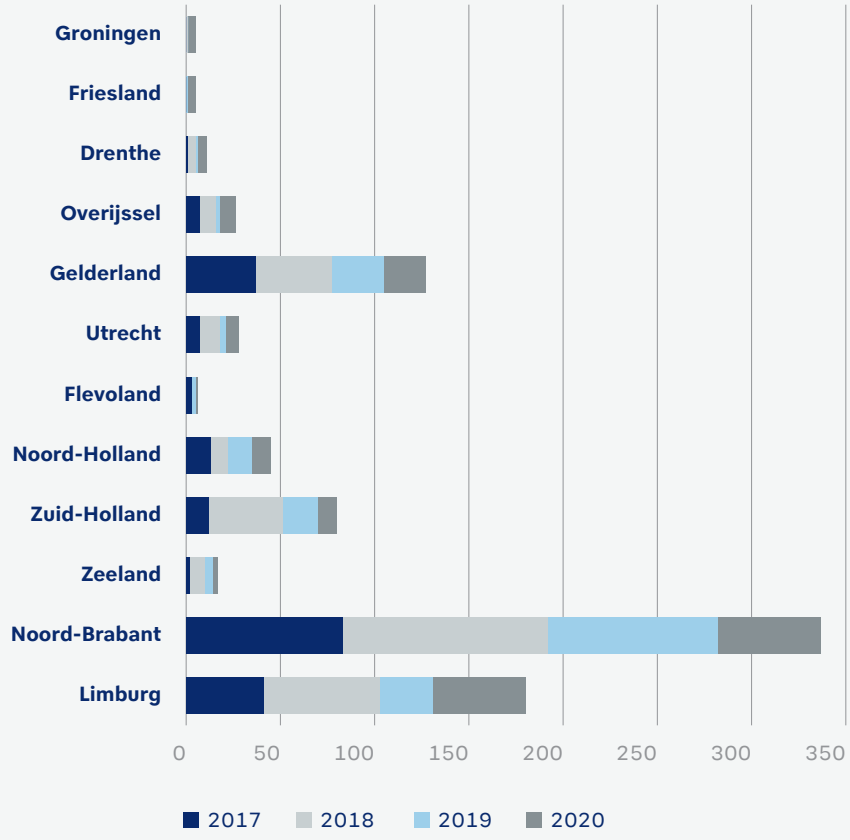
Over half the waste discovered could not be specified in more detail and is listed under the “unknown waste” category. The majority of this waste is removed and destroyed without it being analysed. Due to the circumstances in which the waste was found, it presumably concerned synthetic drug waste. Its actual composition has not been established in conformity with the applicable guidelines. A sizeable share of the waste that has been analysed each year turns out to be amphetamine waste, a fact that is in line with the large number of amphetamine production sites discovered. The major increase in the quantity of amphetamine waste reported in 2019 can once again be linked to the discovery of the 45,000 liters of wastes in the warehouse in Voorthuizen

(O-646). In addition to the fact that fewer MDMA production sites have been found, the production of MDMA produces substantially less waste, meaning it is discovered less often. Too, the waste resulting from MDMA production for a significant part is composed of volatile and flammable solvents (as opposed to amphetamine, the production of which results in a lot of watery waste). This waste can be burned and/or evaporated over time, meaning there is less of a need to dump it. The major increase in methamphetamine waste found in 2020 is due to the sharp increase in methamphetamine production. The waste was mainly found in the production sites discovered.

6.8.3 Geographical spread

Looking at the geographical spread of the dumpings, we note that most dumpings were discovered in the provinces of Noord-Brabant (39%), Limburg (21), and Gelderland (15%). Significant amounts of waste were also being dumped in the provinces of Zuid-Holland (9%) and Noord-Holland (5%).

Figure 6.30. Number of dumping locations by province



Source: Politie, 2021a; ERISSP National overview of Synthetic Drugs 2020.

Over the span of four years, 89 percent of the total number of dumpings took place within the territory of these five provinces. Given the number of production sites discovered in these provinces in that period, this makes sense.

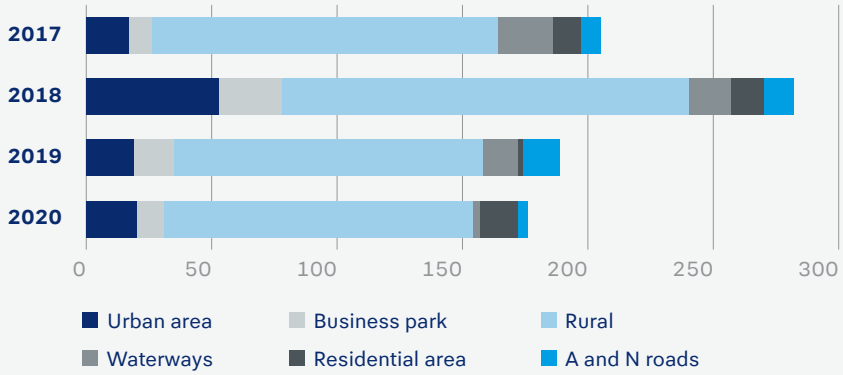
6.8.4 Dumping locations

Dumpings have over the past few years been discovered in many different locations. These locations can be divided into the following categories:

1. A and N roads : motorways and trunk roads
2. Urban areas : built-up areas
3. Business parks : areas where many businesses are located
4. Rural areas : areas with few buildings
5. Waterways : rivers, canals, wide ditches, and lakes
6. Residential areas : areas containing many dwellings

The below figure shows the distribution of locations over these categories by year.

Figure 6.31. Number of dumpings by area type



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

This figure clearly shows that the majority of dumping locations are found in rural areas. Mainly due to the relatively high number of dumpings reported in 2018, urban areas come second. More or less equal numbers of dumping locations are found for each of the other categories.

Rural areas

Most dumping locations were discovered in rural areas. Criminals jump on the fact that they can get rid of the waste unseen. The waste is quickly dumped along the public road, in ditches, and on banks. The enormous dumping that took place in Buren in December 2019 is exemplary of this method: a massive mound of jerrycans and barrels was found here, estimated to total to about 12,000 liters. In addition to dumping

waste along the public road, it is also often dumped in forested areas. About 40 dumpings were discovered annually in 2017 and 2018, a figure which dropped to about 20 per year for 2019 and 2020. The waste left in the woods is often dumped on sandy paths that can be reached by (large) vehicles. For example, two large 1,000-liter IBCs were dumped in the De Wildenburg nature reserve in Drenthe in 2018. Witnesses saw persons dumping these IBCs from a hired van featuring a tailboard. After these persons were arrested on the highway A28, it was found that they had also been responsible for dumping three IBCs and barrels in Benthuizen, Zuid-Holland. The suspects originated from the The Hague region (court judgment)[41]. This case shows that criminals are willing to travel significant distances to get rid of waste.

Residential areas / Urban areas

Unfortunately, waste is often dumped in urban and residential areas. The associated danger is, of course, larger, as more people can be exposed to hazardous substances. Such dumpings generally take place along the public road, at sites where the likelihood of discovery is limited. Criminals prefer locations out of view. Parking lots near sports parks, recreation parks, and other public spaces are used for this purpose. Waste is also found in residential areas. It could for example be stored in a trailer or van, but has also been discovered on banks or in bushes. One extreme example is the van with drug waste that was put to the torch right in a residential area in Eindhoven in October 2018 (O-647). This caused houses and a condo to be evacuated. Fortunately, such excesses are rare. Garage boxes and warehouses are also sometimes used to store the waste.

Business parks

About fifteen dumpings are discovered on business parks each year. Once again, the majority of the waste was found along the public road. Warehouses and company premises can also be used as a waste storage site. Multiple barrels containing waste were for example discovered in Deventer in 2019, when an old factory was being demolished. It was estimated that these barrels had been there for a couple of years already. In addition, site lessors are sometimes confronted with major quantities of waste. In Marum, the lessor of a warehouse found about 10,000 liters of waste, which had to be removed by a specialist company.

Waterways

It is difficult to determine how much waste is dumped in the sewer and surface water. While waste dumped in jerrycans and barrels will be found at some point in time, waste discharged directly into the water is more difficult to detect. A discharge may also relate to other chemical waste. The number of dumpings discovered in or close to waterways has significantly decreased in 2020, totalling three cases, as opposed to about twenty in 2017. Most dumpings were discovered on dykes and banks. In this connection, too, criminals consciously select locations that feature a low likelihood of discovery. Waste is also being found in ditches and canals multiple times a year. Magnet fishers in 2017 discovered gas cylinders in the canal near Kelpen-Oler, for example. As this could prove dangerous to shipping, the Directorate-General for Public Works and Water Management had a team of divers investigate the canal. A total of 30 gas cylinders were removed from the water. In 2017, a hunter noticed a person

41 Rechtspraak.nl: ECLI:NL:RBOVE: 2018:3479.

repeatedly walking to and from a van in the canal in Nuenen. A substance was found on the water. An analysis of samples taken by the Directorate-General for Public Works and Water Management showed that it concerned synthetic drug waste.

Waste is also discharged directly at the production sites. Holes were dug at various locations on the site to directly discharge the waste in. IBCs and barrels with waste were also found buried under the soil. In addition, hoses and drains were used to dump waste in ditches, while manure cellars at farms were used for the large-scale dumping of waste. Another method regularly seen is directly discharging the waste into the sewer system. Dumpings have in recent years been found to have taken place via homemade connections to the sewer system or by simply flushing the waste down the toilet. In Baarle-Nassau, this in 2017 caused a disruption in the water treatment system. After measurements were taken, a major amphetamine production site was discovered on a farm. Part of the waste produced here was discharged directly into the sewer (O-648).

For 46 of the production sites discovered in the 2017-2020 period, it was found that waste was dumped on the site itself. In three quarters of the cases, the waste was dumped directly into the sewer via the toilet, washbasins, baths, or showers. The remainder inter alia concerned waste dumped into the ground (via a hole), via rainwater drains, or in manure cellars.

A and N roads

Waste is also dumped on A and N roads multiple times a year. Jerrycans and/or barrels have been found near approaches, exits, on banks, and on carpool sites.

One modus operandi befitting this location type is leaving major quantities of waste in vans and lorries. The vehicle is loaded to the brim with waste and left at, for example, a parking lot or remote area. These vehicles are often provided with false number plates and are registered as having been stolen. Of note is that a significant number of stolen lorries found originate from Germany. A abandoned lorry was in 2017 discovered in Hilvarenbeek that had presumably broke down on the road. This lorry was completely packed with drug waste and had been stolen in Germany.

The abandonment of these types of vehicles provides the investigative services with opportunities, as fingerprint and DNA analyses can guide them to perpetrators, for example. In order to reduce this risk, these vehicles are often burned down, thus destroying all traces.

Most vans and lorries found in the 2017-2020 period were discovered in the southern part of the Netherlands. This method was used most often in Noord-Brabant.

Dumpings in Belgium

Like the Netherlands, Belgium is a synthetic drug production country in Europe and, thus, is faced with a waste dumping problem. Pardal et al. (2021) on the basis of a media analysis show that the number of synthetic drug waste dumping locations in Belgium has increased and that most such locations are found close to the Dutch border. For some time now, various academic articles (EMCDDA & Europol, 2019; Colman et al., 2008; Middeleer et al., 2018) have cited cooperation between Dutch and Belgian criminal networks in the context of synthetic drug production and the procurement of precursors via Belgium. It would therefore seem logical that Dutch criminal networks, cooperating with the Belgian ones, also have a role to play in the

dumping of waste along the Dutch-Belgian border. Such dumpings may take place across the border in order to frustrate investigations.

6.8.5 Criminal networks

The networks involved with the production of synthetic drugs have an interest in making sure that the waste is dumped in as discrete a fashion as possible: the waste may not be traceable to the production site. Criminal investigations have concluded that laboratory technicians name a location where the waste is to be retrieved. The laboratory organiser makes sure a trusted person arrives to collect the waste. This person then either dumps the waste themselves or transfers it to a third party. Such transfers take place at a location that cannot be linked to the production site, thus concealing the production site from both the authorities and other criminals, preventing theft. A driver arrested with a van packed with waste on the A67 near Eersel stated he was to receive 250 euros for driving the van from location A to location B. He stated to not be aware of what he was transporting.

Criminal investigations have also shown that organisations are on the lookout for "specialists" able to dump the waste against a price agreed on in advance. This price varies from 1 to 2 euros per liter of waste to be dumped. The waste is supplied in 1,000-liter IBCs and jerrycans, which are then dumped. When using this method, the organisation running the production site the waste is retrieved from has no say in the dumping method: they have in fact outsourced the job and trust that the dumpers will properly take care of it. Police information gives rise to the suspicion that part of the waste is removed via regular companies.

6.8.6 Conclusion

Dumping the waste resulting from the production of synthetic drugs is harmful to nature, people and animals. We often do not know what the waste is comprised of, as it is generally quickly removed without sampling it. More dumpings have been discovered over the past few years. Most of the dumping locations are discovered in the southern part of the country, which is in line with the fact that more production sites are located there, as well. As far as known, most dumpings take place in rural areas, where the likelihood of discovery is smaller. Whenever waste is dumped in urban areas, a greater risk exists that people are exposed to hazardous substances. Fortunately, instances where this goes wrong are rare.

The number of dumpings just across the border with Belgium has also increased; is may be that Dutch criminal networks are (partially) responsible for this increase.

6.9 Sales – stage 6

Synthetic drugs are produced on a large scale in the Netherlands. Most of it is destined for other countries. No other conclusion is possible when comparing the Dutch consumer market with the quantities produced in the Netherlands. In its *Global Synthetic Drug Assessment 2020,* the UNODC (2020b) notes that the synthetic drug market is growing worldwide. From the European perspective, the amount of synthetic drugs produced or traded within Europe is found to be on the rise. In this section, we will address national seizure figures, the sale (mainly the transit abroad), and the operations by criminal networks.

We have tried to generate reliable final product seizure figures from the police systems. The data present in the police systems turned out to be unsuitable for automated

queries. Data are laid down in such a way that no reliable figures can be generated. They need to be cleaned and further explained, but we proved unable to do so in the framework of this report.
In order to obtain a view of the nature and scope, we based ourselves on qualitative data collected by the police, Customs, and the Royal Marechaussee. Customs and the Royal Marechaussee have made a per-year overview of the drugs seized available. The Intel & Expertise cell of the Synthetic Drugs Cluster registers the national and international synthetic drug seizure incidents. At the national level, incidents relating to synthetic drugs are collected automatically. In addition, information is received via criminal investigations and from partners like Customs and the FIOD. The police assesses these incidents and, should sufficient indicators exist, processes them in the Summ-IT police system. International incidents the police becomes informed of via various channels are assessed in the same way, provided they concern seizures abroad where a link to the Netherlands exists. In this way, a qualitative image of the national and international synthetic drug seizures arises.

We have in the framework of this report also listed the quantities of final product found at production, storage, and transport sites. Such quantities, too, provide insight into the size of the market and the potential criminal proceeds.

The picture is comprised of:
- national and international qualitative data collected by the police;
- annual overviews of seizures by Customs;
- annual overviews of seizures by the Royal Marechaussee;
- quantities of final product found at production, storage, and transport sites.

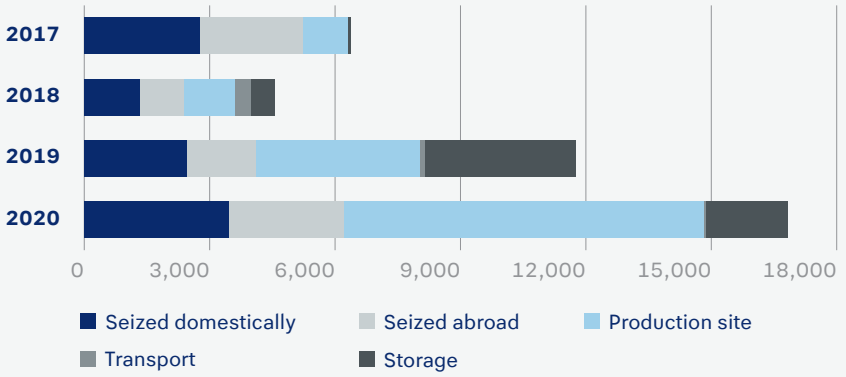
In order to come to a solid comparison, all types of drugs are listed in kilos/liters. Where MDMA tablets or pills were seized, we have opted to convert these using the formula of de facto 1 kilo = 2,500 pills. In the case of captagon pills, the formula was: de facto 1 kilo = 5,000 pills. With respect to international seizures, only those incidents are counted where sufficient indications exist that the drugs originated in the Netherlands.

The overview resulting from the above method will represent an absolute minimum quantity of final product related to the Netherlands sold by criminals around the globe. First of all, only a fraction of the total quantity of smuggled drugs is discovered by the authorities and only a limited share of the total number of drug laboratories is discovered and dismantled. Moreover, not all global seizures of drugs linked to the Netherlands are known to the police. The quantities listed in the below is therefore indicative only, serving as a framework.

6.9.1 Size

A total of around 39,500 kilos/liters of final product has been seized between 2017 and 2020.

Figure 6.32. Discovered and seized final product by location type



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

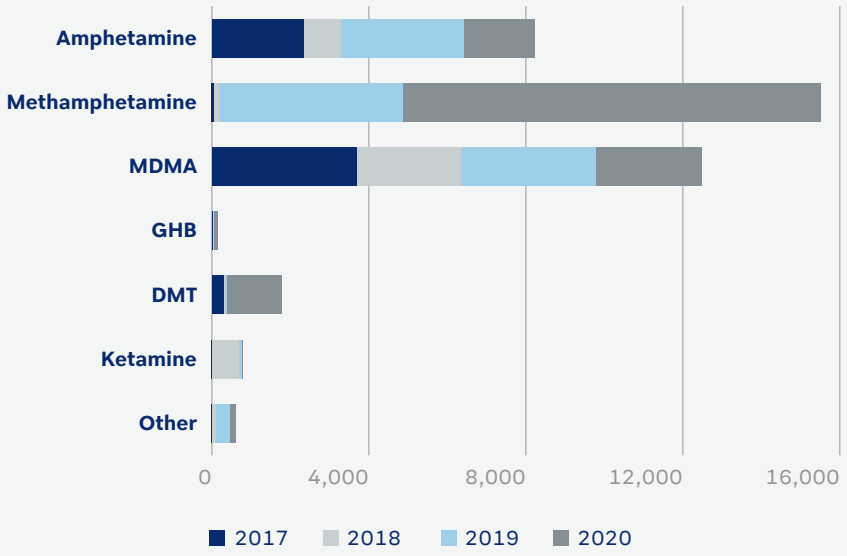
Following a drop in 2018, the quantities of final product discovered has significantly increased in 2019 and 2020. This increase is due mainly to more final product being found at production sites. Interventions using the EncroChat encrypted communication data allowed for intervening at the production sites while the criminals were still in the midst of the production process. Methamphetamine oil, in particular, was found in large quantities. Over a 1,000 liters of methamphetamine oil was in 2020 seized in Herwijnen, for example (O-649). The increase in 2019 can be attributed to one major seizure: during a search in Rotterdam, a hidden space containing over 2,500 kilos of methamphetamine was discovered. This shipment had been imported from Mexico (O-636).

A great deal less of final product was discovered in 2018. Both domestically and abroad, the quantities seized went down, even though the number of production sites discovered had remained the same compared to 2017 (82). This implies that the same quantity of final product should potentially exist. One explanation for this fact may be that criminal networks managed to hide their smuggling routes from the authorities.

6.9.1.2 Size per type

In this section, we will detail the specific characteristics of each type of drugs produced.

Figure 6.33. Quantities of synthetic drugs seized by type, in liters/kilos per year



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

As the figure shows, methamphetamine, MDMA, and amphetamine are the types most often seized. The MDMA and amphetamine figures remain more constant over the four years surveyed, while methamphetamine seizures soared in 2019 and 2020.

Methamphetamine

In 2020, methamphetamine was most often found at the discovered production sites in its oil state. This was presumably related to the fact that the interventions took place while the chemical processes were still ongoing. It is likely that the oil was to be processed further, to ultimately produce crystallised methamphetamine. In addition to the oil, significant quantities of crystallised methamphetamine were discovered at the production sites as well. In one production site in Westdorpe, Zeeland, over 275 kilos of methamphetamine crystals were discovered in 2020. Multiple persons engaged in the process were arrested in the act (O-650).

Methamphetamine is not produced in the Netherlands only: two major shipments totalling over 4,000 kilos were discovered in the past few years. These shipments originated in Mexico and had the Netherlands as their (interim) destination. Dutch and Mexican criminal networks seem to act in close cooperation. The Mexican network takes care of the supply and transport of the product, while the Dutch network arranges for the recovery and further distribution. Police information showed that Dutch criminal

networks have become ever more active in producing and trading in methamphetamine since 2020, leading one to conclude that the demand for methamphetamine is high and that the networks wish to acquire a share of the tremendous profits that can be made with its trade. A kilo of methamphetamine crystals (crystal meth) coming directly from the laboratory cost between EUR 7,000 and 8,000 euros in April/May 2020. In that same period, a kilo would go for between 100,000 and 120,000 euros in Australia (Intel & Expertise cell of the Synthetic Drugs Cluster).

A trend noted by both the UNDOC and the EMCDDA is the increasing methamphetamine production in Afghanistan (I-62 and I-63). Ephedrine is obtained from the ephedra plant, which grows at 2,500 meters in many regions in Afghanistan, and then synthesised into methamphetamine. This methamphetamine is then sold at the wholesale level in Afghanistan and Iran for 259 euros per kilo (I-63). The methamphetamine is smuggled via the same routes used for smuggling heroin from this region. Even though no "Afghan" methamphetamine has been discovered in the Netherlands so far (late 2021), there is a real likelihood that this will change in the future. The existing smuggling routes for other types of drugs, like heroin, and the low per-kilo price render importing methamphetamine from Afghanistan and then trading it on an attractive option to criminal networks.

MDMA

The MDMA seizure picture has remained largely unchanged between 2017 and 2020. MDMA was most often discovered in the form of pills. Broadly speaking, MDMA crystals and MDMA oil where discovered in the Netherlands only at production and storage sites. Adding up all MDMA pills seized around the globe that can be linked to the Netherlands, an indicative figure of 21 million pills over the 2017-2020 period results. The police systems show that some criminal networks experienced problems selling their MDMA oil during the COVID-19-related lockdown in mid 2020. This seems to have been caused by the decrease in global consumption. In this period, MDMA oil was sold against rock-bottom prices. However, the market seemed to have recovered by late 2020. This shows how global developments impact the trade in a recreative drug like MDMA.

Amphetamine

Amphetamine production sites were the most commonly discovered sites between 2017 and 2020. At these sites, amphetamine oil was frequently found. Criminal networks often sell the amphetamine on in this state, with the buyers either crystallising it or smuggling it on as an oil. In Sweden and Spain, batches of amphetamine oil originating in the Netherlands were seized. A lot of amphetamine (in its crystal state) was discovered in Germany. The police systems show that Scandinavia still forms a major amphetamine market. In 2021, amphetamine bricks that had the same outward characteristics as cocaine bricks were seized in Sweden. The Dutch criminal network involved pressed the amphetamine into bricks and provided them with a logo designed in consultation with the Scandinavian network. These bricks were then vacuum sealed and transported to the final destination by road (O-651). It would seem that this network used this "cocaine method" to put a recognisable and reliable "brand" on the market. In other cases, amphetamine is pressed into pills. In most cases, the pills are impressed with the captagon logo. Such captagon pills are popular in the Middle East, where major shipments are regularly seized. Multiple tableting sites where captagon

pills and/or stamps with the captagon logo were present have been discovered in the Netherlands in recent years. In addition, a batch of two million pills originating in the Netherlands were seized in Kuwait in 2017. Dutch criminal networks possessing links with this region organise the production and supply of the pills. Persons of Turkish or Lebanese origin were involved in running these tableting sites. As the knowledge and infrastructure for tableting captagon pills are amply present in the Netherlands, criminal networks can quickly provide them when demand arises: "crime as a service".

Other synthetic drugs – NPS

Close to 1,500 kilos of other types of drugs have been seized between 2017 and 2020. Over half of this total concerned ketamine. Over the course of an investigation in drug production, large quantities of chemicals and pre-precursors were discovered in Lunteren in 2018 (O-652). Green barrels containing about 375 kilos of ketamine were discovered at the same time, showing that this criminal network was trading in multiple types of drugs. In addition, Customs in 2018 found 300 kilos of ketamine hidden in a cover load of salt. These two incidents show that criminal networks import ketamine on a large scale in order to distribute it further. Police information has shown that, after methamphetamine, criminal networks most often trade in ketamine. Ketamine is offered in various guises. "Needles", or small crystals of ketamine, are in highest demand. The significant interest Dutch criminal networks have in ketamine shows that a great demand for this drug exists. While some of the ketamine is likely intended for the Dutch consumer market, once again, the lion's share is destined for export (sales). Police information shows that the United Kingdom is one of the primary markets. In 2019, in addition to 287 kilos of methamphetamine, Customs discovered 18 kilos of ketamine. This batch was hidden between frozen drumsticks.

Customs also found more dimethyltryptamine, or DMT. Shipments from Brazil and Ecuador were intercepted in 2020. DMT is an active substance causing hallucinations and is inter alia used in ayahuasca ceremonies. A draught containing DMT is consumed during healing sessions, giving rise to hallucinations. In 2019, a person died after participating in such a ceremony in Eersel, Noord-Brabant. Investigations have shown that an international organisation, comprised of Spaniards and Italians, was organising these sessions in the Netherlands. In September 2019, a person from Oudewater died after a three-day treatment in IJzendijke. During this three-day treatment session, this person had been given DMT. It became apparent during the investigation that this person had also taken cocaine and that he was subjected to violence, meaning that the cause of his death could be combination of these factors. The organisation behind these ceremonies was found to be comprised of residents of the Netherlands. The increase in DMT discovered leads one to conclude that a demand for this substance exists. It appears that this demand exists mainly among organisations of a spiritual bend. The Supreme Court in 2019 ruled that the trade in ayahuasca tea containing DMT is, and will remain, a criminal offence under the Opium Act. The requirement of protecting public health is of greater importance than the right to freedom of religion, as argued in the appeal (court judgment)[42].

42 Rechtspraak.nl: ECLI:NL:HR:2019:1456.

Of note is that little GHB was found during the period surveyed. Most GHB was discovered at the production sites, mainly in kitchen laboratories. Too, small quantities of GHB were discovered during seizures in the Netherlands. In view of the major quantities of the precursor GBL seized and the trade in this substance by companies, expectations were that more GHB would be found. GBL seems to be sold on the consumer market, with the user themselves taking care of synthesising it into GHB. Another method is to simply consume the GBL, the body itself converting it into GHB. Police information shows that the United Kingdom is a major buyer of this substance.

The "other" category (refer to Figure 6.33) is comprised of substances found in smaller quantities. This concerns the so-called New Psychoactive Substances (NPS), the trade in which is generally not criminalised under Dutch legislation. It may also concern substances only a very small quantity of which is required to produce a consumer dose. Examples include LSD and synthetic opioids, like fentanyl. Sheets of LSD blotters were found being sent to a destination by post, for example. In addition, 1.2 kilo of fentanyl was found in a shed in Eindhoven - enough to produce over 750,000 doses. NPS is sold via the Netherlands on a large scale. Various investigations have shown that people handily make use of lacunae in Dutch legislation, selling NPS on the global scale. In 2017, an NPS distribution centre was discovered in Boxtel after receipt of a mutual legal assistance request from Finland. Over 218 different types of NPS were sold via the Internet from this location (O-653). A similar location was found in Almere in 2019, in connection with a different investigation that was initiated following a mutual legal assistance request from Germany (O-654).

6.9.2 Sales - export

The lion's share of the drugs produced in the Netherlands are intended for export abroad. A total of about 7,000 kilos was seized domestically and abroad over four years. Over half the total seized concerned MDMA, amphetamine and methamphetamine being the second and third-most commonly seized drugs. The domestic and foreign seizures provided insight into the export to 55 countries around the globe. Europe is most strongly represented. The majority of the drugs was discovered in Germany and the United Kingdom, followed by countries in Asia. This latter category comprised countries in the Middle East (Kuwait, UAE) and East Asia (Thailand, Japan, China). A relatively high number of countries in North and South America, too, have received drugs that can be traced back to the Netherlands. In Oceania, drugs have been seized in Australia and New Zealand.

Strikingly, drugs that can be linked to an origin in the Netherlands have been found in only three African countries. In addition to batches in Morocco and South Africa, two postal items containing MDMA headed for the Seychelles were intercepted in 2020.

The ten countries most drugs were intended for account for about 80 percent of the total percentage of seized final product.

Table 6.34. Top 10 countries - seizures of synthetic drugs related to the Netherlands

No.	Country	Total seizures in kilos/liters
1	United Kingdom	779
2	Germany	761
3	Indonesia	717
4	Australia	717
5	Sweden	626
6	Morocco	429
7	Kuwait	400
8	Türkiye	385
9	France	316
10	Spain	198

Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

The United Kingdom and Germany have traditionally been major markets for Dutch drugs (KLPD, 2012). Many small, but also larger shipments of MDMA, methamphetamine, ketamine, and other were sent to these countries. Major shipments of MDMA pills were intercepted in Indonesia. In 2017, Dutch Customs identified anomalies in a roadroller. Close to 1,000,000 MDMA pills were discovered in the roller of the machine. This roadroller was to be transported to its final destination of Indonesia by ship. In addition, 1,200,000 MDMA pills were in 2017 discovered in Indonesia in air cargo originating in the Netherlands. These seizures indicate that significant quantities are shipped to Indonesia. It may be that criminal networks try and get the drugs into Australia via this route. Australia is a country where many Dutch drugs have been intercepted for years now. Each year, many postal items containing drugs sent from the Netherlands are intercepted there. Larger shipments have also been identified in recent years. During an Australian investigation in 2017, 200 kilos of MDMA originating in the Netherlands were seized. This MDMA was said to be transported to Australia by airplane via Dubai. In 2018, about 140 kilos of MDMA were found in hydrogen filters that were also destined for Australia. A batch of 400 kilos of amphetamine hidden in a lorry en route to Sweden was intercepted in 2017. In 2019, too, a lorry heading for Sweden was found to contain a major batch of amphetamine (153 kilos). These seizures show that Scandinavia still forms a major amphetamine market.

Morocco is an upcoming market, with large batches of MDMA pills being discovered there in the past couple of years. In 2018, Moroccan Customs discovered almost 500,000 MDMA pills on a trailer. About the same quantity was discovered in a vehicle in 2019. Both shipments originated in the Netherlands. The number of postal items

containing methamphetamine seized has risen in 2020. A batch of 2,000,000 captagon pills transported by plane from the Netherlands was seized in Kuwait in 2017. As far back as the Crime Picture Analysis 2012, Türkiye was named as an important market for Dutch synthetic drugs (KLPD, 2012). This trend has continued since, with large shipments of MDMA pills destined for that country having been discovered. In 2017, 400,000 MDMA pills carried by lorry were intercepted by the Austrian authorities. This shipment was en route to Türkiye. In 2019, about 500,000 MDMA pills were discovered in a lorry at the Turkish border. These incidents show that major batches are smuggled to Türkiye by road. In France and Spain, larger shipments of MDMA and amphetamine were discovered, in particular in 2019 and 2020. In 2019, during a motorway inspection in France, 100 kilos of MDMA were found in a Dutch passenger car. A lorry transporting flowers was in France in 2020 found to carry 169 kilos of amphetamine and also 250 kilos of cocaine. This lorry originated in the Netherlands and had a Dutch driver. In Spain, 52 liters of amphetamine oil were discovered in 2018. This batch was to be processed further to create solid amphetamine in Spain.

The above allows for concluding that, in the 2017-2020 period, slightly less than 7,000 kilos of synthetic drugs, either ready for transport or already exported, were discovered. These yields are marginal compared to the production capacity of the production sites discovered. Traditional markets like Australia, Germany, and the United Kingdom continue to receive relatively large amounts of drugs from the Netherlands. But the market has expanded to also cover other regions and countries. Major shipments of, in particular, MDMA are being intercepted on their way to Morocco and Indonesia. Moreover, postal items containing drugs originating in the Netherlands are sent to many countries. While these concern small quantities, the large number of such postal items is a thorn in the side of the national authorities. Australia and New Zealand each year issue reports about the major number of postal items containing drugs that can be traced back to the Netherlands. Countries in Southeast Asia and South America, too, increasingly often intercept postal items containing drugs sent from the Netherlands (O-601).

Smuggling methods

Criminal networks provide a lot of attention to smuggling the drugs to their final destinations. Whenever they succeed, the profits are large. Because of their longstanding international experience and cooperation, the criminal networks avail of multiple smuggling routes, regularly shift modi operandi, are aware of the powers and restrictions of the investigative authorities, and have corrupt contacts at their disposal across borders. In addition, the various criminal networks use each other's infrastructure. For a fee, they "hitch a ride" on a safe smuggling route. This sometimes results in polydrug shipments being discovered. The various seizures allow for concluding that criminal networks are still using the same smuggling methods for larger shipments. These methods have not changed much in the last decade. For example, they still use large industrial machines to hide batches of drugs in. Criminal networks try to come up with methods that are lost in regular traffic. They for example procure agricultural machines from a company exporting them and ship them to a company trading in these machines in the destination country. Or they export a drug solution in bottles of olive oil, to be processed further in the destination country. Criminal networks are patient enough to set up as secure a smuggling route as possible.

They first ship one or more “test shipments” of drugs. A batch of drug may also travel via various countries or continents before ultimately arriving at its destination. In so doing, they try to hide the shipment’s origin in the Netherlands, drastically reducing the likelihood of a routine inspection.

Postal items

Over the past few years, the smuggling of drugs by regular postal and parcel services has taken flight. An increase in the total seizures of postal items is visible year on year. Criminal networks ship their product across the world in small quantities. The daily global flow of postal items and parcels is so huge that many parcels containing drugs end up at their final destination. The fact that digitisation has resulted in a smaller world contributes to this “success” rate. A larger group of consumers is able to order drugs via the open and dark webs. Their orders are then mailed by the vendors. Internationally active criminal networks, too, send large numbers of small shipments to their networks abroad. Chinese networks, for example, procure large batches of methamphetamine and MDMDA from Dutch drug producers. The Chinese network then prepares these batches in the Netherlands for shipping to the intended destination in parcels of 5 to 10 kilos. The drugs are hidden in various products, ranging from cans of paint to board games and from bags of candy to electronic devices. The Post Intervention Team of the Central Unit has, over the past few years, successfully intervened in the dealings of a number of these networks. Regular postal services are used by the criminal networks to ship these parcels. As mail from the Netherlands is regularly subjected to additional inspections abroad, the criminal networks try to mask the Dutch origin. Couriers take large quantities of mail from the Netherlands abroad to have them shipped there. While Belgium and Germany are common destinations for this purpose, occasions where the couriers drove all the way to France are also known.

The shipping of drugs by postal items appears to be a persistent problem that is not expected to diminish in the years to come. As ever more people around the global get access to the Internet, the potential consumer market is only growing. Moreover, the option of paying in cryptocurrencies allows for ordering drugs in relative anonymity.

6.9.3 Acquisition and import of synthetic drugs

It has over the past few years been discovered that synthetic drugs are also trafficked to the Netherlands. As a rule, such shipments concern substances not produced in the Netherlands. Methamphetamine forms an exception to this rule. Since 2018, a significant increase in the kilos of methamphetamine shipped to the Netherlands from, in particular, Mexico has been noted. Customs has discovered batches of up to 100 kilos under various cover loads. In addition, a batch of 2,500 kilos was discovered in Rotterdam in 2019, which after investigations was found to originate in Mexico (O-623). In 2020, 1,500 kilos of methamphetamine were discovered hidden in an abutment in Slovakia (O-634). This shipment had been organised by a Dutch criminal network. It is being suspected that these batches were en route from the Netherlands to countries with a major methamphetamine consumer market.

In the past few years, Customs has noted an increase in products containing the banned substance DMT. These products were imported from countries like Brazil and Ecuador.

It has also become clear that criminal networks have a lively ketamine trade going on. Police information shows that many networks procure this substance in order to sell it

on abroad at a profit. Ketamine was mainly found in shipments originating in Pakistan and India. Criminal networks also try to procure ketamine from legal producers in Europe. Using complex company structures in various countries, they try to set up a seemingly legal trade. These shipments at some point end up on the illegal markets.

The final category of drugs imported into the Netherlands on a significant scale is that of the New Psychoactive Substances (NPS). Batches ranging from one to multiple hundreds of kilos are imported from, primarily, China and India. The problem with these substances is that they are usually not prohibited under Dutch legislation. As a result, Customs and other authorities lack the legal basis for seizing these substances upon discovery. Many European countries have banned these substances, causing the Netherlands to have become a hub for the trade in such NPS. Over the years, foreign traders have moved their business to the Netherlands once their own country amended its legislation. Persons from the United Kingdom and Poland have settled here and started up business trading exclusively in such allowed NPS, for example. Customs regularly discovers shipments of NPS destined for such companies. In 2019, Customs discovered 264 kilos of 3-MMC sent from India. Because of the lack of legal basis, Customs had to release this batch. An investigation conducted in 2015 showed that over 50 companies were active in the NPS trade in the Netherlands (Faber et al., 2015). Considering the international signals received by the Netherlands, the number of such companies seems to have increased (Intel & Expertise cell of the Synthetic Drugs Cluster).
There hardly exists a consumer market for the various types of NPS in the Netherlands (Laar et al., 2020). Traders importing these substances sell them around the global via webstores. Such websites are easily found and allow the consumer to add the NPS desired to their online shopping basket. Many websites make things easy for the customer by offering multiple ways of payment and also guarantee anonymous shipping to almost the entire globe.

The above situation formed one of the causes for a proposed amendment of the Opium Act. Under this amendment, many types of NPS would be criminalised under a generic criminalisation provision, meaning that entire groups of substances will become prohibited, as opposed to specific individual substances. Expectations are that many NPS traders will stop selling products that have become banned. Some of them will try to shift their trade to another part of the world, while yet another group will look for loopholes in the law in order to continue their business.

6.9.4 Conclusion

The synthetic drugs produced in the Netherlands are in part destined for the domestic market, but the vast majority is to be exported. Europe, and in particular Germany and the United Kingdom, form popular sales markets. Australia, too, is a traditional sales market for synthetic drugs produced in the Netherlands. Drugs originating in the Netherlands are also being found in Southeast Asia, the Middle East, and North and South America. Some new destination countries have also appeared. Major batches of MDMA have been discovered in Morocco and Indonesia. Moreover, postal items containing synthetic drugs originating in the Netherlands are sent to many countries. Over the past few years, the smuggling by regular postal and parcel services has taken flight. The drugs are sent in smaller individual batches, which get lost in the regular flow of mail and parcels. Criminals sometimes try to hide that the postal items originate

in the Netherlands and mail them from the neighbouring countries of Belgium and Germany, but also from France.

6.10 Other aspects

In this section, we will discuss the use of violence, corruption, and financial gains in the context of synthetic drug production.

6.10.1 Violence

The use of violence is a phenomenon that also manifests itself within and between criminal networks active in the production of synthetic drugs. Various persons have been eliminated or reported missing in the past few years. Signs received indicate that this violence was directly or indirectly related to the synthetic drug market. The provision of information to the police or other criminals, cheating the partnership, failing to pay debts, or failing to fulfil agreements form the primary causes of such extreme violence.

Before proceeding to eliminate persons, the networks will first try to come to a more peaceful solution. The criminal networks closely cooperate over longer periods of time and stand to gain from there being as little attention and conflict as possible. Police information shows that when conflicts are likely, criminal networks try to resolve the situation. They try to identify the party to blame and agree on how to divide the costs associated with the loss. If, for example, the police discovers and dismantles a synthetic drug laboratory, the criminal parties involved will investigate the cause of this occurrence. If the laboratory technicians are to blame, because they treated the chemicals wrongly, they must pay off their debt by paying a certain amount or by providing their services until the agreed amount has been paid. A company or lessor, too, may be held responsible if the network takes the opinion that they have been negligent. Such companies or lessors are then pressured into compensating for the loss of the location and goods. This pressure may involve the threat of (physical) violence, or the setting fire to vehicles. This latter method is a common modus operandi among criminal networks.

Between 2014 and 2017, many synthetic drug criminals joined Outlaw Motor Gangs (OMGs). Gangs like Saturadah, No Surrender, Trailer Trash Travellers, and Bandidos turned out to be attractive to persons active on the synthetic drug market. Both protection and access to the global criminal network were reasons for joining. These years witnessed regular (armed) conflict between the various OMGs. Synthetic drug production may have been at the base of such conflict.
Police information also shows that OMGs are trying to influence the legitimate world. By using the threat of violence, they try to scare away administrators, justice system officials, private companies, and even journalists. In so doing, they attempt to put a halt to, or hinder, investigations into their activities (BN De Stem, 2019).

6.10.2 Corruption

Police information has shown that criminal networks have access to corrupt (official) contacts. Using such corrupt contacts, the networks provide each other with information. Large sums of money are paid for police system queries. The criminal networks make sure they have access to such corrupt (official) contacts and use them often. Whenever they sense they may be the subject of an investigation, they will have

this checked. Money plays no role in this context. One illustrative example is the police mole who provided information to criminal persons for years on end (Openbaar Ministerie, 2018). Such contacts not only are persons employed within the investigation domain, but also persons having access to other information, including bank employees, government bodies (municipal and provincial authorities), housing associations, social services, etc.
Corruption is not limited to the Netherlands. Signs exist that criminals also have contacts able to provide them with useful information abroad and within international organisations. In addition, they try to obtain a solid information position in various countries to facilitate the smuggling of goods. By using these contacts, it is easier to have the goods enter Europe.
As applies to other criminal markets, the criminal networks active in the synthetic drug trade spare no expense to obtain access to information from government systems, and in particular from the systems of the investigative services.

6.10.3 Legal entities

Legal entities are also used within the synthetic drug market. While existing companies may be used to receive pre-precursors, chemicals and hardware, companies may also be specifically set up for this purpose. These companies are often registered as active in the import and export of all sorts of goods. In some cases, so-called straw men are used in this connection. Companies shipping or receiving goods are also established abroad. Upon receipt of the goods, they are sent on to the Netherlands.
In addition to being established for the purpose of receiving and shipping goods, companies are also set up to hide criminal monies. Criminals establish all sorts of companies to have it appear like the income received is legal. The spouses and partners of these persons are often aware of the origin of the money and have the companies established in their names. Persons are also put on the payroll of companies, so as to make it seem as if they are legally employed, while, in fact, this person does not work for the company at all.

6.10.4 Financial aspects

The synthetic drug market is worth billions (Tops et al., 2018). Part of the proceeds goes to the Dutch criminal networks. The networks use the proceeds to maintain themselves or to invest in new projects. It is difficult to obtain insight into the flows of finances. Police information shows that the domestic market uses cash payments. Lessors, pressure vessel manufacturers, laboratory technicians, and couriers are all paid in cash for their services. Payments abroad are more difficult to discover. Suppliers of goods from China and Poland will first want to get paid before they supply their products. Police information has shown that criminal networks engage financial service providers for this purpose. These persons are able to shift money from A to B in various ways. In addition, a major segment of the network appears to use cryptocurrencies, with persons transferring cryptos from and to the various crypto wallets of others.
Criminal investigations into persons linked to synthetic drugs have shown that it is difficult to tackle them financially. Many of the suspects have, on paper, no income or any (im)movable property registered in their name. Whatever they do have registered in their name can usually be accounted for by them. Criminal networks also make use of vehicles they manage to lease via opaque constructions. They make use of companies that form part of a crime-facilitating chain. Police information has shown that the money made is usually spent living a life of luxury, involving holidays abroad and the

purchase of expensive goods like watches and clothing. In addition, signs exist that criminals invest the money in real estate abroad. Making things even more complex is the fact that the money is stored in countries the Dutch government does not, or only to a limited extent, cooperate with on the basis of (bilateral) treaties. Dubai is a prominent location for criminals to store their funds and/or live a life of luxury.

6.11 Criminal networks and subjects

In this section, we will discuss the criminal networks and subjects active in the synthetic drug trade in more detail. First, we will consider the suspects identified in criminal investigations by the police in the context of synthetic drugs. We will next discuss a number of important roles in more detail, on the basis of the synthetic drugs crime script. This section concludes with a look at the synthetic drugs network.

6.11.1 Suspects

The number of suspects identified in police investigations (as discussed in section 6.3) into synthetic drugs has been listed in Table 6.34. In 2019 and 2020, 1,265 and 1,129 suspects, respectively, were identified. The same table also shows the number of suspects identified over the course of the investigations into the various types of synthetic drugs. These numbers do not add up to the total number of suspects, as the same investigation can focus on multiple types of synthetic drugs. The largest number of suspects was identified in MDMA-related investigations, followed by investigations into precursors and amphetamine. This should not be surprising, as these drugs are also the subject of the majority of the investigations.

Table 6.35. Number of suspects identified during investigations into synthetic drugs

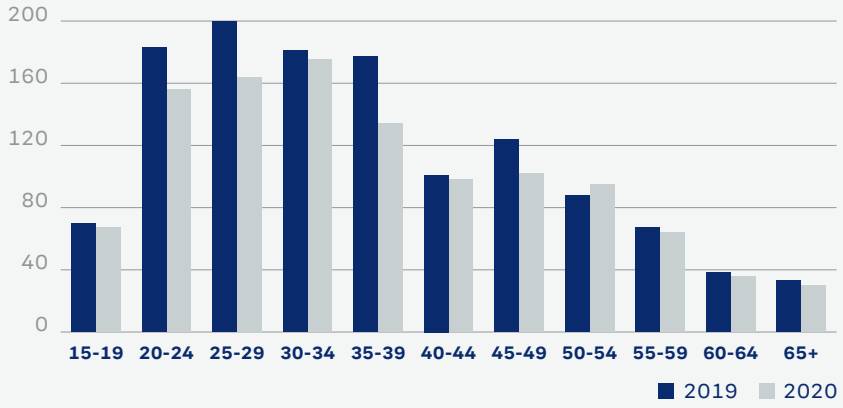
Year	Precursors	MDMA	Ampheta-mine	Metham-phetamine	GHB
2019	469	793	440	189	74
2020	499	557	423	305	83

Year	Ketamine	LSD	Captagon	Other	**Total**
2019	141	57	6	94	**1,265**
2020	194	37	16	73	**1,129**

Source: Summ-IT.

Looking at the population of suspects, we also find that the vast majority of suspects - 89 percent - is male. When looking at the age distribution (Figure 6.36 and Table 6.37), we find that most suspects involved in investigations into synthetic drug belong to the age categories of 20 to 39 years of age.

Figure 6.36 and Table 6.37 Age distribution of suspects



Age category	2019	2020
15-19	70	67
20-24	183	156
25-29	200	164
30-34	181	175
35-39	177	134
40-44	101	98
45-49	124	102
50-54	88	95
55-59	67	64
60-64	38	36
65 and over	33	30

Source: Summ-IT.

It is difficult to ascertain the nationalities held by suspects. Suspects may hold multiple nationalities and some of these may not be registered in the police systems. The data do allow us to conclude that about three quarters of suspects at least holds Dutch nationality. To a far lesser degree, we note suspects holding Turkish or Moroccan nationality in addition to the Dutch one and suspects holding Polish nationality. Considering the nationalities held by the residents of the Netherlands in general, this is not surprising. As was discussed previously in this chapter, the literature and media note the entry of Mexican suspects in the synthetic drug trade in the Netherlands (EMCDDA, 2020a & de Vries, 2020). Mexican suspects are said to be have been found at a methamphetamine production site in 2019. Hundreds of kilos of crystal meth, with an estimated street value of 80 million euros, were found at this site. The three suspects in this case have by now been sentenced (De Vries, 2020). Based on the lists of suspects covering 2019 and 2020, we count a total of seventeen unique

suspects holding Mexican nationality. As was discussed in previous sections (refer to 6.7), Dutch and Mexican subjects are cooperating. The Mexican subjects bring in the expertise the Dutch criminal network do not yet fully possess.

The section on waste dumping discusses the cooperation between Dutch and Belgian criminal networks in the context of the production of synthetic drugs in Belgium. A large share of the mutual legal assistance requests received by the Netherlands is submitted by Belgium (and Germany) (refer to section 6.3). We do not, however, find many suspects holding Belgian nationality that have been identified in Dutch police investigations. It would seem that all cooperative action takes place in Belgium, not the Netherlands. Police investigations have shown that Dutch criminal networks, acting in cooperation with Belgian criminal networks, establish production sites on Belgian soil. The initiative for such action is taken mainly by the Dutch networks.

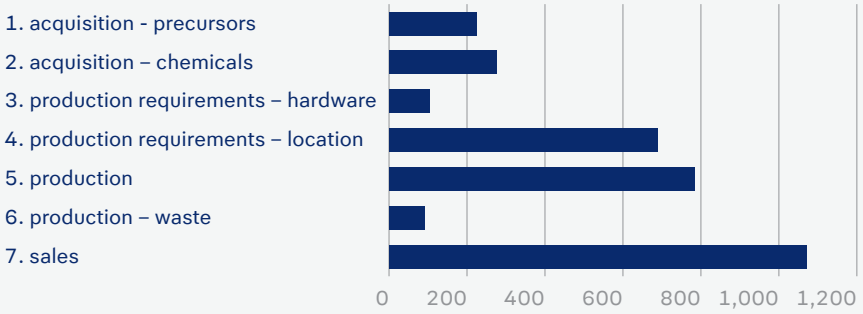
6.11.2 Crime script and roles

The production of synthetic drugs in the Netherlands requires that certain processes are followed in stages, with various activities conducted and various roles played. Each stage features persons that must perform certain actions to - ultimately - produce synthetic drugs and to sell it. The crime script forming the basis for the production of synthetic drugs in the Netherlands and discussed in this chapter, is presented in Figure 6.1.

Certain roles may have to be played in multiple crime script stages. Examples include the roles of organiser, financer, brokers, or transporter. Some roles are more specific to a certain step in the process, such as technicians and tableters during production, waste dumpers, or couriers and exporters in the context of the sale of the goods produced.
To the extent this can be ascertained, the police tracks the roles of all persons involved in the synthetic drugs-related police investigations and labels them in the Summ-IT police system. These persons not only comprise the suspects, but also persons linked to an investigation into synthetic drugs.
In total, 4,397 roles have been linked to persons within the synthetic drugs crime script in the 2017-2019 period. A total of 3,099 unique persons have been identified, each linked to one or more roles.

Figure 6.39 provides an overview of the categorised roles per stage in the 2019-2020 period. The figure lists 2,322 unique persons who play one or more roles within the seven stages. The most common roles are: holder, supporter (this means the exact role played cannot be specified, but there is involvement in the stage concerned), technician/cook, trader, organiser, and transporter.

Figure 6.38. Number of roles assigned per synthetic drugs crime script stage in 2019-2020



Source: Intel & Expertise cell of the Synthetic Drugs Cluster.

The above figure shows that most persons have been assigned a role in the Sales and Production stages and the substage Location, which comes under production requirements. In these stages, persons are often caught in the act. Examples include laboratory technicians, renters and lessors, and drug possessors. Roles like organiser, client, and financer are more leading and managing roles in the script. A total of 305 persons have been labelled as playing these three roles in 2019 and 2020.
The role of financer has been assigned 21 times. Assigning more capacity to investigate this group of persons may be interesting with a view to the financial interests and the impact on the synthetic drug market. The roles will be discussed on a per-stage basis.

Acquisition - precursors: stage 1
This stage relates to the procurement, supply, and receipt of pre-precursors and precursors. In this stage, the roles of precursor supplier and acquirer are most often assigned.
Acquisition here refers to the procurement in the country of origin or, via distributive traders, on the internal market. This also applies to the suppliers.

Acquisition – chemicals: stage 2
This stage relates to the procurement, supply, and receipt of chemicals. 275 persons have had a role assigned to them in this stage. The role of transporter and acquirer of chemicals have been assigned most often. The role of transporter was assigned to persons who retrieve and deliver chemicals on the instructions of the network. This often concerns persons holding a foreign nationality who drive fully loaded vans to the Netherlands. The acquirers of chemicals are persons who, via Dutch distributive traders or foreign companies, procure the required substances for use in the laboratories.

Production requirements – hardware: stage 3
This stage relates to the production, procurement, and sale of the hardware required for production. 103 persons have had a role assigned to them in this stage. The roles

of producer and possessor have been assigned most often. In 2019 and 2020, 17 hardware products have been identified in this stage. Compared to the other roles played throughout the entirety of the crime script, it would seem that this role is played by a small number of persons only. One hypothesis is that this role is a more unique one in the criminal market, meaning that intervening against persons holding this role could have a bigger impact on the workings of the entire chain.

Production requirements – location: stage 4
This stage concerns the arranging for and establishing of sites. 688 persons have had a role assigned to them in this stage. The roles assigned more often relate to the lease and ownership of the site. The role of lessor has been assigned most often. The lessor often submits a document containing a lease agreement. Many of them are straw men. In addition, 32 persons have been identified as responsible for setting up laboratory sites. They provide the furnishings of the laboratory and install electricity, water, and other connections.

Production - stage 5
This stage relates to the production of synthetic drugs. 784 persons have had a role assigned to them in this stage. The role assigned most often is that of laboratory technician (328). In addition, 179 persons were assigned the role of supporter. These persons are not themselves technicians, but provide support during the process. The roles of technician and supporter occur more often and are, then, less unique. The role of super technician / chief cook appears to be a more unique one:
six persons have been assigned this role. Super technicians / chief cooks train, guide, and advise the technicians. In addition, this person is able to resolve problems that may occur during the production and to improve the production process. Intervening against this small group of persons could effectively hamper the market, as their knowledge and skills are not or only rarely available.

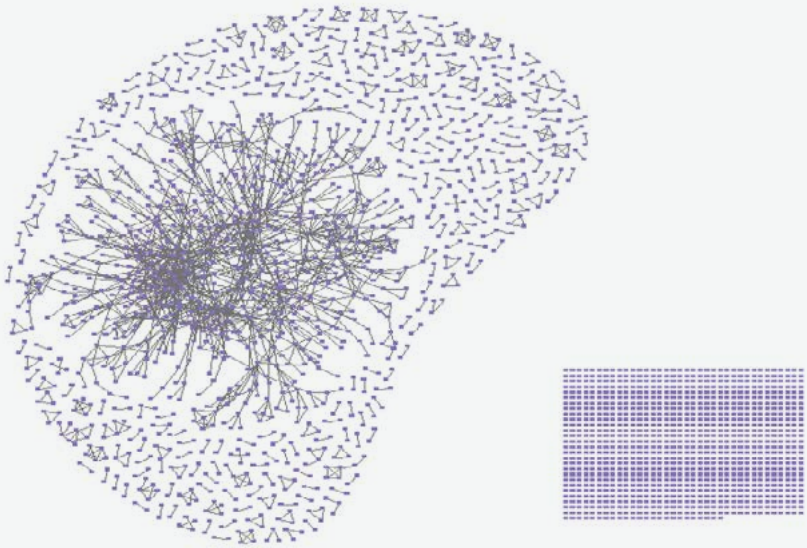
Production – waste: stage 6
One important stage in the context of production is that of getting rid of the waste resulting from the production of synthetic drugs. 92 persons have had a role assigned to them in this stage. The role of waste dumper has been assigned to 46 persons. In addition, 21 persons were assigned the role of facilitator. These are persons who provided assistance with dumping the waste. In many cases, such assistance concerned the provision of vehicles used to dump the waste.

Sales: stage 7
This stage relates to the trade in and smuggling of the final products. 1,072 persons have had a role assigned to them in this stage. The roles assigned most often mainly relate to the sale and smuggling of drugs. The role identified most often is that of possessor (381). A person is assigned this role when they are found to possess drugs. Strikingly, eleven persons have had the role of Internet trader assigned to them in the span of two years. This mode of sale has become immensely more popular over the past few years.

6.11.3 Network on the basis of the persons labelled according to the crime script

As was indicated at the start of section 6.11.2, the police registers the role of all persons involved in synthetic drugs-related police investigation and provides these roles with a label in the Summ-IT police system - to the extent they can be identified. On the basis of these data, 2,322 persons could, in 2019 and 2020, be linked to one ore more synthetic drugs crime script roles. This group of persons jointly made up the following network.

Figure 6.39. Network on the basis of the synthetic drugs crime script roles, 2019-2020



The network is based on the direct relationships existing between these persons. This analysis shows that 722 persons make up one big network. Another 712 persons make up multiple smaller networks that are not connected to the big network. The remaining persons are not related to persons within this network in any way. The analysis allows for concluding that, insofar as this can be identified, about one third of persons making up the network has direct connections with each other. In practice, the network will be even more tightly close-knit.

6.11.4 Conclusion

Synthetic drug crime in the Netherlands is perpetrated mainly by men holding Dutch nationality.

The police in Summ-IT classifies the persons involved in this type of crime according to a role under the synthetic drugs crime script. In 2019 and 2020, 2,322 unique persons have been linked to one or more roles. Most persons have been linked to a role in the

production requirements - location, production, and sales stages. Persons assigned the role of hardware producer or super technician make up a small group. These two groups possess knowledge and skills that are essential to the production process. Intervening against these two groups may result in the access to such specific knowledge and skills becoming more rare. As a consequence, criminal networks will have trouble continuing the performance of the production processes.

According to Summ-IT, the synthetic drugs criminal network seems to be very closely connected, however. In case of a change of circumstances, such as police intervention, the criminals are able to quickly change gears to keep the criminal process running. Interventions against individuals or clusters of up to 5 persons can be overcome by the greater network, meaning no hindrances are experienced and the criminal processes can continue unabated. The structural and long-term disruption of the criminal processes requires a system-oriented approach.

7

Heroin and illegal synthetic opioids

7. Heroin and illegal synthetic opioids

Irma Vermeulen

7.1 Introduction

Heroin and synthetic opioids are substances that have a strong analgetic and narcotic effect. Heroin is a chemical product of natural origin. The seed capsules of the opium poppy produces opium, which can be converted into morphine using a chemical process. This morphine can then be used to produce heroin. Opium, morphine, and heroin are opiates. In contrast to opiates, synthetic opioids are purely chemical products. Morphine and synthetic opioids are, in principle, used for medical purposes; heroin is a wholly illegal product (www.drugskompas.nl; www.jellinek.nl; Van Laar et al., 2020; UNODC, 2020).[43]

Synthetic opioids can be produced by the legal pharmaceutical sector but may also derive from criminal circles, which either conduct an illegal trade in stolen and/or diverted synthetic opioid variants or illegally produce synthetic opioids or synthetic drugs (Visser, 2020).

Due to the comparable and addictive effects of heroin and synthetic opioids, it does occur that people who were initially prescribed synthetic opioids by a doctor have become so habituated to them that they can no longer do without and switch to illegal opioids once the medical prescription stops (Boerman, 2016). In the United States, the user markets for heroin and illegal synthetic opioids overlap (DEA, 2020; UNODC, 2021a3). Australian research has concluded that, when heroin prices rise, consumers will switch to (pharmaceutical) opioids (Chalmers et al., 2010). The possible interconnection of the consumer markets for heroin and illegal synthetic opioids trafficked via the Netherlands provided cause to address both topics in this chapter, albeit in different sections - 7.2 and 7.3, respectively. The section on illegal synthetic opioids is closely connected to chapter 6, which discusses synthetic drugs.

We focus on organised crime in connection with heroin and illegal synthetic opioids that has a link to the Netherlands. This may concern organised crime occurring within Dutch territory or the involvement of Dutch criminal networks and/or Dutch subjects and/or international networks also active in the Netherlands in the context of the transnational trade in drugs.

We have consulted various sources for this chapter, including criminal investigations and interviews. These have been included in the text in coded form. O-71 through

43 However, since 2007, the Netherlands allows for prescribing heroin to heroin addicts and providing them with it for medical reasons, in case existing treatments produce insufficient results in their particular cases (www.ggd.amsterdam.nl).

O-75 are the criminal investigations; I-71 through I-75 are the interviews (also refer to References).

7.2 Heroin

This section addresses the scope and nature of the heroin phenomenon and the associated criminal networks and subjects. We will reflect on demand and supply to calculate the scope, considering the primary markets for heroin trafficked via the Netherlands: the European and Dutch consumer markets. Next, we will look more closely into the scope, inter alia by considering the production and seizure figures. We used the heroin crime script to describe the nature of the phenomenon, inter alia addressing the primary smuggling routes. Both when considering the scope and the nature, we will in this section "scale down" from the global, to the European, to the Dutch level.

The section opens with a description of the illegal trade in acetic anhydride and other essential chemicals. Acetic anhydride is one of the most important chemicals that are essential for converting morphine into heroin. The countries producing heroin for the European market inter alia procure this essential chemical substance in Europe. Dutch criminal networks play an important part in this connection and may also be involved in the import of heroin into Europe. The heroin market is, therefore, inextricably linked to the illegal trade in acetic anhydride.

7.2.1 Acetic anhydride and other essential chemicals

As has been indicated, acetic anhydride is the primary chemical substance that is essential for converting morphine into heroin.[44] Other chemicals essential for the production of heroin include anhydrous acetic acid (glacial acetic acid), sodium carbonate, ammonium chloride, and acetyl chloride. Acetic anhydride is inter alia smuggled from Europe to Southwest Asia for the production of heroin in that region. Even though the substances are legal in themselves, the illegal trade and their use for producing heroin are not, of course.

In this section, we will consider the scope of the illegal trade in acetic anhydride and some other essential chemicals on the basis of seizure figures. We will then discuss the nature of the trade, including the criminal subjects and networks involved, in greater detail.

7.2.1.1 Scope

One important indication for the scope of illegal trade - in this case, the illegal trade in acetic anhydride and other essential chemicals - are the seizure figures. The seizure figures may be deemed the lower limit of the actual size of the illegal trade.

Global and European levels

The International Narcotics Control Board (INCB) of the United Nations inter alia keeps data on essential chemicals, including acetic anhydride. Based on the figures available to it, 565 million liters of this substance were traded in 2019, 46 percent of which was destined for the European Union. The production of heroin does not require a great deal

44 Essential chemicals are chemicals that are necessary specifically for converting precursors into drugs. These substances may be swapped. Precursors are the "true" materials required to produce a certain drug and these materials cannot be swapped or replaced. This means that, in the case of heroin, morphine, though a drug in itself, is also a precursor according to this formal definition (I-74).

of acetic anhydride. To produce 100 kilos of heroin, 100 to 250 liters of acetic anhydride are required (INCB, 2021a). Less than 0.1 percent of all legally produced acetic anhydride is used for the production of heroin (EMCDDA & Europol, 2019).
On the global level, the seizure figures of smuggled acetic anhydride dropped sharply in 2019 from the 2018 level, and the INCB suspects that this downward trend continued into 2020. Table 7.1 lists the number of liters seized on the global level (INCB, 2021a).

Table 7.1. Global acetic anhydride seizure figures in liters

	Global acetic anhydride figures in liters
2017	127,281
2018	194,281
2019	60,049

Source: INCB, 2021a.

The INCB suspects that the decrease in seizure figures is due to a decrease in the distribution of acetic anhydride and, thus, its trafficking, to the increase in the trafficking of acetyl chloride (an alternative essential chemical substance for the production of heroin), and to the use of alternative smuggling routes (INCB, 2021a).
In 2019, major quantities of acetic anhydride were seized in two heroin-producing countries relevant to the European market: Iran and Pakistan. A great deal less was seized in Afghanistan, one of the world's largest heroin producers and a supplier for Europe. This may be due to the substance not always reaching Afghanistan, as it was already seized (in major quantities) elsewhere (INCB, 2021a).
Less information is available on anhydrous acetic acid, sodium carbonate, ammonium chloride, and acetyl chloride. 90 liters of acetyl chloride were first seized in Afghanistan in 2017. A second seizure of 300 liters took place in 2019.

In Türkiye, an important transit country for the smuggle of acetic anhydride, the 2019 seizure figure was the lowest since 2013. Acetic anhydride has in 2019 also been seized in various European countries, but, again, the quantities concerned were less than in 2018 (INCB, 2021a). Refer to Table 7.2 for the overview for 2019.
At the moment of drawing up this report, the INCB does not yet have data on 2020 and 2021. As the cultivation of opium poppy has increased again in 2020 (refer to section 7.2.2.2), it may be assumed that the demand for acetic anhydride and/or other heroin-related essential chemicals will also increase again. With respect to the Netherlands, we possess the data covering 2020 and the first half of 2021.

Table 7.2. 2019 acetic anhydride seizure figures in liters

	2019 acetic anhydride figures in liters
Pakistan	19,060
Iran	15,000
Afghanistan	786
Türkiye	803
Bulgaria	8,000
Romania	4,975
Belgium	3,000

Source: INCB, 2021a.

Scope in the Netherlands

Investigative authorities in the Netherlands have, between 2017 and the first half of 2021, seized multiple chemicals linked to the production of heroin, acetic anhydride being the most important of them.[45] Table 7.3 lists the number of liters seized.

Table 7.3. Heroin-related chemicals seized in the Netherlands in liters

	Acetic anhydride	Anhydrous acetic acid	Sodium carbonate	Acetyl chloride
2017	6,953	4,735	1,725	-
2018	13,840	505	100	-
2019	4,063	12,351	1,100	
2020	1,970	241	98	20
06-2021	5610	546	80	-

Source: FIOD

Customs (*Douane*), the Fiscal Intelligence and Investigation Service (*Fiscale Inlichtingen- en Opsporingsdienst – FIOD)*, and the police (*politie*) in the context of heroin-related chemicals mainly discover (attempted) illegal trade in acetic anhydride. Major quantities have been seized in, in particular, 2017 and 2018 (I-72).

45 The seizure data were obtained via the FIOD.

The illegal trade in acetic anhydride was first identified in the Netherlands in 2015, when a tanker carrying 18,000 liters of this substance was stolen. There have since been various attempts to buy acetic anhydride in the Netherlands (Hendriks, 2017). Though the quantities of acetic anhydride seized went down in 2019 and 2020, a full 5,610 liters were seized in the first six months of 2021.
The monitoring of and enforcement actions against the illegal trade in acetic anhydride are provided for in the Abuse of Chemical Substances (Prevention) Act. The FIOD on the basis of this Act receives reports of suspect transactions (and attempted transactions) from the Dutch chemical substance wholesalers.
The other chemical substances used to produce heroin are not covered by the Abuse of Chemical Substances (Prevention) Act. However, when the investigative authorities do discover these substances, they are seized. As becomes visible from Table 7.3, anhydrous acetic acid, sodium carbonate, and acetyl chloride, too, were seized in the period from 2017 through the first half of 2021. Of note is the seizure of well over 12,000 liters of anhydrous acetic acid in 2019, 10,000 liters of which were seized in one batch. 20 liters of acetyl chloride were seized in the Netherlands in 2020, against nothing at all in the other years. Ammonium chloride has not been discovered in the period from 2017 through the first six months of 2021 (I-72).

7.2.1.2 Illegal trade in acetic anhydride

Acetic anhydride is commonly used in the regular chemical industry in the European Union and in principle is a legal product that can be freely traded, provided one holds the proper registration and export permits. It is not used only for converting morphine into heroin, but also for converting phenyl acetic acid into BMK, an important material for the production of methamphetamine and amphetamine. As a result, heroin-producing countries are increasingly also producing methamphetamine (also refer to Chapter 6) (EMCDDA & Europol, 2019; Tops et al., 2018).
The less well known and, presumably, less often used essential chemicals for producing heroin - anhydrous acetic acid, ammonium chloride, acetyl chloride, and sodium carbonate - are legal as well, but can clearly also be used for illegal purposes. Anhydrous acetic acid is often combined with acetic anhydride when producing heroin. Like acetic anhydride, ammonium chloride is not only used as an essential chemical for producing heroin, but also for the production of methamphetamine. This inter alia takes place in Afghanistan. Acetyl chloride and sodium carbonate are used for the production of both heroin and cocaine (INCB, 2021a).

Due to the legal state of the product, tackling the illegal trade in acetic anhydride is difficult. Moreover, only small quantities are required to produce heroin (Europol, 2021a). As was indicated in the above, to produce 100 kilos of heroin, only 100 to 250 liters of acetic anhydride are required (INCB, 2021a).
The monitoring of the illegal trade in acetic anhydride is regulated in the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. Within the EU, monitoring measures have been adopted in Regulations EC 273/2004 and 111/2005, while the Netherlands provides for them in the aforementioned Abuse

of Chemical Substances (Prevention) Act. In the Netherlands, the FIOD and Customs are charged with enforcing this Act (Hendriks, 2017).[46]
Procuring acetic anhydride in the EU is many times cheaper than it is in the (surrounding) heroin-producing countries, where this substance is rarer and more expensive (Europol, 2021a; Tops et al., 2018). In 2017 and 2018, the wholesale price in the EU was between 4 and 25 euros per liter, while this amounted to 800 euros in Türkiye and a whole 1,500 euros per liter in Iran (I-74). The substance is currently more cheaply available in the heroin-producing countries than it was in 2017 and 2018. Compared to previous years, fewer (attempted) transports to Iran or Türkiye are identified (I-73). However, according to police information, Dutch subjects do still conduct such smuggling operations.
Acetic anhydride primarily seems to be exported to Afghanistan and Iran. In view of the labels discovered on packaging, a strong suspicion exists that orders are placed in Poland, where the rules seem to be less stringently observed. From there, the acetic anhydride is exported from the European Union. Criminal networks attempt to procure the substance in Belgium, Germany, and France using front companies (I-72).
Such front companies often place multiple smaller orders with various bona fide suppliers from multiple countries. These smaller batches are then combined and smuggled out of Europe (EMCDDA & Europol, 2019).

The smuggle of acetic anhydride from Europe, including from the Netherlands, follows the routes used for importing heroin in reverse, including the reverse Balkan route (EMCDDA & Europol, 2019; EMCDDA 2021a; police information). Also refer to section 7.2.3.3. The INCB does assume that some of these routes, including the reverse Balkan route, have decreased in importance, as the seizures along these smuggling routes have sharply declined (INCB, 2021a). This may be due to criminals opting for other routes. Criminal networks can use various smuggling routes to traffick heroin. They either already have access to various countries or are able to organise such via go-betweens (I-73; police information). This may also apply to the smuggle of acetic anhydride.

Acetic anhydride is transported from Europe both by land and sea. Land transportation is mainly conducted via freight traffic and seems to be the most common way (EMCDDA & Europol, 2019). Batches of acetic anhydride have been seized from lorries multiple times in the transit countries of Bulgaria and Türkiye (I-72). Shipments are also smuggled using container vessels. Though this option seems to be less common, the quantities smuggled in this fashion are much greater. The fact that transport by sea is less often identified may be due to EU customs organisations mainly focusing on import and less so on the export of goods (EMCDDA & Europol, 2019; Staring et al., 2019).

When smuggling acetic anhydride, the European criminal networks cooperate with criminal networks from Afghanistan, Iran, and Türkiye. These may be the same networks involved in importing heroin into Europe (EMCDDA & Europol, 2019).

46 The monitoring of and enforcement actions against the heroin-related essential chemicals of anhydrous acetic acid, acetyl chloride, ammonium chloride, and sodium carbonate are not regulated.

Illegal trade in acetic anhydride from the Netherlands and/or by Dutch subjects

Acetic anhydride is also smuggled to heroin-producing countries from the Netherlands and/or by Dutch subjects. The substance is often procured via bona fide Dutch or foreign chemical suppliers (EMCDDA & Europol, 2019; O-72; O-71; police information). It must be noted that the procurement of acetic anhydride via Dutch chemical substance wholesalers often does not progress from the attempt stage, as companies report suspicious orders under the Abuse of Chemical Substances (Prevention) Act (I-72). However, subjects do manage to procure the substance using front companies (O-71). Large shipments seized in, inter alia, Afghanistan and Iran, could be traced back to (front) companies established in the Netherlands on the basis of waybills (I-72).

In 2017, a Dutch criminal network attempting to export a few thousands liters of acetic anhydride (and hydrochloric acid) in total from the Netherlands, Belgium and/or Germany to Afghanistan and/or Iran, was identified. This network was also active in the organised cultivation of herbal cannabis (court judgment).[47]

Acetic anhydride is exported in shipments of up to a few thousands liters. During the COVID-19 pandemic, the smuggle to, inter alia, Iran stagnated, but the moment borders opened up again things went back to business as usual for the Dutch smugglers (police information).

Acetic anhydride is not only destined for export, but also for the conversion of morphine into heroin in the Netherlands (refer to section 7.2.3.4). Dutch subjects may be involved in both its export and the supply to Dutch production sites. The substance was procured by the primary suspect in investigation O-71 and was discovered at a combined cocaine and heroin laboratory. In addition, major quantities of chemicals used for extracting and/or for the further preparation of cocaine were seized (O-71).

Dutch subjects are also involved in the procurement of and trade in acetyl chloride, anhydrous acetic acid, and sodium carbonate (police information). It is not known to what extent these essential chemicals are destined to be used in (the export for) heroin production.

In order to cover up the illegal trade in acetic anhydride, various modi operandi (MOs) are used. In addition to the aforementioned forged waybills and front companies, criminals make use of all sorts of cover loads. In the 2017 case, the cover load was comprised of scrap metal and car materials. In addition, the acetic anhydride was transported in jerrycans bearing motor oil labels (court judgment).[48] The substance has also been found in jerrycans or canisters bearing windscreen wiper fluid and salad oil labels. Too, a shipment of jerrycans bearing anhydrous acetic acid labels was discovered once (I-72).

Another MO is to legally - and with a permit - transport the substance within the European Union to an eastern Member State. The batch is then stored there for a while before being illegally exported from the EU (I-73).

As far as is known, Dutch subjects exporting heroin-related essential chemicals essentially always deal in acetic anhydride. One case is known where both acetic

47 Rechtspraak.nl: ECLI:NL:RBNHO:2018:3181.
48 Rechtspraak.nl: ECLI:NL:RBNHO:2018:3181.

anhydride and anhydrous acetic acid were smuggled to Iran from the Netherlands (I-72).
Dutch criminal subjects and networks are involved in both the export of acetic anhydride and the import of heroin into Europe. It is very well possible that they use the same smuggling routes for doing so, reversing directions (police information; O-71; O-72). The networks are highly diverse in nature, albeit that subjects with a Turkish migration background seem to be slightly more commonly represented (I-72; O-71; O-72).

7.2.1.3 Conclusion

Essential chemicals are required to convert morphine into heroin. The most important such chemical is acetic anhydride. Acetic anhydride is inter alia smuggled from Europe to Southwest Asia for the production of heroin in that region. While global acetic anhydride seizure figures were very high in 2017 and 2018, they have dropped sharply in 2019. As the cultivation of opium poppy has increased again in 2020, it may be assumed that the demand for acetic anhydride and/or other heroin-related essential chemicals will also increase again.
The Dutch seizure figures, too, peaked in 2017 and 2018 before decreasing in the following years. Seizure figures have, however, significantly increased again in the first six months of 2021. This may be due to increased demand in the countries of origin of heroin, but as yet the figures are lacking to prove this.
Acetic anhydride is smuggled to heroin-producing countries from the Netherlands and/or by Dutch subjects. The substance is often procured via bona fide Dutch or foreign suppliers and criminals use all sorts of methods to cover up the smuggle. Dutch criminal subjects and networks are involved in both the export of acetic anhydride and the import of heroin into Europe.
In all, the European heroin market is inextricably linked to the illegal trade in acetic anhydride and Dutch subjects play a part in this trade.

7.2.2 Size of the heroin market

Like all other drug markets, the heroin market is one based on supply and demand. A demand for heroin exists and this is catered to by criminals. As the supply and demand allow for providing an indication of the size of the market, these two subjects will be discussed in more detail in this section.

7.2.2.1 Demand - consumer markets

We have consulted various sources to provide an overview of the demand for heroin at the global, European, and national levels. The data on these consumer markets cannot be readily compared due to differences in registration methods. The UNODC, for example, registers the consumption of *opiates* (heroin and opium) among people aged 15 to 64 *within the last year*, while the EMCDDA registers *problem use* of *opiates and opioids* among people aged 15 to 64 and the Trimbos Institute (*Trimbos Instituut*) registers the consumption of *heroin within the last year* and *at any time in the past*.

Consumption of opiates, including heroin and/or synthetic opioids, can have serious health consequences (UNODC, 2020). The modes of consuming heroin and other opiates, such as injection by needle, are very harmful (EMCDDA, 2020a). When injecting heroin, consumers run the risk of infection with diseases like HIV and hepatitis C, especially when needles and syringes are shared. The likelihood of (fatal) overdoses is also increased (UNODC, 2021a2).

Apart from injecting it, heroin can also be inhaled. In this case, the heroin is heated on a strip of aluminium foil and the resulting vapour is inhaled using a straw or tube. This method is called "chasing the dragon" and is the most commonly used one in the Netherlands (Van Laar et al., 2021). Heroin is sometimes added to cannabis products (Bervoets et al., 2021).
Heroin is only very rarely consumed creatively or occasionally. Most use is problem use and it is often consumed together with other drugs - polydrug use (Van Laar et al., 2021).

In 2019, 0.6 percent of people aged 15 to 64 around the globe had used opiates (heroin and opium) within the last year. Almost 70 percent of opiate consumers resides in Asia. Opiate consumption prevalence is highest in Southwest Asia (1.8%), South Asia (1.1%) and Central Asia (1%). With 1.1 percent, prevalence is also high in North Africa (UNODC, 2021a2).
The EMCDDA keeps combined data on opiate and opioid use in the European Union. Heroin is the most commonly consumed such drug (EMCDDA 2020a). The use of heroin and other opiates and opioids is rare in the EU. The group of heroin users is aging and decreasing (EMCDDA, 2021a). In 2019, 0.35 percent of people aged 15 to 64 in the EU were problem opioid and opiate users, as opposed to 0.4 percent in 2018.[49] The five countries with the highest number of users per 1,000 inhabitants in 2018 were the United Kingdom, Finland, Italy, Austria, and Ireland (EMCDDA, 2020a).[50]
Even though the consumption figures are low compared to those for other drugs, the death tolls due to overdoses of opiates (and specifically heroin) in combination with other drugs are relatively high. In 2018, 45.5 percent of drug-related deaths registered by the police in Germany was due to opiate use (heroin and morphine). In England and Wales, this figure at 46 percent in that same year, and at 45 percent in Scotland (EMCDDA, 2021b).[51]
Of all people looking for help in connection with drug use in the EU in 2019, 27 percent used opiates and opioids. The number of persons looking for help treating primary heroin use has dropped sharply since 2009 (EMCDDA, 2021a).
The COVID-19 pandemic does not seem to have had an impact on the consumption of heroin and other opiates and opioids in Europe. Consumption levels remained stable during and after the first lockdown periods in 2020 (EMCDDA, 2021c).

The Netherlands counted many heroin addicts in the 1970s and 1980s. Amsterdam, for example, housed well over 10,000 heroin addicts in 1980. These days, the Dutch consumer market is no longer as big. This is due, in part, to heroin having the image of a loser drug and, thus, having lost popularity. For once a person is addicted to heroin, they can really run to seed (jellinek.nl). Due to the provision of methadone and medical heroin, "criminal heroin" consumption has decreased (Van Laar et al., 2020). This harm reduction method resulted in heroin addicts disappearing from the Dutch streets around 2010 (Blok, 2016).

49 The EMCDDA defines problem use as injecting drug use or long duration / regular use of opioids, cocaine and/or amphetamines (emcdda.europa.eu).
50 The United Kingdom was still part of the European Union in 2018.
51 Problem drug use in Scotland, and in particular in Glasgow, mainly seems to be related to heroin (Het Parool, 2019).

In 2019, 0.3 percent of people had used heroin once in their lives, and 0.1 percent had consumed it in the past year. In 2018, these figures stood at 0.6 and 0.1 percent, respectively, among people aged 15 to 64.[52]
For the sake of comparison: in 2019, 27.7 percent of people aged 15 to 64 had used cannabis once in their lives, and 9.3 percent had consumed it in the past year. For the same year, these figures stood at 6.5 and 2.3 percent, respectively, for cocaine use (Van Laar et al., 2021).
Dutch consumers procure their heroin from (street) dealers. While the Dutch consumer market is small, it definitely does exist. In addition, dealers often seem to sell heroin in combination with cocaine (Summ-IT).[53]
As is the case in the rest of Europe, the COVID-19 pandemic hardly seems to have had an impact on the availability, consumer prices, and composition of various types of drugs (Trimbos.nl). Heroin addicts did, however, more often relied on the provision of methadone, as heroin was (temporarily) less easily available (NRC, 2020).

7.2.2.2 Supply - production and seizure figures

The production and seizure figures allow for providing an indication of the supply of heroin. The number of seizures can be deemed a lower limit of the total actual quantities on offer.
Illegal opium is produced in various countries. Afghanistan is responsible for 83 percent of global production. Producing 7 and 6 percent, respectively, Myanmar and Mexico take second and third spot (UNODC, 2021a3). Opium is extracted from cultivated opium poppy and converted into morphine by way of a chemical process. This morphine can then be used to produce heroin.
The heroin on the European markets mainly derive from those countries in Southwest Asia where the required opium and morphine have also first been produced (EMCDDA, 2020a; I-73).

While global opium poppy cultivation had decreased significantly over the past few years, it had increased again in 2020. This upswing is mainly due to increased cultivation in Afghanistan (UNODC 2018; UNODC 2019; UNODC 2020; UNODC 2021a3). Refer to Table 7.4. In 2019, 69 percent of opium poppy cultivation took place in Afghanistan, 14 percent in Myanmar, and 9 percent in Mexico (UNODC, 2021a3).

Table 7.4. Global opium poppy cultivation in hectares

	Opium poppy cultivation
2017	418,000
2018	346,000
2019	240,000
2020	294,350

Source: UNODC 2018, 2019, 2020, 2021a3.

Opium poppy is cultivated on a large scale. For the sake of comparison: global coca shrub cultivation in 2019 was estimated to come to 234,200 hectares, and less than the global opium poppy cultivation in that same year (UNODC, 2021a4).

The UNODC's global seizure figures show increased quantities of opium seized in the 2017-2019 period, and decreasing morphine and heroin figures (UNODC 2019, UNODC 2020, UNODC 2021a3).[54] Refer to Table 7.5. The UNODC in 2021 does not yet possess the global seizure figures for 2020.
Most of the opium and morphine are seized in Iran, Afghanistan, and Pakistan - accounting for no less than 98 percent of the total global seizures in 2019. Strikingly, more opium and morphine have been seized in Iran than in Afghanistan, the country responsible for the lion's share of opium production.
Heroin is seized in many more countries, as the trade in heroin, as a final product, is more widely geographically distributed than that in opium and morphine. The countries where most heroin was seized in 2019 - Türkiye, Iran, and Pakistan - are jointly responsible for 48 percent of total global seizures (UNODC, 2021a3).

Table 7.5. Opiate seizures in kilos

	Opium	Morphine	Heroin
2017	693,000	87,000	103,000
2018	704,000	43,000	97,000
2019	726,000	26,000	96,000

Source: UNODC 2019, 2020, 2021a3.

The UNODC assumes that investigative services around the world have become more efficient in intercepting opiates, as the increase in quantities of opiates seized is relatively higher than the increase in opium (poppy) production (UNODC, 2021a3). Future seizure figures will prove whether this assumption is correct. These figures were not yet known when this report was drawn up.
The UNODC also assumes that fluctuations in opium poppy cultivation are cushioned by temporarily storing opium batches. In this way, consumer markets receive a constant flow of heroin, without supplies stagnating (UNODC, 2021a3).

Europol states that the European heroin market has remained stable between 2017 and 2020. The increase in the number of kilos seized in 2018 is due to a few larges batches seized in Antwerp (Europol, 2021a). As per the 2021 EMCDDA data, seizure

54 Opium can be extracted from cultivated opium poppy and converted into morphine. Morphine can then be converted into heroin. Refer to section 7.2.3 for more information.

figures went down in 2019 compared to 2018, but were still higher than in 2017. Refer to Table 7.6.

Table 7.6. Heroin seized in the European Union in kilos

	Heroin seized
2017	5,200
2018	9,700
2019	7,900

Source: EMCDDA, 2021a; Europol, 2021.

Dutch seizure figures

To arrive at the heroin seizure figures in the Netherlands, we base ourselves on the figures provided by Customs (*Douane*), the Royal Marechaussee (*Koninklijke Marechaussee – Kmar*), and the Police (from BVH).[55] The police seizure figures shown here constitute the lower limit of the actual quantities seized by the police. This is due to lacunae and registration problems (refer to Chapter 2 and References).

Table 7.7. Heroin seized in the Netherlands in kilos

Heroin	Total Customs seizures	Total Marechaussee seizures	Police seizures indication	**Total**
2017	830 kg	104 kg	795 kg	**1,729 kg**
2018	296 kg	117 kg	94 kg	**507 kg**
2019	625 kg	23 kg	170 kg	**818 kg**
2020	105 kg	57 kg	254 kg	**416 kg**
06-2021	1,500 kg	-	-	**-**

Source: Customs, Royal Marechaussee, police.

Except for 2019, the heroin seizure figures are decreasing since 2017. While the total figures for 2021 have not been included in this overview, the catch of well over 1,500 kilos in the port of Rotterdam in March 2021 alone means the figures for that year will vastly outstrip those of the previous years (www.om.nl).

55 BVH: *basisvoorziening handhaving* , the national law enforcement database.

As was detailed in Chapter 5, a great deal of cocaine ultimately trafficked via the Netherlands arrives via the port of Antwerp (cf. Boerman et al., 2017; cf. De Middeleer et al., 2018). Heroin traded via the Netherlands, too, may first be shipped to Antwerp on container vessels (I-73; Summ-IT).
Heroin ultimately destined for the Netherlands may also have been seized elsewhere. For example, 1,279 kilos of heroin was in 2019 seized in the English port of Felixstowe. This batch was supposed to arrive in the Netherlands via the port of Antwerp (O-75).
Europol (*Analysis Project Heroin*) provided an overview of the heroin seizures from 2019 through the first half of 2021 known to it where Dutch criminal networks were involved. These figures present seizures within the European Union (such as in Belgium, Bulgaria, and Poland), in the United Kingdom, and in transit countries to the east and southeast of the EU, including Ukraine, Armenia, Türkiye, and Belarus. In two cases in 2020, a total of 115 kilos of opium were seized in addition to heroin.
Seizures in the Netherlands that may have a connection with Dutch networks have not been included in this overview to prevent double counting. Refer to Table 7.8.

Table 7.8. Heroin seized outside of the Netherlands involving Dutch networks

	Number of countries	Total number of kilos
2019	7	5,520
2020	8	3,312
2021 (January through July)	5	3,812

Source: Europol.

Even though these data show that the 2020 seizure figure is lower than the 2019 one, the number of kilos seized in the first half of 2021 is higher than the 2020 total.

Police investigations in Summ-IT
The police in 2019 conducted a total of 1,086 investigations into drug-related crime. Of this total, 119, or 11 percent, were related to heroin. In 2020, 968 drug-related investigations were conducted, of which 125 - or 13 percent of the total - were related to heroin. In both years, the investigations concerned range from those into street-level dealing to wholesale. Even though fewer criminal investigations were conducted in 2020, the share of heroin-related investigations is slightly higher compared to 2019.
It must be noted that, in 2019, 81.5 percent of heroin-related investigations were polydrug ones. In 2020, this figure stood at 80 percent. This means overlap exists with the investigations as mentioned in Chapters 4, 5, and 6.

Table 7.9 Number of heroin-related criminal investigations

	Heroin-related	Heroin - polydrug	Heroin - cocaine	Heroin - synthetic drugs
2019	119	97	90	29
2020	125	100	92	31

	Heroin - chemicals	Heroin - cannabis	**Total**
2019	5	29	**1,086**
2020	11	35	**968**

Source: Summ-IT.

Mutual legal assistance requests

It must be noted in this section that, for all the mutual legal assistance requests relating to drugs that have been registered, most have been entered into the *general narcotics*[56] category. No less than 79.4 percent of all mutual legal assistance requests have received this label (refer to Chapters 2 and 3). As applies to the heroin seizure figures of the police, the mutual legal assistance requests registered as being related to heroin are most likely the proverbial tip of the iceberg.

Between 2017 and 2020, a total of 355 mutual legal assistance requests were related to heroin. The number of requests received (302) is significantly higher than the number of requests issued (53). While the number of requests received and issued in this period fluctuates, overall, a downward trend is visible. Refer to Table 7.10.

Table 7.10. Total number of heroin-related mutual legal assistance requests per year

	2017	2018	2019	2020	2017 through 2020
Incoming	90	67	74	71	302
Outgoing	20	7	14	12	53
Total	**110**	**74**	**88**	**83**	**355**

Source: LURIS.

56 The requests included in this category have been given the following labels: general narcotics, European Investigation Order illegal trade in narcotics and psychotropic substances.

Well over two thirds (69%) of all heroin-related mutual legal assistance requests only concern heroin (244 requests). This is striking, as polydrug cases seem to be the norm when considering all further sources. It may however very well be that polydrug combinations are mainly registered in the *general narcotics* category.

Table 7.11 displays the top five countries heroin-related mutual legal assistance requests are exchanged with. This top five accounts for 68.7 percent of the total number of heroin-related mutual legal assistance requests. Germany accounts for by far the biggest share (94). Türkiye takes the fourth spot, which is probably due to the position taken by this country in the transit of heroin from the Middle East to Europe and the involvement of criminal subjects and networks with a Turkish (migration) background.
Most of the mutual legal assistance requests issued by the Netherlands are submitted to Belgium (8), Türkiye (6), and France (6). Most of the incoming mutual legal assistance requests are received from Germany (89), France (45), and Belgium (29), closely followed by Türkiye (28).

Table 7.11. Number of heroin-related mutual legal assistance requests per country per year

	2017	2018	2019	2020	2017 through 2020
Federal Republic of Germany	**25**	**17**	**26**	**26**	**94**
Incoming	23	17	24	25	89
Outgoing	2		2	1	5
France	**10**	**17**	**13**	**11**	**51**
Incoming	8	16	13	8	45
Outgoing	2	1		3	6
Belgium	**13**	**10**	**7**	**7**	**37**
Incoming	8	8	6	7	29
Outgoing	5	2	1		8
Türkiye	**15**	**5**	**10**	**4**	**34**
Incoming	12	4	9	3	28
Outgoing	3	1	1	1	6
United Kingdom	**15**	**2**	**6**	**5**	**28**
Incoming	14	2	5	5	26
Outgoing	1		1		2

Source: LURIS.

7.2.2.3 Conclusion

The use of heroin and other opiates in the European Union, including the Netherlands, is limited. The group of heroin users is ageing and diminishing. However, there is still a demand for heroin in several countries in the European Union and in the United Kingdom. The Netherlands, too, has a small sales market. The modes of consuming heroin and other opiates are very dangerous to one's health and death tolls due to overdoses, often in combination with other drugs, are high when compared to other drugs.

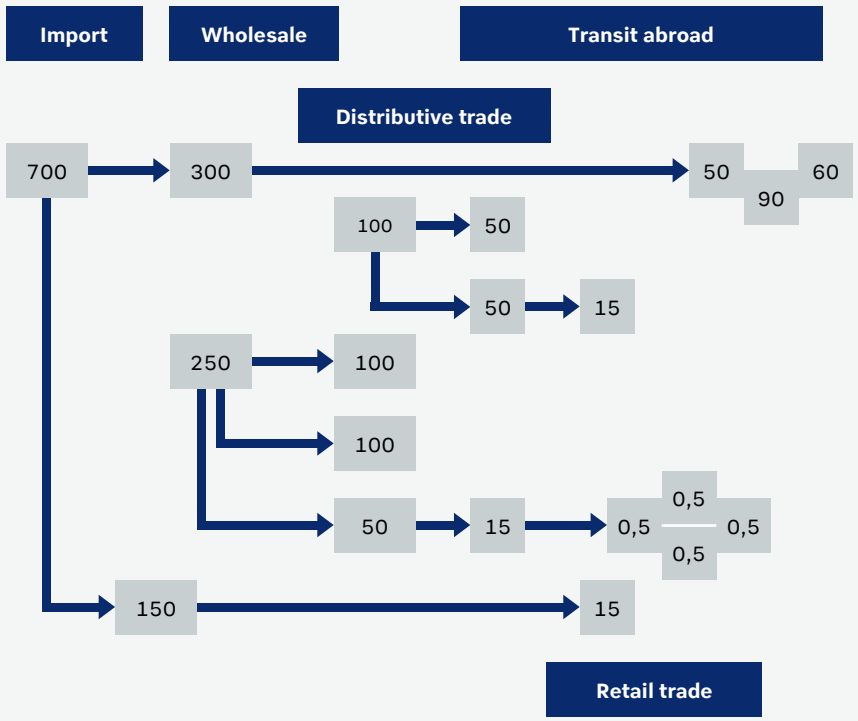
The global opium, morphine, and heroin seizure figures have decreased in the 2017-2019 period. Global opium poppy cultivation, too, has significantly decreased in this period, though it is still being cultivated in sizeable quantities. For the sake of comparison: estimated global opium poppy cultivation in 2019 exceeded the cultivation of coca shrubs. Opium poppy cultivation increased again in 2020. At the moment this report was drawn up, it was unknown whether this constitutes a trend and whether this may result in increased opium, morphine, and heroin seizure figures - and thus, indicate increased production.

The European heroin market has remained stable in the period from 2017 to 2020. The seizure figures in the European Union show no clear upward or downward trend between 2017 and 2019. As the Dutch figures are not complete, no conclusions can be drawn from them. It can be said, however, that this is a somewhat smaller drug market - by Dutch standards - with some hundreds to a few thousands of kilos being trafficked via the Netherlands and/or by Dutch subjects each year.

7.2.3 Nature of the heroin market

Heroin destined for the European market is produced mainly in Iran, Pakistan, Afghanistan, and, to some extent, in eastern Türkiye. Heroin trade is a type of transit crime: organised crime involving cross-border trafficking / international trade of, in this case, heroin (Kruisbergen et al., 2012). Large batches of heroin are transported from Southwest Asia to the European Union via various smuggling routes. Once in the EU, the batches are split up into wholesale lots, which are in turn split up into distributive batches, to be transited to other countries and/or distributed within a country. In this way, the batches are delivered to the various dealers in smaller quantities. Finally, the dealers sell the heroin on to the consumers. Refer to Figure 7.12 for a diagram of this distribution.

Figure 7.12. Diagram of heroin distribution



After Vermeulen et al., 2018.

In this section, we will show that the heroin market is not as simple as was just presented in the above. Import, distributive trade, and retail trade cannot be always clearly distinguished, especially where criminal subjects are involved in multiple segments of the heroin market. The Netherlands form an important heroin transit hub in Europe. Subjects in or from the Netherlands are involved with both the large-scale import and transit to other, mainly European, countries. Dutch subjects may even be involved in having heroin produced in the countries of origin.

In order to penetrate the complexity of the heroin market, we make use of a crime script.[57] As was detailed in Chapter 2, the various crime scripts used in this report are modular and can be constructed from various components. Each component can, in turn, be comprised of various subcomponents. These components form the various stages of the script, depending on where they appear in the order. The same applies to the heroin crime script. In all cases, the position of the Netherlands is leading. All components selected relate to trafficking via the Netherlands, production in the

57 When composing the heroin crime script, we made use of the cocaine crime script and the synthetic drug crime script, as composed by the police.

Netherlands and/or involvement of Dutch criminal networks and/or subjects. Refer to Figure 7.13.

Figure 7.13. Heroin crime script

The heroin crime script has similarities to the cocaine crime script, in the sense that the product concerned is produced and procured abroad (acquisition) and is imported into the Netherlands. A relatively small part of the totals acquired are distributed in the Netherlands, while the rest is exported to other countries via the Netherlands (sales). However, one important distinction is that the heroin-producing countries require an essential chemical substance (acetic anhydride) that originates from Europe and also from the Netherlands (refer to section 7.2.1). Because of this, the first stage of the heroin crime script is similar to that of the synthetic drugs crime script, as it is based on the materials acquisition component. This chemical substance is then exported out of the Netherlands or Europe by criminal networks and subjects, including Dutch ones (sales component). As a result, the acquisition and sales components both appear twice in the heroin crime script, albeit as different stages and comprised of different subcomponents: they first appear in the context of the supply of materials to the countries where heroin is produced (acquisition and sales - stages 1 and 2) and again in the context of the procurement of heroin in the heroin-producing countries and the

sale thereof in the Netherlands and abroad (acquisition and sales - stages 3 and 7). Moreover, in the heroin crime script we made use of a production component, similar to that used in the synthetic drugs crime script, such in connection with the presence of heroin laboratories in Europe and the Netherlands.

It will become evident from this section that subjects do not adhere to any crime script whatsoever. They may be active within various stages and play different roles. A heroin importer may also be an exporter, while a trader may also be a producer. What's more, the criminals are often also active in other criminal markets. Polydrug trafficking reigns supreme. In the below elaboration of the crime script, we have compiled a number of stages.

7.2.3.1 Acquisition of materials and import – stages 1 and 2

Various essential chemical substances (specifically, acetic anhydride) are required to produce heroin. These materials are procured by Dutch networks and subjects and smuggled to the heroin-producing countries from the Netherlands and/or other European countries. Refer to section 7.2.1 for more information about these stages of the heroin crime script.

7.2.3.2 Acquisition of the final product - stage 3

Heroin destined for the European market mainly derives from opium produced in Afghanistan. Opium is extracted from the cultivated opium poppy and converted into morphine. This morphine is next converted into heroin in Iran, Pakistan, Afghanistan, and eastern Türkiye (EMCDDA, 2020a; I-73). The heroin is pressed into bricks and packaged. The packaging of the bricks is provided with a logo or a certain colour. The packaging indicates the client the batch is to be shipped to (I-73).
Heroin is usually brown in colour, but white heroin also exists. It may sometimes be light pink in colour. Heroin is mainly sold in the consumer markets as a powder, but it may also turn up in a solid brown form, resembling dried clay (www.jellinek.nl).
White heroin is a pure heroin variant that is also referred to as China White (www.urban.dictionary.com). Because white heroin resembles cocaine, the two drugs can be mixed up, with all associated negative consequences: heroin is more potent than cocaine. In 2014, three British tourists died in Amsterdam after using white heroin, presumably as they believed they were taking cocaine (RTL Nieuws, 2021). White heroin originates in Iran, Pakistan, and Afghanistan (police information).
Strikingly, Dutch subjects may be involved in having heroin produced in the countries of origin (police information). Even though the production of heroin destined for the European market mainly takes places in Southwest Asia, there have, in the past few years, been some discoveries of laboratories in the European Union where morphine was converted into heroin. Refer to section 7.2.3.4, stage 6.

Incidentally, Afghanistan is also a producer of methamphetamine and cannabis resin (refer to Chapters 4 and 6) (EMCDDA, 2020b; Europol, 2021a; police information). Seizures of combined heroin and methamphetamine shipments have taken place in Afghanistan. The Taliban is said to be involved in the trade in both heroin and methamphetamine (UNODC, 2021a4). At the moment this report was drawn up, the impact of the Taliban having seized power in Afghanistan on the production of and trade in these drugs, is unknown. Europol (2021b) has outlined two possible scenarios. In one, the Taliban will curtail or ban opium poppy cultivation and opium production; in

the other, it will continue to exploit opium poppy cultivation. According to Europol, the latter scenario is the more likely one, as a segment of the impoverished rural population is financially dependent on opium poppy cultivation and the Taliban does not wish to alienate the local population.[58] Possibly of even greater importance is the fact that the production of and trade in heroin form an important source of income for the Taliban. Should opium poppy cultivation and opium production in Afghanistan increase, this will have immediate consequences for the European heroin market (Europol, 2021b).

7.2.3.3 Import and storage – stages 4 and 5

Traditionally, the most important routes for importing heroin from Southwest Asia to the European Union and the United Kingdom are the Balkan route, the Caucasus route, the northern route, and the southern route.

- Balkan route: via Iran, Türkiye, and the Balkan countries
- Caucasus route: via Iran, Türkiye, Georgia, and Ukraine
- Northern route: via the Black Sea region
- Southern route: via Iran and Pakistan, East Africa and South Africa, West Africa and North Africa

(Boerman, 2017; EMCDDA 2020a; Europol, 2021a).

58 Expectations are that both the cultivation of opium poppy and of ephedra (used for the production of methamphetamine) will increase in order to cope with the economic troubles in Afghanistan (Oxford Analytica Daily Brief, 2021).

Figure 7.14. Heroin smuggling routes

Source: Europol, 2018.

The Balkan route is considered the primary route, with the heroin being transported by land to Europe using lorries. The Caucasus and northern routes, too, are land-based (Europol, 2021a).

When these latter two routes are used, the transit of the heroin is facilitated in countries like Belarus, Ukraine, Georgia, and Moldova. The criminal heroin networks make use of bona fide storage and transshipment locations in those countries, possibly involving hiding the batches of heroin under a new cover load. It also occurs that the cover load remains the same, but that the paperwork is adjusted to have it appear that the "legal" (cover) load originates from one of the said countries. A shipment of, for example,

stone from an Eastern European country is less conspicuous than a shipment of stone from Iran. The criminal networks in this fashion try to decrease the likelihood of getting caught. Another interesting modus operandi is that of switching loads. Outside of the EU, a legal EU load is switched with a so-called identical EU load that contains a batch of heroin. The heroin is then smuggled into the EU under the pretext of returning an unwanted EU load. Corrupt contacts in European countries outside of the EU facilitate the crossing of borders (I-73).
The position of Türkiye as a transit country for both the import of heroin to Europe and the export of acetic anhydride from Europe forms the likely cause of the relatively high number of heroin-related mutual legal assistance requests being exchanged between the Netherlands and Türkiye (also refer to section 7.2.2.2).
A more recent development is the transit of heroin through the Suez Canal and the Mediterranean (ports) (EMCDDA, 2020a; Europol, 2021a; UNODC, 2021a3). Heroin is inter alia transported to the port of Koper in Slovenia. Other smaller EU ports where heroin is imported are Constanta in Romania, Varna in Bulgaria, and Gdansk in Poland (I-73).
Heroin is also imported via the ports of Antwerp and Rotterdam, as is witnessed by the seizures of multiple, major quantities of heroin in those ports and of batches destined for Antwerp or Rotterdam (Summ-IT; UNODC, 2021a3).
Criminal heroin networks are relatively quickly able to switch routes. Shipments by sea for example head to Gdansk, Antwerp, and Koper, and by land via the Balkan or northern routes. Criminal networks seem to have, or to be able to obtain, access everywhere (I-73; police information).
Even though Dutch criminals complained about the fact that the borders of the primary countries of origin of heroin (including Afghanistan and Iran) were closed due to the COVID-19 pandemic and as a consequence influenced heroin trade in Europe, trafficking continued as usual, including by selecting other routes (police information). The supply of (primarily) Afghan opiates did not come to a standstill in Europe (UNODC, 2021b). The quantities on offer did decrease for a while, though, causing the kilo prices to rise (police information).

When the heroin arrives in a country in the east of the EU by land (including in Romania, Hungary, Austria, and Slovakia), the load is often removed from the lorry and transshipped to a lorry bearing an EU number plate. This decreases the likelihood of being discovered, as a lorry carrying an EU number plate is less likely to be inspected than a lorry bearing, for example, a Turkish number plate. For in the EU with its open borders, the principle of free movement of goods and people applies. The transshipment of the heroin to EU lorries takes place at bona fide companies or at front companies established specifically for this purpose.
Containers carrying batches of heroin imported into the EU by sea (Constanta, Gdansk, Antwerp, etc.) are transported on by road freight traffic (truck-trailer combinations). From Koper, a freight train travelling to, inter alia, Vienna, Bratislava, and Budapest is also used (I-73).

Wholesale batches are destined for various criminal networks in the Netherlands, Belgium, and Germany. These buyers are not competitors but serve different markets. They agree with each other when, how, and where the shipment is divided. The division of imported shipments of heroin into wholesale batches inter alia takes place in Germany, the Netherlands, and northern France (I-73).

Dutch wholesalers may import dozens to hundreds of kilos in one go. Such import can be systemic in nature, with multiple batches being imported throughout the year (O-71; police information).
Dutch subjects mainly do business with Iran and Pakistan to have the heroin imported (I-71; I-73; police information). This may be because not only is heroin produced in those countries, but Iran may also serve as a transit country for heroin produced in Afghanistan. Iran directly borders Türkiye and, in contrast to Afghanistan, has seaports. There are also contacts in Pakistan and, there, too the shipment of heroin to Europe by sea container is being organised (police information). Heroin transports by sea destined for Europe also travel via Dubai (I-71; police information).
As was indicated in the above, the heroin may be transported in major batches. In criminal investigation O-71, the primary suspect, currently sentenced, was in 2018 involved in the import of 954 kilos of heroin and 1,259 kilos of heroin in the port of Antwerp. He was also involved in the import of a batch of 268 kilos of heroin from Iran, which was supposed to be imported into the European Union via the port of Genova. A batch of 169 kilos of heroin was discovered hidden between marble tiles in a warehouse in the Netherlands. The said primary suspect could also be linked to a batch of heroin (658 kilos) seized in Germany in 2019, hidden in a lorry carrying halva (confectionery) from Kyrgyzstan, which batch originated in Iran. This means the criminal network was not only able to organise sea transport, but also land transport (O-71).
In 2019, the British authorities intercepted 1,279 kilos of heroin in the port of Felixstowe. The heroin was transported in a sea container carrying fabric arriving from Pakistan and destined for a front company in the Netherlands. Following this seizure, a warehouse was searched in the Netherlands and a copy of the container seal was found. The subjects had intended to place the cloned seal on the container after having removed the heroin and before the "unopened" container was to be transported to the formal recipient. Multiple such seals were found during this search. This modus operandi is also in regular use when importing cocaine in containers (O-75; also refer to Chapter 5).
Dutch subjects are also involved with the import of heroin via the aforementioned smuggling routes using road freight traffic. In so doing, they make use of the so-called "from company, to company scheme" in order to make up a legal flow of orders and transport documents (O-71). The import using such company-to-company schemes is inter alia realised via Ukraine and Belarus (police information). During the pandemic, business could not always be conducted via Türkiye or Iran due to border closures. As a consequence, the criminals switched to using transports via Ukraine and Russia (police information).
The Dutch criminal networks in any case have access to, and are able to make use of, various smuggling routes (police information). Over the course of investigation O-71, it became apparent that too many people were aware of the heroin transports via Kyrgyzstan, causing the Dutch criminal network involved to consider it to be too high-risk a route. As the primary suspect also had contacts in Kazakhstan, the network switched to transporting the heroin via Kazakhstan (O-71).

Though Europol (2021a) indicates that the Balkan route is the most important route for importing heroin, Dutch networks seem to predominantly use the northern route (running via Kazakhstan and Kyrgyzstan) and/or the Caucasus route. The shipments are then moved into the EU, inter alia via Poland (I-71; police information).

Cover loads used by Dutch subjects and networks when importing heroin batches include construction materials, like stone, marble, and sand, foodstuffs, like halva and Turkish delight, and fabrics (I-73; O-71; O-75). The heroin is sometimes also inserted into the pallets other goods are stored on. The heroin can be hidden within the cover load, for example, within tiles. It is not known whether infusions of heroin into other substances, requiring later extraction, occurs, as it does when smuggling cocaine.
Customs formalities are taken care of by front companies and/or transshipment companies (O-71). In addition, Dutch subjects also have direct contacts at the border, for example with Iran (police information).
Dutch subjects, too, often switch lorries close to the border to decrease the likelihood of discovery, with the heroin being transshipped onto a lorry carrying an EU number plate. Lorries with an EU number plate are also sometimes used directly from the point of loading (O-71).
Dutch subjects fly to, inter alia, Iran and Türkiye to manage the heroin transports (I-71; police information). They also head to countries where the heroin is loaded, transshipped and/or packaged. Dutch subjects have in this connection travelled to, inter alia, Kyrgyzstan and Kazakhstan. They do not have contacts within, or travel to, all countries the heroin is transported through (I-71).
As was indicated in the above, the same Dutch subjects and networks may be involved in both the export of acetic anhydride and the import of heroin into Europe, using the same routes (O-71; police information). Barter may also take place, with the Dutch subjects providing acetic anhydride and receiving heroin in return (police information).
The same Dutch subjects importing heroin may also import cannabis resin from Pakistan. In addition, they may be involved in the import of ketamine or ephedrine from Pakistan (police information). Heroin importers may also be cocaine importers and importers of, for example, ketamine from India and synthetic opioids from China; also refer to Chapters 4, 5, and 6 (police information).

Even though transport to the Netherlands by road and sea seems to be most prevalent, heroin is also imported by air. Such transports mainly take place via freight aviation and incidentally by using couriers. Air transports usually take the southern route via various African countries, and in particular via South Africa. During the COVID-19 pandemic in the second half of 2020, it was found that heroin, like khat (refer to Chapter 8), was more often transited via Africa. It would seem likely that the sound air connections, which remained intact during the pandemic, are the cause for this phenomenon (Customs e-mail, 7 September 2021).

The extent to which rip-off crews are deployed when containers with heroin arrive at European ports the Dutch criminal networks have access to, is unknown. It is known, however, that containers are moved from Antwerp and Rotterdam to sites in, inter alia, the Netherlands and Belgium using truck-trailer combinations (O-71; O-74). In such cases, the heroin may be unloaded and stored in a warehouse, for example. Over the course of investigation O-71, it was discovered that heroin was chipped from a load of marble in a warehouse (O-71). Heroin traded on via the Netherlands is stored in smaller quantities in houses, garages, car washes, and the like (I-73; O-71).

7.2.3.4 Production - stage 6

Heroin destined for the European market is produced mainly in Southwest Asia. However, in the past few years, multiple laboratories where morphine was converted

into heroin have also been discovered within the European Union: in Spain, the Czech Republic, Belgium, and Bulgaria (EMCDDA, 2020a; EMCDDA, 2021a; I-71; I-73). The same development is also visible in the Netherlands. According to Europol, this is an important development, also in view of the fact that an increasing number of laboratories used for multiple purposes is being discovered in the EU. For example, the same laboratories are used for extracting cocaine from products and for producing synthetic drugs (Europol, 2021a).
In the heroin laboratories, the dried morphine is cooked in large boilers or metal drums with acetic anhydride and then filtered (Hendriks, 2017; court judgment)[59].

In the 2017-2020 period, a total of thirteen heroin production sites were discovered in the Netherlands, as well as seven sites where chemicals required for the production of heroin were stored; refer to Table 7.15.[60] Morphine was also found in some of these laboratories (Summ-IT; court judgment).[61]

Table 7.15. Number of heroin sites discovered

	Heroin production	Chemicals storage
2017	5	1
2018	1	3
2019	5	3
2020	2	-
Total	**13**	**7**

Source: LFO & BVH.

The distribution over the years is relatively constant. This means that the aforementioned scarcity of acetic anhydride in the heroin-producing countries does not seem to have had an effect on the number of production sites in the Netherlands. It must be noted, however, that the numbers are so low that it is difficult to identify a trend on their basis. Strikingly, four of the laboratories concerned were used to produce various types of drugs. One such combined production site was found in each year. One site was found to be used for both cocaine extraction and heroin production. The second was a combined MDMA, cocaine (extraction), and heroin laboratory, while the third was an MDMA and heroin production site where a few thousand kilos of dried herbal cannabis were also found. In the fourth laboratory, in addition to, inter alia, acetic anhydride, MAPA was also found, used in the production of BMK. BMK is a precursor used to

59 Rechtspraak.nl: ECLI:NL:RBDHA:2019:1687.
60 Data set compiled on the basis of data from the National Dismantling Support Unit (LFO) of the National Operational Cooperation Unit (DLOS) and from BVH.
61 Neither Customs nor the Royal Marechaussee possess any morphine seizure figures for the period from 2017 through 2020. It may be that morphine is transported to the Netherlands predominantly by land. Rechtspraak.nl: ECLI:NL:RBDHA:2019:1687.

produce amphetamine or methamphetamine (O-72). What's more, with respect to another heroin production site, suspicions are that it was also used to convert cocaine base into cocaine hydrochloride (also refer to Chapters 5 and 6).
Other chemicals that can be used to produce heroin are also found at heroin production sites and/or chemicals storage sites in the Netherlands. For example, in addition to containing a few thousand liters of acetic anhydride, one production site was also found to hold 200 liters of anhydrous acetic acid and few dozen kilos of sodium carbonate. Too, acetic anhydride and sodium carbonate were discovered among other substances at one storage site (I-72).

One organised crime group, the members of which appeared before court in 2019, made use of multiple greenhouses, producing heroin at at least one site. A large cannabis nursery was discovered at another site. In order to produce heroin, they inter alia tried to procure 1,600 liters of acetic anhydride a month, with 3,200 liters having been actually supplied (court judgment).[62] The 3,200 liters supplied could have been used to produce between 1,280 and 3,200 kilos of heroin.[63]
In Belgium in 2019, a heroin production site was discovered, where Dutch subjects were also involved. It concerned an investigation into the import and transit of heroin and the smuggling of acetic anhydride (I-71; O-71).

Before heroin can be sold to retailers, like cocaine, it is often cut with a mixture of caffeine and paracetamol, sometimes adulterated with a brown colouring agent. These substances have inter alia been found at three heroin production sites (I-74; Summ-IT). The production of this cutting mix for the European heroin market seems to be a purely Dutch activity, meaning that the Netherlands also plays an important role in this aspect of heroin trafficking (I-74). The fact that this may concern large-scale production becomes evident from the discovery of a professional site in 2021, where 125 kilos of caffeine, over 370 kilos of paracetamol, and close to 33 liters of colouring agent were found (Summ-IT). The illegal trade in paracetamol and caffeine, too, may be large in scale. In 2021, a suspect was convicted for trafficking 2,300 kilos of paracetamol and 1,300 kilos of caffeine (court judgment).[64]

7.2.3.5 Sales - stage 7

Only a small part of the heroin trafficked via the Netherlands is destined for the country itself. The lion's share is transited abroad.

The Netherlands

The heroin is distributed throughout the Netherlands via distributive trade (in kilos), usually in combination with other drugs (police information; Summ-IT).
While no large consumer market exists in the Netherlands, there certainly are heroin consumers. Dealers often sell the heroin in combination with cocaine - or "coffee with milk". Dealers also offer other drugs in addition to heroin, such as synthetic drugs and cannabis (Summ-IT). A recent investigation into drug use in Gouda found that heroin

62 Rechtspraak.nl:ECLI:NL:RBDHA:2019:1609.
63 To produce 100 kilos of heroin, 100 to 250 liters of acetic anhydride are required during the conversion process (INCB, 2021a).
64 Rechtspraak.nl:ECLI:NL:RBDHA:2021:6292.

dealing had increased in this municipality, as herbal cannabis dealers gave their products an additional "bite" by adding heroin (Bervoets et al., 2021).
At the retail level, the heroin is cut further before being sold to the consumers (police information; Summ-IT). Cutting substances used include paracetamol, caffeine, diazepam, and quinine, but also cocaine and amphetamine (toxicologie.org).
In the United States, heroin is sometimes cut with fentanyl (DEA, 2020). In December 2020, it was indicated as part of a chat on drugsforum.nl that heroin cut with fentanyl is sometimes also offered in the Netherlands. This does not seem to be common however (drugsforum.nl). More information about heroin mixed with fentanyl is presented in section 7.3.2.

Heroin and synthetic opioids have a similar and addictive effect. As such, it may be that the Dutch user base of both these substances overlaps (Boerman, 2016). A small query in Summ-IT showed that the combined consumption of heroin and synthetic opioids, and sometimes also in combination with other drugs, may indeed take place. The aforementioned discussion on drugsforum.nl also seems to point to this conclusion, though the chat participants did warn each other about using fentanyl (drugsforum.nl). Combined heroin and synthetic opioid use in the Netherlands does not seem to be widespread.
No investigations turned up in the criminal investigations from 2019 and 2020 considered by us that involved combined heroin and synthetic opioid dealing. The picture is slightly different as concerns online (international) trade. The same vendor may offer both heroin and synthetic opioids, also in combination with other drugs and (illegal) medication (Summ-IT). For more information, refer to Chapter 9.

Transit
As was indicated previously, wholesale batches are destined for various criminal networks in the Netherlands, Belgium, and Germany. These networks agree with each other when, how, and where the imported shipment is divided. The division of the shipments into wholesale batches inter alia takes place in Germany, the Netherlands, and northern France. The Dutch networks trading in such wholesale batches seem to be doing so from the Netherlands, even if they have to retrieve a shipment from, for example, France (I-73). It may also be the case that heroin is transited from the Netherlands to Germany while the batch concerned had previously been imported from Poland into the Netherlands via Germany (I-71).

Heroin trafficked via the Netherlands is inter alia destined for the Belgian and French markets (Bervoets et al., 2021). Heroin is also exported to, for example, Scandinavia, the United Kingdom, Ireland, and Spain (police information; O-73; I-73; Summ-IT).
In addition to brown heroin, Dutch subjects sometimes also trade white heroin; however, this form is not in demand everywhere in Europe (police information).
The transit of heroin is almost always combined with that of cocaine or other drugs. That is to say, it concerns polydrug trade. The drugs may be shipped either as combined shipments (cocktail batches) or by way of multiple shipments (Summ-IT; police information; O-73). Specialised transit of heroin alone also takes place, as becomes evident from the attempt to smuggle 60 kilos of heroin by general aviation from Teuge airport to the United Kingdom (O-74).

Of particular note is that heroin originating from Iran is also being transited to Canada by Dutch subjects (police information). However, transited shipments are predominantly destined for retail trade in the various EU countries (I-73; Vermeulen et al., 2018).

The transit of heroin and other drugs in Europe is conducted using cars featuring hidden spaces, by road freight traffic (with the lorries, too, sometimes featuring hidden spaces), and by air (Summ-IT; O-71; O-73; O-74; Vermeulen et al., 2018). When lorries are used to transport the drugs, they may be accompanied by one or two passenger cars (O-73).
Front companies are used to effect the transit. The criminal network featured in investigation O-73 for instance availed of its own, internationally operating transport company, which was established in Poland. A cover load of lorry tyres was used to provide the transports with a legal status, while an administrator ensured that the right papers and digital documents were issued. In addition, use was made of crypto communications, jammers, and reconnaissance teams to hide the criminal activities. In other words, the subjects employed counterstrategies (O-73).

A ride can be "hitched" on the transport movements of others when transiting heroin or other drugs (police information). It also happens that a subject organises not only their own heroin transports, but also those of others (O-71).
The heroin, either by itself or in combination with other drugs, is transited in batches of a few kilos to up multiple kilos at once. Such transit may be systemic in nature. The criminal network identified in investigation O-73, for example, can be linked to multiple transports, including the transit of well over 100 kilos of heroin to the United Kingdom (O-73; cf. Vermeulen et.al., 2018).

7.2.3.6 Other aspects

Using crime script, we have set out the nature of the heroin market. This section will discuss a few other aspects that are also relevant: financial aspects, quality, and violence.

Financial aspects

Like other forms of illicit (drug) trade, the trade in heroin is an example of a market-oriented profit model: it takes advantage of the demand for heroin and profits are based on the difference between the procurement and sales price. As applies to cocaine, a major distance must be bridged between the producing countries and the European markets. Kruisbergen et al. (2012) argue that the ability to bridge this distance is the most important and profitable step in the cocaine trade and that those parties managing to do so rake in the big money (Kruisbergen et al., 2012). Even though the heroin wholesale and consumer prices are lower than those of cocaine (refer to Chapter 5), in the case of heroin, too, they increase manifold. The margins are huge - though it should be noted that each link in the chain costs money. Many links exist between the opium poppy fields in Afghanistan and the syringe or aluminium foil of the European user.

Prices

As the heroin market has remained stable, kilo prices in Europe have remained stable or even decreased slightly over the past few years (Europol, 2021a). There are, however, massive price differences between European countries (www.emcdda.

europa.eu). This may relate to the availability and/or the quality of the heroin in the various countries. The difference between wholesale and distributive trade may also play a part. First, a kilo of heroin is much cheaper in the wholesale trade than it is when sold as part of a (smaller) distributive batch (I-73). Second, the distance to be moved when transiting the heroin also seems to affect the kilo price. The greater the distance, the higher the price per kilo (I-71). Finally, the difficulty of transiting the heroin may play a part. It is, for example, more difficult to transit drugs by ferry to the United Kingdom or across the bridge linking Denmark and Sweden (Vermeulen, 2019).
The Netherlands is a transit country for the trade in heroin. This means that major shipments of heroin are imported into our country and exported again in smaller quantities. Refer to Figure 7.12. The wholesale kilo prices in the Netherlands are around EUR 9,000 to 10,000 (I-71; I-73;police information). The price drops to about EUR 8,000 for heroin of lower quality and rises to EUR 12,000 for high quality (I-71; police information). During the COVID-19 pandemic, market scarcity meant that prices temporarily hit some EUR 12,000 to 13,000 (police information).
The kilo prices in the distributive trade in the Netherlands are somewhat higher, averaging around EUR 12,000 to 14,000 (I-73). Distributive traders sometimes wait a while before selling the product to drive up the prices (I-71).

In Iran, the price for a kilo of heroin is between EUR 1,800 and 2,000, reaching between EUR 4,500 to 5000 in the transit country of Türkiye. Transport to the European Union would cost about EUR 2,500 per kilo. In the United Kingdom and Scandinavia, a kilo of heroin costs about EUR 20,000, while this goes up to about EUR 31,000 in Spain (Analysis Project Heroin data, Europol).

Based on the foregoing, the profit model of heroin trafficked via the Netherlands might look as presented in Table 7.16. The kilo prices are in euros.

Table 7.16. Heroin trade profit model in euros per kilo

Iran	1,800 - 2,000
Türkiye	4,500 - 5,000
Transport to the EU	About 2,500
Wholesale trade in the Netherlands	9,000 - 10,000
Distributive trade in the Netherlands	12,000 - 14,000
Distributive trade in United Kingdom and Scandinavia	About 20,000
Distributive trade in Spain	About 31,000

This means that a kilo of heroin costing EUR 2,000 in Iran has increased tenfold in value by the time it has been transited from the Netherlands to the United Kingdom and/or Scandinavia. In Spain, a kilo is worth more than fifteen as much.
Not all of this increase is formed by profit: Costs must be incurred to be able to effect the smuggle, however.

Like the trade prices, the consumer prices for heroin in Europe vary wildly (www.emcdda.europa.eu). The consumer prices have remained stable in the various countries in recent years, but are lower than in the previous years (EMCDDA, 2020a).[65] The EMCDDA (2021a) notes that the purity of the heroin in the EU is higher than it was a few years ago. Average purity is said to have increased by 23 percent between 2009 and 2019, while prices have decreased by 17 percent in the same period (EMCDDA, 2021a). The consumer thus gets more heroin for their money. A similar development has taken place with respect to cocaine. Given the increased purity and decreased prices, it can be assumed that (more than) enough heroin is available - in fact, the market may be more supply-driven than demand-driven.

Payments

The heroin trade seems to work on a "pay first, retrieve later" basis. Payments in the heroin trade are commonly effected in cash (police information), but also in kind, with subjects receiving a part of the batch in return for their work, such as arranging transportation (I-71). This appears to be a rather common way of payment, in particular within the European Union, where the sales markets are located. It does also occur in Ukraine, however, as this country has a consumer market as well and payments can thus be effected by handing over part of the shipment (I-73). Smaller players or subjects who have just entered the market are generally not paid out immediately. Instead, they are allowed to "hitch a ride" on a subsequent transport movement (I-71). Barter may also take place, especially between drugs. Heroin may be bartered against cocaine, cannabis resin, and various types of synthetic drugs. Expensive watches, too, are used in payment or exchange (police information).

Underground bankers may be engaged to make down payments, for example for new batches. Over the course of investigation O-71, for instance, it was found that money was transferred to Türkiye via jewellery shops. Companions also carried money in cash to the transit countries to pay for the customs formalities there (O-71). Underground banking also serves as a money laundering method; refer to Chapter 10.

Money exchange services may also be engaged. For example, a money changer in the United Kingdom was in investigation O-73 found to make sure that the pounds made were exchanged for euros before the money was retrieved and taken to the Netherlands (O-73).

While cryptocurrencies are used in the cocaine trade, this does not seem to occur in the heroin trade (I-71; police information).

Profits

We possess hardly any knowledge about the profits made in the heroin trade. While, as indicated, the margins are high, each link comes with a cost.

Nor do we have much insight into the destinations of the money made (I-71). The primary subject in investigation O-71 seemed to primarily reinvest the money in new batches and/or to pay off deals gone sour (I-71). For example, he was found to have a debt of well over 1 million euros to one of the suspects identified in investigation O-72.

Heroin trade may serve as a stepping stone towards the trade in cocaine. The money made is used as an investment to start importing cocaine (I-73).

65 Heroin base in the Netherlands costs between EUR 20 and 40 per gram. 90 percent of heroin consumers in the Netherlands take heroin base (www.jellinek.nl).

Previous investigations into the heroin trade in the Netherlands conducted in the context of the 2017 National Threat Assessment concluded that wholesalers can make significant profits. Money was found to be invested into land and real estate in the Netherlands and Türkiye, as well as in real estate (projects) elsewhere in Europe (Boerman, 2016).

Financing and links to terrorism-related organisations

The Kurdish *Partiya Karkerên Kurdistanê* (PKK), which fights for an independent Kurdish state, is sometimes linked to heroin trafficking from Afghanistan to Europe via Iran and Türkiye. This is because members of this organisation would themselves be involved in the smuggling in and via these countries, or heroin traders would have to pay the PKK to be allowed to use this smuggling route. Open sources provide few indications for any involvement of the PKK in the drug trade within the European Union (Basra, 2019). In the words of Europol: "In the EU, there is little evidence of systematic cooperation between criminals and terrorists" (Europol, 2021a, p. 25).

However, indications do exist that one or more persons linked to the PKK in the Netherlands also are or have been involved in the trade in heroin (I-75). Dutch subjects active in the heroin trade may sympathise with the PKK ideology and even donate money. We are unable, on the basis of the sources available to us, to determine whether certain criminal activities are performed specifically in order to fund an organisation like the PKK.

Subjects with a Kurdish background, Turkish (migration) background and/or Turkish-Kurdish background cooperate with each other, even within the same organised crime groups. The trade in heroin and making a profit are leading (I-71; I-73). Dutch subjects in the transit and countries of origin do seem to do business with persons affiliated with the PKK and/or Grey Wolves (a far-right Turkish organisation), however (police information).

Quality

As applies to cocaine, synthetic drugs, and cannabis, the quality of the heroin forms an important aspect of the trade. Experienced traffickers focus not so much on the colour of the heroin - in principle, it does not matter if it is light or dark in colour - but on its quality or potency. However, some buyers attach more importance to the appearance of the heroin than to its quality and prefer, for example, darker heroin. Even though business is, in principle, business, deals may fall short if a supplier believes a potential buyer is insufficiently knowledgeable about heroin. Buyers are willing to pay higher prices for greater quality. In order to assess the quality of the heroin, traders often first want to see photos and receive a sample. They sometimes have this sample tested by a junk (police information). In order to be able to sell a batch of lesser-quality heroin, it may be mixed with heroin of a higher quality (I71) Quality seems to be an important and distinctive characteristic that makes foreign traders choose to procure heroin from Dutch subjects (police information).

Violence

Europol (2021a) notes that violence between rival groups does occur in the heroin trade (Europol, 2021a). According to the interviewees of I-71, it would seem that less use is made of excessive violence in the wholesale trade in heroin via the Netherlands conducted by traders with a Turkish migration background than is the case for the trade in cocaine. Heroin traders would act more like entrepreneurs, albeit ones trading in

illegal goods. They can be held responsible when things go awry, which may prevent the occurrence of physical violence. Assault and kidnapping may be used to pressure others. The interviewees have not identified any killings (I-71). Five liquidation cases have been identified in the Netherlands between 2016 and 2019 that may be linked to possible combined heroin and cocaine trade, but no liquidations that relate only to the trade in heroin. As far as is known, no liquidation cases related to the trade in heroin have been identified in the Netherlands in 2020 and the first six months of 2021, either.[66]
Over the course of investigation O-73, it was found that someone trying to steal a batch of drugs from the group, was subjected to assault (O-73).

7.2.3.7 Conclusion

Heroin destined for the European market is produced mainly in Iran, Pakistan, Afghanistan, and, to some extent, in eastern Türkiye. Dutch subjects supply the essential chemicals and may even be involved in having heroin being produced in the countries of origin. To a very limited extent, heroin is also produced in the EU, including in the Netherlands.
Large batches of heroin are transported from Southwest Asia to the European Union via various smuggling routes. Traditionally, the most important routes are the Balkan route, the Caucasus route, the northern route, and the southern route. Dutch networks seem to predominantly use the northern route (running via Kazakhstan and Kyrgyzstan) and/or the Caucasus route and may import dozens to hundreds of kilos at once. The heroin is transported by road, by sea, and - in smaller quantities - by air.
The Netherlands forms an important heroin transit hub in Europe. Subjects in or from the Netherlands are involved with both the large-scale import of heroin and its transit to other, mainly European, countries. Subjects are apparently equally at ease importing cocaine from South America as heroin from Iran. The transit of heroin abroad often takes place in the context of polydrug trafficking. Some distribution also takes place within the Netherlands, even though no major consumer market exists here.
Import, distributive trade, and retail trade cannot be always cleanly distinguished, especially where Dutch criminal subjects are involved in multiple segments of the heroin market and are also active on other illegal markets.
The production of a heroin cutting mix for the European heroin market seems to be a purely Dutch activity, meaning that the Netherlands also plays an important role in this aspect of the heroin trade.
As holds for the other Dutch drug markets, all sorts of methods are used to conceal the trade: company-to-company schemes, front companies, switching loads or means of transport, etc. Money is inter alia moved by way of underground banking.
The trade in heroin is an example of a market-oriented profit model: it takes advantage of the demand for heroin and profits are based on the difference between the procurement and sales price. The trade via the Netherlands may lead to the purchase price increasing tenfold; sometimes, the same kilo has even become worth fifteen times the original price once it had reached its final destination. It should, of course, be noted that the difference is not all profit, as certain costs are incurred in effecting the smuggle.

66 Murder/manslaughter in the Netherlands data file 2016 – 2021, Analysis and Research Department, DLIO, Central Unit. Consulted on 4 October 2021.

As the purity of heroin has increased on the European consumer markets, while the prices have gone down, we may assume that (more than) enough heroin is available. As such, the heroin market may be supply-driven, instead of demand-driven.
The trade continued as usual during the COVID-19 pandemic, also making use of different routes. The quantities on offer did decrease for a while, though, causing the kilo prices to rise.
Quality seems to be an important and distinctive characteristic that makes foreign traders choose to procure heroin from Dutch subjects and from the Netherlands. Quality might also be a reason for batches to be smuggled by Dutch networks via the Netherlands, even if such batches were initially smuggled through the country they are ultimately sold in.

7.2.4 Criminal networks and subjects

Various players are involved in ensuring that the heroin produced in Southwest Asia reaches the sales markets in Europe. In this section, we will discuss the criminal networks and subjects active in the heroin market in more detail. We will first describe the criminal networks and subjects in Europe, before discussing the (international) networks and subjects in the Netherlands. We will in this connection also address the primary roles as denoted in the various stages of the heroin crime script.

7.2.4.1. Criminal networks and subjects in Europe

The criminal networks involved in the trade in heroin towards the European Union may be comprised of members holding various nationalities, both from within and without the EU (EMCDDA & Europol, 2019; Europol, 2021a). The import of heroin into Europe seems to be controlled primarily by criminal networks with a Kurdish and/or Turkish (migration) background. They procure their heroin in Iran, Pakistan, and elsewhere (I-73). Various networks in Europe may directly do business with the same suppliers (I-71). Such clients or wholesalers are active in the Netherlands, Belgium, and Germany and have known each other for years. They are not competitors but serve different markets (I-73).
Europol (2021a) notes that ethnical ties may play a role: “For instance, suspects involved in the trafficking of heroin to the EU often have a Kurdish ethnic background, but may variably hold Turkish, Iraqi or Iranian nationality as well as EU citizenship.” This renders it difficult to separate networks on the basis of the nationalities held (Europol, 2021a, p. 51).
Heroin traffickers with a Kurdish background are able to communicate with the suppliers in the countries of origin of heroin. The ability to speak the same language seems to play a more important part in the cooperation than, say, family ties do. Kurdish is the primary trade tongue in the context of the heroin trade in Iran (I-73), while most communications in the context of the further transit to Europe are conducted in Turkish. Subjects having a Kurdish background are often able to communicate in both Kurdish and Turkish (I-73). Criminal networks with a Turkish (migration) background are responsible for the lion’s share of the import, transit, and distribution. They sometimes outsource certain activities to other networks (EMCDDA & Europol, 2019).
The import of the heroin into the EU is facilitated in countries like Belarus, Ukraine, Georgia, and Moldova. The criminal heroin networks make use of bona fide storage and transshipment locations in those countries, including warehouses and (parking) garages, that are usually owned by persons with a Kurdish and/or Turkish migration background. As the same language is spoken - Turkish - it is relatively easy to establish

contact and use the said facilities. Such contacts are business-like. No family or friendship ties exist and the owners and employees are not involved in the heroin trade (I-73).
In addition to trading in heroin, these subjects have also increasingly gotten involved in the trade in cocaine and synthetic drugs. Networks involved in the import of heroin may be - and sometimes have been for years - involved in the import of cocaine (I-71; I-73). According to the EMCDDA and Europol (2019), Albanian-speaking criminal networks, too, are involved in the import of heroin to Europe and its transit through the continent. They are said to control parts of the Balkan route and to have, in recent years, expanded their activities to distributing the heroin, in particular in the United Kingdom. Too, they are said to have taken over part of the wholesale trade from the criminal networks with a Turkish (migration) background. Networks with a British and/or Pakistani (migration) background are responsible for the import of heroin into the United Kingdom. Networks with a West African (migration) background, too, are said to play a role in in heroin trafficking. Finally, the EMCDDA and Europol (2019) identify the Netherlands as a distribution hub for heroin in Europe. Dutch criminal networks cooperate closely with other criminal networks (EMCDDA & Europol, 2019).
Criminal networks may be involved in both the import of heroin and the import of cannabis resin and/or cocaine. Moreover, the same networks have been involved in both the export of acetic anhydride and the import of heroin for years now (I-73).

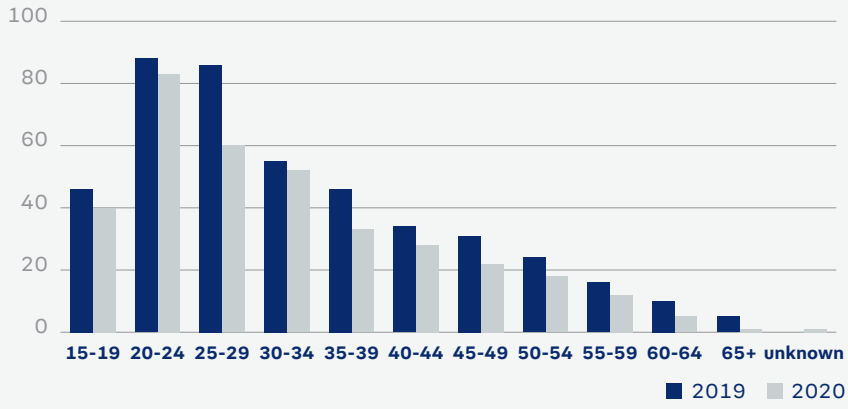
The distributive trade and further transit of heroin towards the retailers in the various EU countries mainly take the form of polydrug trade. While these criminal networks may still include members with a Kurdish and/or Turkish (migration) background, they are composed mainly of members with various nationalities and/or backgrounds, also depending on where the heroin is transited from. Albanian-speaking criminal networks are also active in the distributive trade (I-73). Like Albanian-speaking networks, criminal networks with a Serbian or Bulgarian background often procure heroin from criminal networks with a Turkish (migration) background (EMCDDA & Europol, 2019).

7.2.4.2. Criminal networks and subjects in the Netherlands

To consider the extent to which the networks and subjects active in Europe as referred to by the EMCDDA and Europol (2019) are also seen in the Netherlands, we checked the Summ-IT file of heroin-related criminal investigations over the years 2019 and 2020 and the suspects registered therein. In both years, about 15 percent of suspects had a Turkish (migration) background. The majority of them held both Dutch and Turkish nationality. Every now and again, suspects with a West African (migration) background were linked to heroin trade in the Netherlands (by way of couriers). A few suspects originate from the Balkans. Almost no Albanian-speaking criminal suspects have been registered in the Netherlands in the context of the heroin trade (Summ-IT). While Dutch heroin traffickers sometimes do business with Albanian-speaking customers, they also trade with individuals from other European countries (police information).
Suspects holding other nationalities have also been registered in 2019 and 2020, but again, this concerned a few incidental cases only. A few more suspects holding Polish nationality have been registered in 2019, however. The majority of them were suspects in the O-73 criminal investigation.
Well over 80 percent of suspects in 2019 held the Dutch nationality; for 2020, this concerned close to 90 percent.

A total of 441 suspects were registered in Summ-IT in connection with heroin-related crime in 2019, and 354 in 2020. The majority of them - 90 percent in 2019 and 93.5 percent in 2020 - were men.

Figure 7.17 Ages of suspects of heroin-related crime



Source: Summ-IT.

Figure 7.17 shows that the majority of the suspects is aged between 20 and 30. Most of the suspects were involved in polydrug cases, ranging from the wholesale to the street dealer level. Refer to Table 7.18.

Table 7.18 Total number of suspects of heroin-related crime

	Heroin and other drugs	Only heroin	**Total heroin-related**
2019	**386**	**55**	**441**
2020	292	62	**354**

Source: Summ-IT.

A full 87.5 percent of the total number of suspects of heroin-related crime was involved in polydrug cases in 2019. This figure stood at 82.5 percent in 2020. Some of these suspects also show up in the overviews of suspects provided in Chapters 4, 5, and 6.

The heroin trade - and the trade in acetic anhydride - via the Netherlands forms part of the global drug market, and Dutch subjects and networks are not only active within the Netherlands but also operate on the transnational level and/or from abroad. In addition, international networks may use the Netherlands as a drug transit hub. The Dutch subjects and networks operate on the principle that business is business. They often trade other drugs alongside heroin. And should the opportunity arise to trade in cigarettes and weapons, they will jump on it. Barter may also take place, with heroin for example being exchanged for cocaine. In addition to trading in heroin, Dutch subjects and networks may also be involved in the production of heroin in the Netherlands or in the countries of origin. They can also be active on both the wholesale and the distributive level (I-72; O-71; O-72; O-73; O-75; police information).
As a consequence, the various drug markets crime scripts may overlap and, in many cases, no clear division of roles exists. An importer of heroin may at the same time be a distributive trafficker and a heroin production client. An exporter of acetic anhydride may at the same time be a heroin importer. A heroin importer may also be an importer of cocaine from South America, etc. It is also possible for the various trade-related and facilitator roles - including those of client, logistics services provider, and transporter - to be organised within a single criminal network (O-73).
A varied range of products and roles thus exists on the heroin market.
Criminal networks and subjects trade in various types of drugs and other illegal products. Sometimes acting within a network and sometimes acting on their own, they fulfil various roles within the same or various markets.
These generalist heroin-related networks and subjects engage specialists to arrange certain things for them when trading in heroin and acetic anhydride. Such specialists are facilitators, such as corrupt contacts at border crossings, logistics services providers, (lorry) drivers, administrators, and financial facilitators arranging the (underground) transfer of money and exchange of cash. Heroin producers in the Netherlands must also avail of a certain level of specialisation to be able to convert morphine into heroin.

Not only do very close links exist between subjects involved in the wholesale and distributive trade in heroin (police information), they also have close connections with subjects involved in trafficking of other drugs - or are themselves active on those markets (police information). One subject involved in, inter alia, the trade in acetic anhydride and BMK (O-72), for example, had connections with the primary suspect in investigation O-71, who was involved in the large-scale import of heroin and cocaine. What's more, he was still owed a million euros by this suspect.
Various criminal networks engage the same facilitators. One of the subjects identified in investigation O-74 into the import of over 1,200 kilos of heroin in sea containers, for example, engaged an administrative firm used by multiple rogue companies and subjects involved in the large-scale import of cocaine. During the same investigation, it was found that the driver who was to retrieve the shipment of heroin from the port of Antwerp was also engaged to retrieve batches of cocaine from this port (O-74).
The degree of interconnectedness is such that heroin traders must mainly be considered independent entrepreneurs, working closely with this person in one case and with that person in another, even though cooperation with the same partners for years on end also takes place (I-71; police information). This means that persistent offenders and persistent networks also exist (cf. Kruisbergen et al., 2019).

On the wholesale level, both as concerns the import of heroin and the export of acetic anhydride, Dutch subjects with a Turkish (migration) background are often identified (I-71; I-73; police information; Summ-IT). When doing business in Türkiye, family connections may play a part. In addition, social relationships with persons in Iran may also exist (police information). Such relationships may provide access to an important transit country like Türkiye or a production country like Iran (cf. Kleemans et al., 1998). Language also plays an important role in this context. People who speak the same language do business more easily (Vermeulen et al., 2018). For example, the primary suspect in investigation O-71 was able to get a lot of things arranged via persons with a Turkish (migration) background present in the source and transit countries. This case concerned the import of heroin by land and sea. He also outsourced criminal services to be provided in the Netherlands, such as underground banking (via jewellers) and transport, to people with a Turkish (migration) background (I-71; O-71).
The supply of the mixture of caffeine and paracetamol for cutting heroin (production and trade), too, seems to be a business persons with a Turkish (migration) background often play a part in (I-73).

Even though Dutch heroin networks operating on the wholesale level include members with a Turkish (migration) background, activities are performed by various groups of people, including internationally: the networks are highly fluid in nature. Dutch subjects of various backgrounds cooperate among themselves and with foreign subjects, making use of each other's contacts. The primary suspect in investigation O-71, for instance, also arranged heroin transports for third parties (I-71; O-71; police information).
The trade in heroin and/or the export of acetic anhydride may be important criminal activities, but they do not necessarily form the core business of Dutch subjects. They may, for example, also be involved in the import of cocaine (O-71; O-74; police information) or the trade in synthetic drugs. Subjects identified in investigation O-72, for instance, were involved in the production of heroin and PMK in addition to trading in acetic anhydride and synthetic drugs.
Dutch subjects may be active on both the wholesale and distributive trade levels, including the transit abroad.

As is the case on the wholesale level, the Dutch drug networks active on the distributive trade level only rarely consist of closed, homogenous groups of one specific background. Distributors and buyers are inter alia able to deal with each other via reliable contacts, crypto communications networks, meeting spaces (like coffeehouses), social lines and/or their colleagues (I-71; police information; Vermeulen et al., 2018; Vermeulen, 2019). People of various nationalities cooperate or form joint networks. In investigation O-74, the German pilot and co-pilot flew to Teuge airport from Germany to retrieve suitcases packed with heroin from their Dutch client (O-74). Dutch subjects do business with buyers in places like Spain, the United Kingdom, Scandinavia, Ireland, and Germany (police information).
International networks may also be active on Dutch soil. One network that was mainly comprised of subjects holding Polish nationality and instructed by a subject holding Iranian nationality, for example, transited heroin, cocaine, cannabis resin, and herbal cannabis via the Netherlands to Scandinavia and the United Kingdom. The network was not active only in the distributive trade, but also imported cocaine by sea from

South America. Two Dutch members of the network leased storage sites for the drugs and arranged accommodations for the Polish members of the network (O-73).

In the context of the transit of heroin from the Netherlands abroad, too, Dutch subjects are at home in various markets. This is due, on the hand, to them often focusing on multiple markets. A distributive trader may, for example, export heroin to Denmark, Scotland, and France (police information). On the other hand, this is due to Dutch distributive traffickers that operate on the international level often also transiting drugs other than heroin. They incidentally trade synthetic opioids with countries like Canada (police information). Distributive traders may also act as importers of, for example, ketamine from India (police information).

7.2.4.3 Conclusion

The heroin trade and the trade in acetic anhydride via the Netherlands are part of the global drug market, and Dutch subjects and networks are not only active within the Netherlands but also operate on the transnational level and/or from abroad. In addition, international networks use the Netherlands as a heroin transit hub. The Dutch subjects and networks operate on the principle that business is business. They often trade other drugs and other illegal products alongside heroin. Dutch subjects and networks may also be involved in the production of heroin in the Netherlands or having heroin being produced in the countries of origin. They may be active both on the wholesale and the distributive trade levels.

The heroin-related networks and subjects engage specialists to arrange certain things for them when trafficking heroin and acetic anhydride. Sometimes, these generalists engage the same facilitators.

Even though Dutch heroin networks operating on the wholesale level are often comprised of members with a Turkish (migration) background, activities are performed by various groups of people, including internationally: the networks are highly fluid in nature. As is the case on the wholesale level, the Dutch drug networks active on the distributive trade level only rarely consist of closed, homogenous groups of one specific background.

A high level of interwovenness and interconnectedness exists.

7.3 Illegal synthetic opioids

Heroin and synthetic opioids have a similar and addictive effect. Synthetic opioids can be produced by the legal pharmaceutical sector but may also derive from criminal circles, which either conduct an illegal trade in stolen and/or diverted (modified) synthetic opioid variants or illegally produce synthetic opioids, or synthetic drugs. These latter drugs are new psychoactive substances (NPS) (Visser, 2020; Van Laar et al., 2021). As was already noted in the introduction to this chapter, in contrast to opiates, synthetic opioids are purely chemical products. Synthetic opioids can be divided in three categories: fentanyl, fentanyl-like synthetic opioids (including carfentanyl) and non-fentanyl-like synthetic opioids (including U-47700) (Van Laar et al., 2021). Oxycodone, similar to heroin, is a semi-synthetic product (toxicologie.org). As oxycodone, like fentanyl, is used as an analgesic and the distinction between semisynthetic and fully synthetic opioids is becoming increasingly blurry, it is included

in this section as an (illegal) synthetic opioid (Van Laar et al., 2021; toxicologie.org). Synthetic opioids (and oxycodone) are covered by the Dutch Opium Act (List I).[67]
We will first consider the primary markets for synthetic opioids trafficked via the Netherlands: the European and Dutch consumer markets. Next, we will address the size and nature of the market for illegal synthetic opioids on the global, European, and national levels. Due to its close relation with the synthetic drug market as detailed in Chapter 6, we will in this section restrict ourselves to a general description and will not use a crime script. Precursors and essential chemicals used in the production of illegal synthetic opioids, too, are discussed in Chapter 6.

7.3.1 Size of the illegal synthetic opioid market

The market for illegal synthetic opioids, too, is one of supply and demand. In this section, we will first address the consumer markets (the demand) and then the seizure figures, as the latter provide an indication of the total supply.

7.3.1.1 Demand - consumer markets

The use of synthetic opioids can have a major health impact. Even very small quantities can result in a (fatal) overdose and the substances are usually more potent than heroin is. Fentanyl, for example, is thirty to fifty times as potent as heroin. In addition, these substances are highly addictive (Van Laar, 2021). Synthetic opioids are in particularly high demand among persons who are long-term problem drug users, not so much among those who consume drugs only recreatively (Van Laar et al., 2021).[68] Synthetic opioids seem to be consumed predominantly to make physical, emotional, and social problems more bearable (UNODC, 2021a3).
Depending on the potency of the product, a user's quantity is very small: about 1.7 to 2 milligrams. Illegal synthetic opioids take the form of powders, tablets and capsules, plasters, and fluids. In addition, they are consumed by smoking and by ingesting blotters (EMCDDA, 2020a). In the latter case, the synthetic opioids, in powder form, are wrapped in blotter paper (removed from plasters or otherwise), similar to how amphetamine can be used (drugsforum.nl; Nabben & Benschop, 2020). Fentanyl is sometimes mixed with heroin. This combined drug is referred to as "China blue" (www.urbandictionary.org). This seems to be a relatively new product (police information).

In 2019, 0.6 percent of people aged 15 to 64 around the globe had used medical and/or illegal synthetic opioids for non-medical reasons within the last year (UNODC, 2021a2).
The consumption of (illegal) synthetic opioids is considered a crisis in the United States and in Canada (DEA, 2020; Van Laar et al., 2021). Initially, the market in the United States shifted from heroin to synthetic opioid consumption. By now, a full-blow epidemic exists, with both heroin and (illegal) synthetic opioids being used (in combination or otherwise). In 2019, 3.6 percent of people aged 15 to 64 in the United States had used medical and/or illegal synthetic opioids for non-medical reasons

67 Lighter pharmaceutical opioids, like tramadol, are not covered by the Dutch Opium Act and are not considered in this section. They can, however, cause problems. In North, West, and Central Africa, for example, problem use of tramadol is increasing and, in consequence, so is the illegal market (UNODC, 2021a3).
68 The same also applies to cannabinoids - refer to Chapter 4.

within the last year (UNODC, 2021a2). The number of fatalities due to an overdose has increased more than tenfold in the 2012-2018 period, from 2,628 deaths in 2012 to 31,335 in 2018 (DEA, 2020). In Australia, too, consumption of legal and illegal (non-medical) opioids had become increasingly common, albeit that a downward trend is visible there since late 2018 (ACIC, 2021).

As was noted in section 7.2.2.1, the EMCDDA keeps combined data on opiate and opioid use in the European Union. In 2019, 0.35 percent of people aged 15 to 64 in the EU were problem opioid and opiate users. The consumption of (illegal) synthetic opioids is relatively rare in the EU (EMCDDA, 2021a). An exception to this rule is Estonia, where illegal synthetic opioids have been dominating the drug consumption market for years now (Van Laar et al., 2021).
In some Member States, heroin consumption has partially given way to the consumption of synthetic opioids, both due to their greater potency and to their lower prices (Europol, 2021a). In Finland and Estonia, synthetic opioid consumption even seems to have completely replaced heroin use (UNODC, 2021a3).
Few people in the European Union have themselves treated for problem NPS use, including the use of synthetic opioids. In 2018, the treatment of problem synthetic opioid use did make up 16 percent of all cases related to opioids/opiates, though (Van Laar et al., 2021).
The EMCDDA (2021a) assumes that the registration of fatalities due to consumption of fentanyl or fentanyl-like synthetic opioids in the EU is not optimal, meaning that the number of fatalities due to these substances may be underestimated. It does find that the number of fatalities in Estonia, Sweden, and Germany has decreased between 2017 and 2018. While an increase was visible in Finland, the numbers concerned are low (four in 2017 and eleven in 2018) (EMCDDA, 2021a).

Though the consumption of (illegal) synthetic opioids is relatively rare already in the EU, in the Netherlands, illegal synthetic opioids are even less often discovered. The Drug Information and Monitoring System (DIMS) has not discovered any U-47700, fentanyl, or fentanyl-like substances in 2019. Even though no complete image can be generated on the basis of the DIMS, the Trimbos Institute does assume that recreative use of synthetic opioids in the Netherlands is not increasing (Van Laar et al., 2021).[69]
The Trimbos Institute does not possess figures on the consumption of (illegal) synthetic opioids among persons aged 15 to 64 in the last year, at any point in the past and/or on a problematic basis.
The number of patients in the Netherlands who have been prescribed medicinal (synthetic) opioids has significantly increased in the 2003-2018 period, though. This is likely caused by an amendment in the guideline for the treatment of postoperative pain adopted in 2013. In 2019, this rising trend was broken due to a drive to reduce the extent of prescribing this medication irresponsibly, initiated by the Ministry of Health, Welfare and Sport in an attempt to prevent the abuse of medicinal opioids (Van Laar et al., 2021).

69 The picture painted by the DIMS is based on recreative users who have their drugs tested. Problem users will not be identified in this manner.

7.3.3.2 Supply - seizure figures

It is difficult to provide the global illegal synthetic opioid seizure figures. The UNODC reports them under the heading seizure of pharmaceutical opioids for non-medical use. This heading also includes other substances, however, including tramadol, which is not covered by the Dutch Opium Act and therefore is not discussed in this section. The UNODC (2021a3) states that, of the total quantities of pharmaceutical opioids seized in 2019, 2 percent concerned fentanyl and fentanyl-like synthetic opioids. It was not possible to obtain the seizure figures of non-fentanyl-like synthetic opioids and oxycodone on the basis of the UNODC report.

This would mean that 4,560 kilos of the 228,000 kilos of pharmaceutical opioids seized in 2019 concerned fentanyl and fentanyl-like synthetic opioids.[70] Table 7.19 provides an indication of the quantities of fentanyl and fentanyl-like synthetic opioids seized in the 2017-2019 period. At the moment this report was drawn up, no figures covering 2020 are known. The lion's share - a full 98 percent - of the seizures in the 2015-2019 took place in the United States (UNODC, 2021a3).

Table 7.19. Global seizures of fentanyl and fentanyl-like synthetic opioids, in kilos

	fentanyl and fentanyl-like synthetic opioids
2017	2,192
2018	2,850
2019	4,560

Source: UNODC, 2021a3.

According to the UNODC, the average seizure figures in Europe - and in particular in Eastern Europe - in the 2015-2019 period amounted to 1.3 percent of the global total. The EMCDDA keeps records of the seizures of fentanyl and fentanyl-like synthetic opioids in the European Union. For 2017 and 2018, figures are available covering various measurements and forms; for 2019, only the number of kilos seized is known. Again, no figures covering 2020 are available from the EMCDDA at the moment this report was drawn up. Refer to Table 7.20.

70 As a result, the global 2019 pharmaceutical opioid seizure figures (228,000 kilos) were much higher than the heroin seizure figures (96,000).

Table 7.20. Fentanyl and fentanyl-like synthetic opioids seized in the EU

	Kilo	Liter	Tablets	Plasters
2017	14.3	1.9	10,551	2291
2018	6.2	0.1	19,800	587
2019	15	-	-	-

Source: EMCDDA, 2021a; EMCDDA, 2020; EMCDDA 2019.

Dutch seizure figures

The request made to the Royal Marechaussee and Customs to provide the seizure figures covering the 2017-2020 period included the figures on fentanyl and oxycodone. The Royal Marechaussee possessed no seizure figures covering synthetic opioids in that period. This may be because synthetic opioids are included in the categories "other/unknown opiates" and/or "other/unknown synthetic drugs" used by the Royal Marechaussee. In the category "other/unknown opiates", the Royal Marechaussee registered 1 kilo of codeine in 2018. A total of 20,15 kilos were between 2017 and 2020 registered under "other/unknown synthetic drugs", featuring the additional description "polymix". No fentanyl and/or oxycodone seizures were listed. The Customs data, too, do not include fentanyl and/or oxycodone seizure figures.

The Police in 2020 seized 1.28 kilo of fentanyl, all during one action. According to the NFI calculations, this would be enough to produce 720,000 (non-medical) user's quantities (Summ-IT). This means that a relatively small quantity suffices for generating major profits.

Police investigations in Summ-IT

The police conducted a total of 1,086 investigations into drug-related crime in 2019, and 968 in 2020. Five of the investigations conducted in 2019 (0.55% of the total) was related to fentanyl and/or oxycodone. Only one case was focused on fentanyl only. In all other cases, other drugs, too, were involved. The cases related to distributive and/or online trade.

In 2020, two criminal investigations were conducted that may concern fentanyl-related substances (0.2% of the total). However, it was in both cases not clear whether the substances concerned were fentanyl or (meth)amphetamine-related. The most striking case in 2020 concerned the seizure of 1.28 kilo of fentanyl. Major quantities of a precursor were discovered at the same time. Refer to Table 7.21.

Table 7.21. Number of criminal investigations into fentanyl/oxycodone

	Fentanyl / oxycodone	Polydrug	**Total**
2019	5	4	**1086**
2020	1	1	**968**

Source: Summ-IT.

7.3.2 Nature of the illegal synthetic opioid market

Illegal synthetic opioids are classified as new psychoactive substances (NPS). In 2019, over four hundred new NPS were identified on the European drug market. This figure includes multiple synthetic cannabinoids and eight synthetic opioid variants. The potent isotonitazene - a non-fentanyl-like synthetic opioid - was first discovered in Europe in that year, for example. In addition to the fact that new variants spring up regularly, making the phenomenon a complex one, the potent effects of these substances mean they form social and health risks. The introduction of new NPS does seem to have levelled off a bit in the past few years, however (Europol, 2021a; EMCDDA, 2020a).

As was previously indicated, illegal synthetic opioids may have a legal origin. This concerns the illegal trade in stolen and/or diverted synthetic opioid variants. In addition, illegal production of synthetic opioids also takes place: synthetic drugs (Visser, 2020). While opiates (mainly heroin) for the European markets mainly originate in Southwest Asia, synthetic opioids can in practice be produced anywhere and, thus, stem from anywhere. However, they are produced mainly in Southeast and East Asia.

The illegal trade is increasingly conducted online. The synthetic opioids are then sent by post from, inter alia, India and China (UNODC, 2021a3). Fentanyl and fentanyl-like synthetic opioids produced illegally in Russia were smuggled to the Baltic States a few years ago. However, no more such shipments have been identified in 2018 and 2019. In connection with this decreased availability, the number of fentanyl-related deaths in Estonia has dropped sharply (UNODC, 2021a3).

Fentanyl and fentanyl-like synthetic opioids in the EU commonly originate in China and are traded online, including via the dark web. In addition, multiple production locations have been discovered in Estonia, Lithuania, France, and Ukraine in the past few years (UNODC, 2021a3).

No illegal synthetic opioid production locations have been discovered in the Netherlands in the period from 2017 through the first six months of 2021. Precursors and essential chemicals used to produce synthetic opioids have been seized in this period, however (refer to Chapter 6 for more information). The 1.28 kilo of fentanyl seized in the Netherlands in 2020 very likely resulted from illegal production. It is however not known where this batch was produced (Summ-IT).

7.3.3 Criminal networks and subjects

In the United States, the heroin and synthetic opioid consumer markets are interconnected and it has been found that the same criminal networks trade in both drug types. The export of both heroin and fentanyl and fentanyl-like synthetic opioids

to the United States is also arranged by the same Mexican criminal networks. According to the UNODC (2021a3), the European consumer markets are more strictly separated, meaning that so are the networks trading in either heroin or in synthetic opioids. The UNODC (2021a3) does, however, assume that in Finland and Estonia, synthetic opioid consumption has completely replaced heroin use (UNODC, 2021a3). In other Member States, too, heroin consumption is found to have partially given way to the consumption of synthetic opioids (Europol, 2021a). This may imply that in Europe, as well, both heroin and synthetic opioids are trafficked by the same networks, or that networks shift from trading in one drug to trading in the other.

Dutch subjects are found to sometimes trade in both heroin and illegal synthetic opioids. The trade in illegal synthetic opioids, including fentanyl and oxycodone, by Dutch subjects does appear to be a niche in the drug market, though. Fentanyl sometimes originates in China or India and very incidentally in an EU country. A single major trader may for example also import ketamine from India and heroin from Iran, in addition to fentanyl from China. Dutch distributive traffickers that operate on the international level also trade in drugs other than heroin. They incidentally trade synthetic opioids, including with Canada. The same subjects also export synthetic opioid precursors to Canada. The trade in illegal synthetic opioids is sometimes combined with the trade in illegal medication. Dutch subjects sometimes trade the China blue combined drug (fentanyl and heroin) (police information).
All criminal investigations with a link to fentanyl and/or oxycodone registered in Summ-IT (2019) related to distributive trade. Three of these cases concerned trafficking via the dark web. In view of the size of the batch of fentanyl seized in 2020 (1.28 kilo), such trade may be conducted on both the wholesale and the distributive level.

It would seem that Dutch subjects and networks trading in illegal synthetic opioids are predominantly polydrug traders. Because of the dangers involved in consuming illegal synthetic opioids, which are also known to the Dutch criminal subjects, some drug traders refuse to trade in it (police information). In the 2019-2020 period, a total of six suspects identified in criminal investigations related to oxycodone or fentanyl were registered in Summ-IT. All six of them are men. Three of the subjects were aged between 40 and 44, and one of them was aged between 45 and 49. Even though no clear image can be obtained from the limited data set, the majority of suspects seems to be slightly older than suspects in heroin-related cases.

7.3.4 Conclusion

Synthetic opioids can be divided in three categories: fentanyl, fentanyl-like synthetic opioids and non-fentanyl-like synthetic opioids. The semisynthetic product oxycodone has been included in this section as an (illegal) synthetic opioid.
The use of synthetic opioids can have a major health impact. Very small quantities can result in a (fatal) overdose and the substances are usually more potent than heroin is. They may also be highly addictive. Synthetic opioids are in particularly high on demand among persons who are long-term problem drug users, not so much among those who consume drugs only recreatively.
On the global level, the number of kilos of fentanyl and fentanyl-like synthetic opioids seized more than doubled over the period from 2017 through 2019. The majority of the seizures took place in North America (United States and Canada), which correlates to the large consumer markets existing there. The demand for and supply of illegal

synthetic opioids is of a totally different order of magnitude in the European Union: the consumption of illegal synthetic opioids is relatively rare in the EU, and in particular in the Netherlands. One batch of fentanyl was seized in the Netherlands in the 2017-2020 period. That said, this batch, totalling 1.28 kilo, could be used to produce 720,000 (non-medical) user's quantities.

In the United States, the user markets for heroin and illegal synthetic opioids overlap, and the same criminal networks trade in both types of drugs. Heroin consumption is partly being replaced by synthetic opioid consumption in some European Union Member States. In Finland and Estonia, its consumption even seems to have completely replaced heroin use. This may imply that, similarly to the situation in the United States, the same criminal networks in Europe might also trade or start trading in both heroin and synthetic opioids or might shift from trading in heroin to trading in illegal synthetic opioids.

Dutch subjects are found to sometimes trade in both heroin and illegal synthetic opioids. Those subjects and networks trading in illegal synthetic opioids predominantly seem to be polydrug traders. The trade in illegal synthetic opioids, including oxycodone, does appear to be a niche market, when compared to the trade in other drugs.

No illegal production of synthetic opioids has been identified in the Netherlands in the past few years. Precursors and essential chemicals used to produce synthetic opioids have been seized in this period, however, which may indicate that illegal production does take place. Only a little needs to be produced in order to generate major sales.

8

Other drugs

8. Other drugs

Central Intelligence Department, Central Unit's Intelligence Centre

8.1 Introduction

The markets in cannabis, cocaine, synthetic drugs, and heroin form the largest drug markets in the Netherlands. However, these are not the only drugs traded in or via the Netherlands. In this chapter, we will discuss two types of drugs with possible (criminogenic) consequences for public order and security in the Netherlands: nitrous oxide and khat. With respect to nitrous oxide, both consumption levels and quantities consumed have increased, creating certain risks. The number of incidents involving nitrous oxide have also sharply increased in the past few years. While less information is available concerning the consumption of khat, the number of seizures have gone up since 2020.

8.2 Nitrous oxide

Nitrous oxide is a colourless, sweet smelling and tasting gas. Its active substance is dinitrogen monoxide. There are multiple applications for nitrous oxide. As far back as the 18th century, it has been used in medicine as a narcotic or short-term painkiller. In addition to its use in medicine, technical, gastronomic, and recreative applications of nitrous oxide exist as well.

Ever since 2016, when nitrous oxide was, in consequence to European legislation, covered under the Dutch Commodities Act, the recreative use of nitrous oxide has increased. Recreative use of the substance is commonly by way of a balloon. The gas is injected in the balloon with a cream dispenser or tank and then inhaled. Inhaling nitrous oxide causes a short, strong high that lasts between one and five minutes. The effect is near-instantaneous. During the high, the user feels their muscles relax and pain ebb away. Nitrous oxide decreases consciousness and alters perception: both images and sounds are processed differently. Nitrous oxide consumption and the desire to constantly be high may have an addictive effect.

Common unwanted effects occurring during or shortly after nitrous oxide use include dizziness and balance disorders, confusion, headaches, nausea, and fainting. These effects may relate to a shortage of oxygen in the brain. Chronic nitrous oxide use may cause vitamin B-12 shortage. In the long term, nitrous oxide use may cause neurological damage, including paralysis (Van Goor, 2020).

8.2.1 Developments in consumption

In 2020, 7.4 percent of Dutch nationals aged 18 and over had used nitrous oxide once in their life (Van Goor, 2020). Nitrous oxide is mainly used by youths and young adults, aged 16 through 29, in the nightlife context. According to the Trimbos Institute's 2020 Large Nightlife Survey, over half of the people going out had used nitrous oxide at one point. The percentage of students in vocational education who had used nitrous oxide

at least once in their life has increased from 20 in 2015 to 30 in 2019. 10 percent of all students aged 12 through 16 had used nitrous oxide at least once in 2019, as opposed to 7.8 percent in 2015 (Monshouwer et al., 2021).

The rise in the use of nitrous oxide tanks (as opposed to individual cartridges) causes more nitrous oxide to be consumed each use, resulting in a greater risk of side effects or problem use.
The reported number of health complaints registered by the National Poisons Information Centre (*Nationaal Vergiftigingen Informatie Centrum – NVIC*) in the context of "non-medical consumption" of nitrous oxide once again increased significantly in 2020. In total, 144 exposures were reported in 2020, mainly among young adults aged below 30. Of particular note is the increase in the number of reports about regular nitrous oxide use or the consumption of major quantities (50 balloons or more in one session). In 2015, 13 such reports were made; in 2018, 54. This number had more than doubled in 2019. Half the number of reports concerned the consumption of extreme quantities of nitrous oxide, but complaints may also arise when smaller quantities are consumed (NVIC, 2021). The consumption of nitrous oxide impacts driving ability and its use regularly causes problems in traffic. In the past few years, nitrous oxide use has caused dozens of fatal accidents (https://nos.nl).

8.2.2 Size - National law enforcement database BVH quick scan

In order to obtain an overview of the number of nitrous oxide-related incidents, we performed a quick scan on the basis of the national law enforcement database BVH of the police. The scan was performed of a select number of social categories, to wit, nuisance / becoming unwell, youth nuisance, vandalism, and traffic cases. This means that not all incidents registered in BVH have been analysed. Nitrous oxide-related incidents involving nuisance or persons becoming unwell were most prevalent (IAT, 2021).
The number of incidents has risen sharply since 2017. Despite the COVID-19-related measures in place, the number of incidents in 2020 more than doubled from the 2019 level. Compared to 2017, the number of incidents in 2020 was thirteen times as high. Refer to Table 8.1.

Table 8.1. Nitrous oxide-related incidents.

	Number of nitrous oxide-related incidents in the Netherlands
2017	2,528
2018	4,844
2019	14,287
2020	33,134

Source: BVH.

8.2.3 Policy developments

At the moment this report was drawn up, no national ban on the consumption of nitrous oxide existed. Some municipal authorities have, however, banned the consumption of nitrous oxide in public spaces by way of a general municipal bylaw. Awaiting the national ban, the police, acting on the basis of the action framework, only takes enforcement action under the general municipal bylaw in case of nuisance. The mere possession or use of nitrous oxide is not subject to enforcement action. Nitrous oxide discovered is not, in principle, seized. In addition to taking enforcement action under the general municipal bylaw, the police may, on the basis of current legislation, act against nitrous oxide use in traffic by invoking Sections 5 and 8 of the Dutch Road Traffic Act 1994. The direct effect of nitrous oxide is very short in length and its consumption is not generally visible in the driver's blood, urine, breath, of saliva, rendering proving its use difficult in practice (www.officielebekendmakingen.nl).

In December 2019, the Assessment and Coordination Centre for new drugs (*Coördinatiepunt Assessment en Monitoring nieuwe drugs - CAM*) published a risk assessment of nitrous oxide on the instructions of the Ministry of Health, Welfare and Sport. The report states that the recreative use of nitrous oxide as a narcotic can form a serious risk to individual and public health (CAM, 2019).

The government on the recommendation of the CAM in 2019 announced it intended to include nitrous oxide on list II to the Dutch Opium Act as a prohibited substance. This inter alia means that the import, export, and possession of, and the trade in, nitrous oxide will be criminalised. Three exceptions will apply: the use of nitrous oxide is not punishable when serving a medical, technical, or gastronomical purpose. These exceptions will be included in the decision on the inclusion in list II to the Dutch Opium Act. The purpose of the ban is to reduce the widespread availability of nitrous oxide for recreative use and, thus, to limit the offer of nitrous oxide for such use (www.officielebekendmakingen.nl).

The ban on nitrous oxide was supposed to become effective in early 2021, but the Minister of Justice and Security and the State Secretary for Health, Welfare and Sport on 31 March 2021 informed the House of Representatives that the taking of a decision on the proposed ban on nitrous oxide would, because of the caretaker status of the government, be left to a new government. This was necessary, as the enforcement of the ban on nitrous oxide would result in such systemic costs that they could not be covered under the present budget of the Ministry of Justice and Security (*Ministerie van Justitie en Veiligheid – MinJenV*; www.officielebekendmakingen.nl). Funds for the enforcement of the ban were made available on Budget Day of 2021, causing the legislative procedure to be resumed. The current aim is to have the legislation on nitrous oxide take effect in mid 2022.

8.3 Khat

Khat is a shrub that has a stimulating effect. Khat inter alia grows in Kenya, Yemen, Somalia, and Djibouti. The consumption of khat forms part of local culture in these countries. Khat is consumed by chewing the leaves. The user swallows the juices released from the leaves. It takes an hour to become effective, but the effects can last for hours. Users become more active: tiredness and hunger disappear and it becomes easier to talk. Khat is hardly addictive on the physical level. However, the long-term consumption of major quantities of khat may result in mental dependence (www.jellinek.nl).

8.3.1 Developments in consumption

Khat has been included on list II to the Dutch Opium Act since 5 January 2013. Khat consumption in the Netherlands is predominantly an affair of people with a background in the areas where the shrub grows naturally. The substance has a social function and is used to strengthen social contacts. It is therefore consumed in company (www.jellinek.nl). The Trimbos Institute (*Trimbos Instituut*) does not keep records of khat consumption in the Netherlands. As a result, no information on consumption at any point or in the last year is available.

8.3.2 Size - seizure figures

One important indication for the scope of illegal trade - in this case, the illegal trade in khat - are the seizure figures. The seizure figures may be deemed the lower limit of the actual size of the illegal trade. To arrive at the khat seizure figures in the Netherlands, we base ourselves on the figures provided by Customs (*Douane*) and the Royal Marechaussee (*Koninklijke Marechaussee – KMar*) covering the 2017-2020 period.
Between 2017 and 2019, the quantities of khat seized by Customs decreased from 6,371 kilos in 2017 to 2,080 kilos in 2019. An explosive increase was visible in 2020, however, with no less than 9,137 kilos of khat being seized. This increase mainly occurred in the second half of 2020 and constituted an increase in both the number of seizures and of the kilos of khat seized (Douane, 2021). The Royal Marechaussee identified a similar trend. In 2017, the Royal Marechaussee seized a total of 3,626 kilos of khat, which had dropped to 1,255 kilos in 2019. But the Royal Marechaussee, too, noticed an enormous increase in the quantities of khat seized in 2020: a total of 8,474 kilos was seized in that year. Refer to Table 8.2.

Table 8.2. Khat seizures in kilos

	Customs	Royal Marechaussee
2017	6,371	3,626
2018	3,331	2,029
2019	2,080	1,255
2020	9,137	8,474

Source: Customs, Royal Marechaussee.

The smuggle of khat via and to the Netherlands seems to take place predominantly by aircraft, with air cargo shipments (generally postal items) being discovered more frequently than smuggle via couriers in passenger flights. Quantities smuggled by passenger flight usually are larger and are smuggled in suitcases (Douane, 2021; KMar, 2021).
The primary countries of origin for khat smuggled by air cargo in 2018 were Kenya, Angola, and India. In 2019, the top three was made up of Ethiopia, Kenya, and Nigeria. In 2020, Nigeria was the primary country of origin, with all other countries playing a

subordinate role (Douane, 2021). Khat was incidentally discovered in flights arriving from other countries, including Israel (KMar, 2021).
While in 2018 and 2019 most of the shipments seized were destined for the Netherlands, in 2020, most seizures were of shipments destined for transit. For the first six months of 2020, the majority of these shipments were to go to the United Kingdom and France, and for the second six months, to the United States. It seems likely that the good connections of the Dutch airlines via the African continent, which stayed intact during the COVID-19 pandemic, caused an increase in the number of khat shipments (that were to be) transited via Amsterdam Airport Schiphol and an associated increase in the amounts of khat seized in that year (Douane e-mail, 7 September 2021). Customs has identified the same trend in the context of the transit of heroin (refer to Chapter 7).
When khat is identified in passenger flights, the Royal Marechaussee usually processes the matter as an individual incident. The same applies to the discovery of khat in air cargo, where it is mainly found in postal items. No subjects are identified in this connection (KMar e-mail, 23 July 2021).

8.4 Conclusion

This chapter addressed nitrous oxide and khat. The number of nitrous oxide incidents has risen sharply since 2017. In order to reduce the widespread availability of nitrous oxide for recreative use and, thus, to limit the offer of nitrous oxide for such use, a proposal to include nitrous oxide as a prohibited substance in list II to the Dutch Opium Act was submitted at the time this report was written. This inter alia means that the import, export, and possession of, and the trade in, nitrous oxide will be criminalised. Three exceptions will apply: the use of nitrous oxide is not punishable when serving a medical, technical, or gastronomical purpose.
The number of khat seizures in the Netherlands decreased drastically between 2017 and 2019, but rose explosively again in 2020. It seems likely that the good connections of the Dutch airlines via the African continent, which stayed intact during the COVID-19 pandemic, caused an increase in the number of khat shipments (that were to be) transited via Amsterdam Airport Schiphol and an associated increase in the amounts of khat seized in that year.

9

The trade of drugs via the dark web

9. The trade of drugs via the dark web

Rutger de Waardt

9.1 Introduction

At present, the majority of the world's population has access to the Internet. In consequence, more than ever before, people have access to tremendous amounts of information and a state of connectedness. This in turn leads to a marked increase in the opportunities available in life. Such opportunities are not always of the legal variety, though: the Internet also made it possible to advertise and sell drugs from one's own home. Before 2011, this happened on the small scale, via niche discussion forums or social media (NADIC NY/NJ, 2009; Wax, 2002). In the present day, however, and following the success of the *Silk Road* marketplace between 2011 and 2013, this trade takes place on a much greater and more professional level via the dark web (Soska & Christin, 2015; Van Buskirk et al., 2017)

9.2 Dark web

The concept of the dark web is difficult to explain without first providing some background information on the structure of the Internet itself. This is first of all comprised of the so-called clear web: every webpage or web application that is freely accessible. Second, there is the so-called deep web: pages and applications requiring login data, such as e-mail pages. And third, there is the dark web, comprised of all webpages and applications that can only be accessed using special software. Such software is generally programmed in such a way that the data identifying users are hidden. Various such software programmes exist, but in this chapter we will focus on TOR and the possibilities it offers to set up hidden services.

9.3 TOR

TOR is an Internet communication protocol. It stands for "The Onion Routing". This name is based on the anonymisation protocol used by the application to mask the IP address of the user. Every connection from source to destination is first diverted via a number of points (routing). Each of these points opens up an encryption layer, like an onion peel. Only once the final encryption layer is removed will the connection with the destination be made. All communications between source and destination now take place via this reroute. As a consequence, at the source one can only see the track of communications up to the first rerouting point and the destination will only see the IP address of the final rerouting point. If a destination can only be accessed using TOR, it is called a Hidden Service. For the destination site, this has the advantage that the IP address the application runs on is hidden from users but can still be freely accessed (TorProject, 2021).

Because of the routing, TOR is an effective way of evading state censorship. TOR therefore plays an important role in the context of the freedom of press and of expressing fundamental human rights under suppressive regimes. Unfortunately, not all users of the protocol have noble intentions.
As Hidden Services allow for the provision of these hidden services, they also allow for performing criminal actions, such as the sale of banned or controlled substances. Such services are often referred to as dark web markets.

9.4 Dark web markets

A wide range of products is offered on dark web markets: from stolen credit card information to firearms. The vast majority of products traded on the platforms relate to drugs, however. The vendor ships an order to the buyer using regular postal services and payments are made using virtual currencies. In this way, the vendor remains wholly anonymous to the buyer. The buyer, on the other hand, will have to submit a delivery address for the goods (Baravalle, Lopez, & Lee, 2016; Broséus, Rhumorbarbe, Morelato, Staehli, & Rossy, 2017; Dolliver, Ericson, & Love, 2016; Soska & Christin, 2015; Van Buskirk, et al., 2017). So as to prevent police services from gaining insight into the buyer data - in case they seize the market - PGP encryption is used by default (Soska & Christin, 2014).
This bundling of protective features means that a lot of effort goes into investigating drug vendors on the dark web.
Moreover, obtaining strategic insight into the scope of this form of crime is not an easy thing to do, either (Broséus, Rhumorbarbe, Morelato, Staehli, & Rossy, 2017; Décary-Hétu, Paquet-Clouston, & Aldridge, 2016). It is very rare for a market to be open about the exact amount of trade conducted there, for example. The length of time a market is active also varies strongly. Some markets exist only a few months to a year, while others last for multiple years.

9.5 Strategic insight

The Police has seized multiple dark web markets in the past few years. An analysis of the data obtained may provide insight into this form of crime. However, such an analysis would be very limited, as the market share of the markets seized only forms part of the whole.
The data could be used, however, to arrive at a percentual scaling of the Dutch share per drug type on such markets. This scaling could then be used to make an estimate of the total dark web drug market.
Unfortunately, legal restrictions are in place against the use of the data sets of the markets accessible to Dutch investigative services, meaning they cannot be used. Scientific studies attempting to obtain similar insight using the public part of dark web markets can be used, however.
Christin & Thomas (2019) conducted such a study on the instructions of the EMCDDA. Shortly after the conclusion of *Operation Bayonet*[71] in June 2017, they spent a year collecting information on activities of the then-largest markets: *Dream Market, Traderoute, Valhalla Market* and *Berlusconi Market*. The figures resulting from their

71 Operation Bayonet was a joint action by the FBI and the Dutch Police involving the simultaneous takedown of two dark web markets (*Hansa Market* and *Alphabay Market*) (Algemeen Dagblad, 2017).

study can be used to obtain insight into the share of the drugs sent from the Netherlands[72].
The study allowed them to obtain an overview of the quantities of drugs sold, the types of drugs sold, and the countries and platforms the drugs were shipped from, covering a period of about one year. This in turn allowed them to deduce that 80 percent of sales on these markets were related to drugs and that about 6.58 percent of the drugs sold had been shipped from the Netherlands. Table 9.1 shows the division into drug types they observed:

Table 9.1. Division of the drug types shipped from the Netherlands, in percentages

Drug types	Percentage
Stimulants (other than cocaine)*	41.81
Cocaine	26.85
Dissociative substances**	11.08
Cannabis-related products	6.42
Hallucinogens***	6.06
Opiates****	5.31
NPS	2.48

* Such as (meth-)amphetamine and MDMA.
** Such as ketamine and GHB.
*** Such as LSD.
**** Such as heroin, opium, and pharmaceutical analgesics.

It becomes apparent from the criminal investigations registered in Summ-IT that the Dutch drug vendors often offer and trade in various types of drugs (polydrugs).
Based on these figures, it would seem that the Dutch trade in drugs on the dark web, at any rate in the 2018-2019 period, focused mainly on cocaine and other stimulants, such as MDMA and amphetamine.

9.6 Financial transactions

In order to obtain a view of the size of the total drug trade on the dark web, we may look at the virtual currencies used to effect payment. As many of these currencies are traceable, it is possible to obtain an overview of transactions per market. This grants us a view of the frequency and size of transactions related to dark web markets. The Chainalysis virtual currency tracing company used this principle in its *The 2021 Crypto Crime Rapport*. In its report, Chainalysis converted the transactions in *Bitcoin, Bitcoin Cash, Litecoin* and *Tether* in the 2015-2020 period that can be related to the dark web markets, into fiat money.[73] Fiat money is money issued by the government.

72 Where the article did not state exact figures, the EMCDDA provided an individual explanation.
73 Chainalysis does not state the exact quantities in its report. It has, however, submitted them separately.

The Chainalysis figures are divided into a total overview and an overview excluding *Hydra Market*. This division was made as *Hydra Market* exclusively targets the Eastern European / Slavic drug market. Should this market be included in the total dark web trade figures, an extrapolation on the basis of the EMCDDA figures would no longer be valid. For the total would be much higher, as a market section the Netherlands does not form a part of would be included in that total. We will therefore only use the Chainalysis totals excluding *Hydra Market* for our extrapolation. Refer to Table 9.2.

Chainalysis assumes that the dark web markets (excluding *Hydra Market*) in the 2015-2020 period had a turnover as listed in the second column of table 9.2. On the basis of the results of the EMCDDA investigation, it can assumed that 80 percent of those totals are related to the sale of drugs. This share of drugs is presented in the third column.

Table 9.2. Chainalysis turnover in euros, excluding Hydra Market

	Turnover	Drug-related turnover
2015	388,073,744.05	310,277,688.72
2016	596,759,308.90	477,128,643.52
2017	565,107,353.53	451,821,866.90
2018	194,369,108.33	155,404,478.18
2019	351,839,091.52	281,306,895.38
2020	325,446,316.14	260,205,005.68

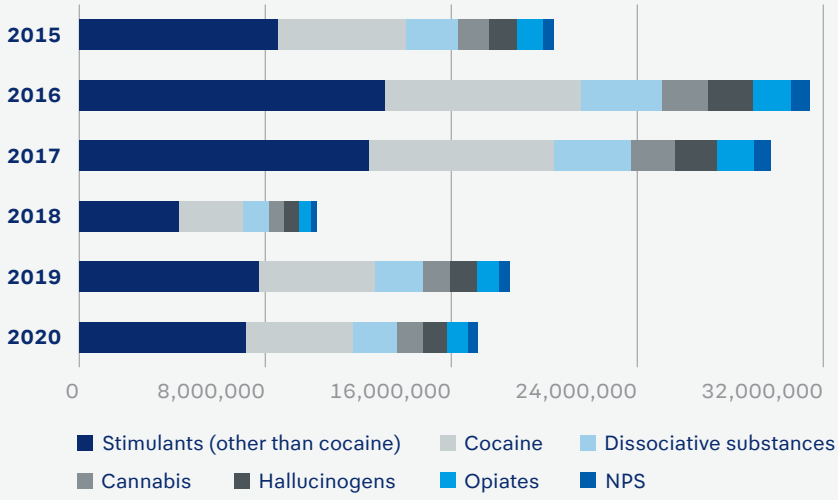
It may also assumed, on the basis of the EMCDDA figures, that 6.58 percent of these drug turnover totals was shipped from the Netherlands. This would mean that the annual turnover realised on drugs sold via the dark web and shipped from the Netherlands would be as presented in Table 9.3:

Table 9.3. Dutch drug turnover in euros

	Dutch drug turnover
2015	20,425,276.53
2016	31,408,911.55
2017	29,742,991.22
2018	10,230,124.68
2019	18,518,157.56
2020	17,129,040.81

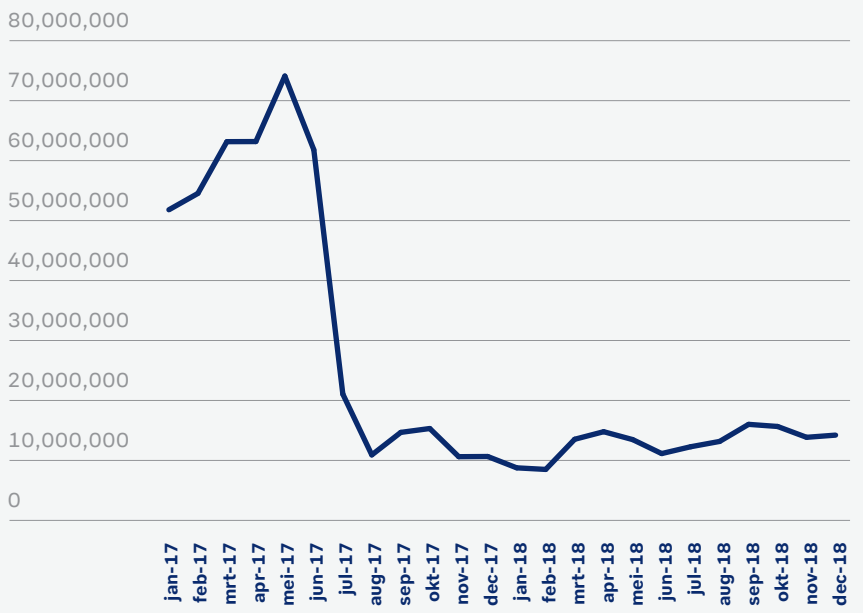
By using the drug type proportions from the EMCDDA report, these turnover figures can be broken down into estimates per drug type; refer to Figure 9.4.

Figure 9.4. Dutch drug turnover in euros, per drug type



The enormous drop between 2017 and 2018 is very striking. This drop is caused by a massive downturn in global dark web turnover. Figure 9.5 provides a better picture of the downward trend and shows that it took place over a period of three months.

Figure 9.5. Global drug turnover in euros



The effect of *Operation Bayonet* forms a potential explanation of this decrease. It is possible that a significant percentage of dark web vendors and buyers stopped their activities after that intervention. This assumption is based on the fact that, even years later, the total figures are still far lower than they were before the intervention.
Unfortunately, another, less favourable explanation seems to be a more realistic one for the continuation of the decrease: the lack of recovery is due to defragmentation and/or the more widespread adoption of privacy coins.

9.6.1 Defragmentation

Defragmentation refers to the shift from large vendor portals to smaller, more personal vendor portals, such as single vendor shops. Once a vendor has traded long enough on the markets to have built up a reputation, they may choose to establish their own hidden service. In this way, the vendor is no longer dependent on the infrastructure of a market. Nor will they have to pay commission to that market.
Another smaller vendor portal variant was *Televend*, which is no longer active. *Televend* was an automated Telegram Messenger program. The program allowed a drug vendor to establish their own portal. The buyer could indicate the amount of each product they wished to procure. *Televend* would take care of the payment by the buyer and would transfer the amount, less commission, to the vendor. The vendor would then ready the order in a dashboard panel offered by *Televend*.

Should the defragmentation trend continue, this would mean that larger points of sale investigations can be focused on would disappear, while the efforts required to close

down a vendor portal do not decrease. This may, then, result in a situation where the market share of individual portals becomes so small that a consideration must be made in each case as to whether the effect of closing down the market portal justifies the expenditure in staff and resources.
Innovations in the methods used to tackle such portals are desirable in pre-empting this situation. By more ingeniously organising the available intervention options and deploying them on a greater scale, a wider net could be cast without this requiring more resources than is presently the case.

9.6.2 Privacy coins

The wider adoption of privacy coins form an equally realistic explanation for the drop in global turnover. Privacy coins are virtual currencies programmed in such a way that the tracing of transactions is frustrated or even rendered impossible. In consequence, companies like *Chainalysis* are no longer able to link virtual currency transactions to dark web markets and, thus, to include them in their estimates of total dark web market size. Nowadays, more dark web markets exist that accept such privacy coins, or even made their use mandatory.

One of the consequences of a switch to privacy coins on the large scale would be that an important tactical method - the tracing of virtual currencies - would no longer be useful. Another consequence is that it becomes easier to launder criminally obtained profits via legitimate companies.
Because the transactions are screened, exchange offices, too, are unable to see the origin of privacy coins, meaning they can no longer meet their know your customer obligation. For the exchange office is unable to verify the origin of the privacy coins as indicated by the customer. As a consequence, nothing stands in the way for a customer to convert their privacy coins into fiat money, like the euro, and have it deposited to their personal bank accounts.
No simple solution for this problem exists. Solutions must likely be sought in the further regulation of the trade in virtual currencies, both in the Netherlands and around the globe.

9.7 Dutch criminal networks and subjects

An investigation into 43 Dutch suspects of the online trade in drugs was conducted in 2018. It was found in this connection that only a strikingly small number of Dutch online drug traders are new players. Most online traders were already associated with the offline trade in drugs. The traders studied were active on ten different crypto markets. Some of them shipped drugs mainly to European countries; however, drugs was also shipped to Australia, New Zealand, South Africa, Canada, and Brazil. No organised crime groups could be identified on the basis of the collected data. The trade via the dark web was committed both by persons acting in concert and by individuals acting without partners (Rouwenhorst, 2018).

9.8 Conclusion

In this chapter, we tried to obtain insight into the amounts of drugs sold via the dark web and shipped from the Netherlands. By collating multiple data sources, we have arrived at a scientifically sound estimate of the scope of this drug trade. Strikingly, the outcomes show that the ratios between the types of drugs sold via the dark web seem to reflect the ratios known from the regular drug trade. Also of note is the tremendous

drop in global dark web drug trade figures in mid 2017. As this drop exactly coincides with *Operation Bayonet*, it stands to reason to assume that this operation caused the drop. At first glance, the effect of this operation seems to have been so strong that it can still be seen well over three years later: the annual dark web turnover following the drop does not exceed half the amount made in the years before.
Even though sound arguments exist to link the operation to the cause of the drop, the same cannot be said of the very long continuation of this effect, as it is not realistic to assume that a single intervention would result in such a gigantic long-term decrease.
It is more realistic to assume that the cause for the continuation of the effect is to be found in shifts in the dark web trading environment. These changes may mean that the survey method used in this chapter is no longer valid after a certain period.
One of these changes could be the defragmentation of the market. This involves the classical structure, with a limited number of central platforms provisioning the market, being replaced by a great many smaller platforms.
Another explanation is that privacy coins have become more widely adopted.
Both of these changes result in the application of the currently customary investigative methods being frustrated. Defragmentation results in interventions targeting vendor portals having an ever smaller effect on the total market while still requiring the same amount of effort and investigative capacity, while the wide adoption of privacy coins results in an important investigative method, the tracing of virtual currencies, being side-lined.

In order to continue effectively tackling the trade of drugs via the dark web, it is recommended, or even required, that developments take place both in the field of investigations and on the technical and administrative levels. For example, an exploration of the further regulation of the virtual currency market may be an option on the administrative level, specifically in the context of privacy coins. In the investigative context, new methods will need to be developed, so as to allow for the use of the current methods on a larger scale and broader basis.

10

Financial and economic perspective

10. Financial and economic perspective

Melvin Soudijn

10.1 Introduction

In this chapter, we will consider the drug trade from a financial and economic perspective, focusing on money laundering. For the (international) drug trade is a commercial activity, with the primary aim being the making of profits.

Though illegal, these profits are partly laundered in the legal economy. We in this context do not consider small traders who pay for their own addiction by selling small user's quantities, but focus on the distributive and wholesale traders active in legitimate society with their net proceeds. Our research question is therefore the following: to what extent and in what ways do the profits from drugs end up in the legitimate Dutch economy?

In the next few sections, we will first present what is known about the financial scope of the drug trade in the Netherlands and the part that is laundered on the basis of the available literature. Next, we will look into money laundering characteristics and methods. We elected not to provide an extensive overview of the literature, as the extent to which money laundering methods described as being used abroad or existing only in theory are actually used in the Netherlands, is unclear. Instead, we will use empirical data derived from, in particular, the Financial Intelligence Unit – the Netherlands (FIU), but also from the Public Prosecution Service (*Openbaar Ministerie - OM*), criminal investigations by the police, and police information.

10.2 Size

Coming straight to the point: the financial size of the total drug economy is not clear. This is simply due to the fact that the activities are kept from view, meaning that specific, unambiguous figures are lacking. It is unknown, for example, how many drugs are produced and traded in the Netherlands, how many drugs are traded abroad, and how many drugs enter the Netherlands from abroad. But even if we did know this, we would find ourselves faced with another problem: what are the actual profits on the total turnover? To calculate them, we need to know the sales prices and expenses, but such amounts are known to us only sporadically.

Another problem is determining the share that is laundered. For the sake of clarity: "money laundering" in this chapter refers to the performance of activities causing the

criminal money to come to have a seemingly legal origin.[74] By laundering it, the money can, in principle, more easily be spent in the legitimate economy.
A complicating factor in determining the scope of money laundering is that part of the money is made in the Netherlands and is laundered here, while another part of the money is transferred abroad to be laundered there. Will this money remain there, or does it return via legal routes? We do not know. We should in this connection also consider criminals who produce drugs abroad and sell them there but then launder (part of) the proceeds in the Netherlands. Moreover, it may also be that the money, immediately after it has obtained a legal status in the Netherlands, is transferred abroad once more.
Determining the financial scope of the drug trade in the Netherlands, and in particular that share that is laundered, therefore means having to work with multiple dark numbers, added to other dark numbers, which are in turn supported by yet other dark numbers. Nevertheless, various attempts have been made to provide an indication of the scope of the laundering of drug moneys, even if only to provide some information to policy makers. A number of estimates are presented in the following sections, starting with the macroeconomic estimates drawn up by the Utrecht University School of Economics and Statistics Netherlands (*Centraal Bureau voor de Statistiek – CBS*). We will then present figures based on the transactions declared suspicious by the FIU, before considering the data derived from various reports.[75]

10.2.1 Macroeconomic

The first macroeconomic study into the scope of money laundering in the Netherlands was conducted in 2006. Researchers of the Utrecht University School of Economics, using the so-called gravity model, arrived at a drug-related turnover in the Netherlands amounting to EUR 1.96 billion (Unger et al., 2006). 80 percent of this total was believed to be laundered (1.568 billion).
However, these figures are based on data from around the turn of the millennium. An update was therefore performed in 2018 (Unger et al., 2018). In this updated version, an average money laundering need of EUR 180,385 was assumed for each drug crime.[76] As, according to Statistics Netherlands, 15,742 drug crimes were committed in 2014, the total money laundering need would therefore amount to EUR 2.84 billion (Unger et al., 2018).
The method employed - the gravity model - is not without its detractors, however (Van Duyne, 2006; Van Duyne et al., 2018; Kruisbergen, 2021; Soudijn & Akse 2012). One important criticism is that the model is based heavily on the assumptions made by the Australian researcher Walker (1995; 1998) in his calculations. Walker for example based his assumption that 80 percent of drug monies were laundered on the opinion of just a few respondents. Firm figures have a tendency to take on a life of their own,

74 This is a financial and economic definition of money laundering, not a legal one (Section 420bs of the Dutch Criminal Code). The legal definition is much broader in scope and may also relate to activities taking place wholly outside of the legitimate economy.
75 Another potential source of information are the data on suspected money laundering cases, seizure figures, or confiscation figures kept by the Fact Factory of the National Head Office of the Public Prosecution Service. The Fact Factory was unable, however, to provide these data within the term of the investigation, and these data have therefore not been taken into account.
76 It was noted in this connection that the average money laundering need would vary sharply from case to case. One drug trader might not remotely realise a turnover of EUR 180,000, while another might be shipping drugs worth millions each month.

however. The UNODC (2011) in its study into illicit financial flows originating from the trade in drugs state that Unger (2007) *calculated* that 80 percent is being laundered, for example. To be clear: this is not true. She based herself on the *assumption* that 80 percent would be laundered.
Another important criticism is that the economic model is largely based on economically rational behaviour. It is far from certain that this also applies to money laundering. Obtaining the highest possible yields is most likely subordinate to staying out of sight of the investigative authorities, for example. It often becomes apparent from police information that money must be spent, you should be able to buy "good stuff" for yourself and, in particular, that "you can't take it with you when you go". This does not sound like a fiscally stable long-term strategy.

10.2.2 Statistics Netherlands (CBS)

Like all other EU Member States, the Netherlands is obliged to include various illegal activities in its calculations of its gross domestic product. This allows for comparison between the Member States and for the more accurate calculation of the mandatory transfer per Member State. Statistics Netherlands (CBS) therefore includes an estimate of the financial scope of the drug trade in its national calculations.
When calculating the illegal scope of the drug trade, Statistics Netherlands bases itself on the cost-benefit principle. It for example, basing itself on the figures provided by the then Netherlands Police Agency (*Korps Landelijke Politiediensten - KLPD*), calculated the production capacity of illegal cannabis nurseries by reference to the capacity of closed-down nurseries and an assumption of the investigation percentage. This capacity is estimated using data on the number of plants seized, the yield per plant, and the number of harvests a year. These and similar assumptions in 2014 resulted in the following figures; refer to Table 10.1 (NOS,2018):

Table 10.1. Statistics Netherlands estimates of the illegal drug trade size in euros

Illegal drug trade size	
Production, trade, and sale of cannabis	2.9 billion
Production, trade, and sale of heroin and cocaine	460 million
Production, trade, and sale of XTC	160 million

Source: Statistics Netherlands.

According to the Statistics Netherlands figures, the trade in cannabis massively outpaces the trade in heroin, cocaine, and XTC. The estimates concerning cannabis covering the year 2015 were even adjusted upwards by almost EUR 1.5 billion (CBS, 2018). This adjustment was prompted by the fact that the likelihood of getting caught cultivating cannabis must be estimated to be lower, while the number of harvests and annual yields must be estimated to be higher.

The Statistics Netherlands estimates do not state the amounts of money laundered per type of drugs. Nor is it clear what developments have taken place regarding these amounts in 2021, as the financial scope of the drug trade was not calculated again.

10.2.3 Financial Intelligence Unit - the Netherlands (FIU)

Another source of financial data that may be relevant in the context of providing an indication of the financial drug economy is formed by the FIU. The FIU receives reports on unusual transactions (UTs), made by entities with an obligation to report on the basis of objective and subjective indicators as described in the Wwft Implementation Decree 2018.[77] Upon being assessed by the FIU, these UTs may be declared to be suspicious. The so-called suspicious transactions (STs) are then made available to the investigative authorities. They may, for example, serve as starting information for a criminal investigation or as (in)direct evidence in a criminal case, or be used for analysis purposes.[78]

In the context of this National Strategic Assessment, we have compiled a file of all drug-related criminal investigations by the police and the related suspects in the 2017-2020 period, as registered in Summ-IT. When retrieving the (possible) STs concerning the 13,827 persons suspected by the police of drug offences in the 2017-2020 period, the following picture emerges.[79]

15,828 transactions were declared to be suspicious in the period studied. In total, these transactions relate to 7,913 natural persons and 1,374 companies or entities registered with the Chamber of Commerce. The total amount of these transactions is EUR 1,647,178,042.

Does this mean we may conclude that EUR 1.65 billion in drug money is laundered? No, because these figures also include *intended* transactions. Some of these intended transactions can be deemed wholly absurd. One financial institutions reported an intended transaction of 1 billion euros by one specific client. This client had indicated he wished to open a commercial account, as he believed he would be able to make 1 billion euros in turnover in the short term with his new one-man business. Given his market position and financial history, this was an unrealistic amount. Nevertheless, this amount of 1 billion was included in the report.

In order to avoid such distortions, it is therefore better to only consider the transactions actually completed. We then find that 14,780 completed transactions have been reported in the period studied. In total, these transactions relate to 7,710 natural persons and 1,290 companies or entities registered with the Chamber of Commerce. The total amount of transactions actually completed is EUR 467,759,526. As becomes clear from Table 10.2, this amount fluctuates wildly over the past four years.

77 The Wwft is the Dutch Money Laundering and Terrorist Financing (Prevention) Act.

78 Unusual transactions are state secrets and cannot, therefore, be shared with third parties. For more ways the suspicious transactions are used, consult: https://www.fiu-nederland.nl/sites/www.fiu-nederland.nl/files/documenten/5169-fiu_jaaroverzicht_2020nl_web.pdf .

79 Refer to Chapter 2 for more information on this file.

Table 10.2. Total amounts of suspicious transactions in euros

Suspicious transactions in euros	
2017	95,013,911
2018	168,903,468
2019	82,084,648
2020	121,757,499
Grand total	**467,759,526**

Source: FIU-the Netherlands

These fluctuations are inter alia caused by reporting behaviour and do not, in themselves, reflect the size and scope of money laundering in the Netherlands. For example, with respect to the reports made by the same bank, transactions worth 5 million euros are declared ST in 2017, with the amount increasing eightfold to 40 million in 2018, dropping again to 3 million in 2019, and rising again to 10 million in 2020. Some other reporting entities, too, display a wildly varying pattern and regularly show massive outliers. The cause of this variation in reporting behaviour cannot be deduced from these figures. The annual reports by the FIU state that an increase is sometimes due to subsequent reports over previous years, specific policies, or internal development of semi-automatic file compilation (FIU, 2018; FIU, 2019; FIU, 2020; FIU, 2021). One specific strong decrease observed in the past was due to one major financial institution halting its offerings of a specific transaction type, for instance (FIU, 2016).

Do the data by the FIU mean that close to half a billion in drug moneys are laundered in the Netherlands? It is impossible to verify this on the basis of these data. There are, however, three caveats that render such an assumption unlikely.

First of all, the transactions are STs, or transactions that have only been declared *suspicious.* Without follow-up investigations, it is not clear whether, first, any illegal acts have been performed and, second, it concerned drug moneys. For the original reporting just marked the financial transaction as being unusual, but is not aware of the background. It is up to the authorities to investigate the matter further. However, given the large number of reports and the often summarily recorded data, this is far from the default response.[80] Moreover, it is also known that reporting parties will report "defensively". This means that the transaction is reported even if, presumably, nothing illegal is going on, out of a fear of being fined. STs are, then, just an indication that "something" might not be financially squeaky clean. In addition, many UTs are automatically declared STs, as the FIU matches the UTs to the Criminal Investigations and Subjects Reference Index (VROS). This is not an unimportant detail. Each UT relating to a person included in the VROS will automatically be declared an ST, without

80 The Netherlands Court of Audit (*Algemene Rekenkamer – AR*) notes that, as a result, the effectiveness of the reports is not known (AR 2008; 2014).

any further analysis taking place. It was found that, in 2020, 41 percent of all STs were produced in this way (FIU, 2021).
A second caveat is that the total amount of well over half a billion euros is comprised not only of transactions made by the suspects of drug-related offences *themselves*. The transactions sometimes also relate to persons not included on the original list of suspects of drug-related offences. Third parties may transfer money to the suspect, for example, with the suspect being the beneficiary. In the same fashion, the transactions may relate to providers and beneficiaries of loans, providers and beneficiaries of mortgages, buyer and sellers, debtors and creditors.
A third caveat is that some incidents may be counted twice. This may occur, for example, when someone withdraws money from the bank to buy an expensive car in cash. When both the bank and the car dealer report the transaction, this in fact concerns the same amount.

10.2.4 Reports

A bottom-up approach is also possible when estimating the size. This refers to extrapolating from data or turnover calculations relating to individual police investigations. Tops et al. (2018) for instance drew up a model allowing for calculating the domestic and international turnover of the trade in synthetic drugs. The Dutch XTC turnover turned out to amount to well over EUR 680 million, based on a street value of EUR 3.50 per pill. Another 8.7 billion could be added to this figure in sales abroad. The figures for amphetamine amounted to EUR 636 million and 8.8 billion, respectively. This would mean that the (street-level) yields for just these two synthetic drugs would jointly already amount to EUR 18.9 billion worldwide. When, in line with Unger et al. (2006; 2018), we apply a money laundering need of 80 percent to this amount, this would mean that EUR 15.12 billion has to be laundered in the context of the Dutch production of XTC and amphetamine alone. When only considering the share made in the Netherlands, this would still amount to EUR 1.14 billion. In 2021, Valkenhoef & Tops (2021) even posit that production and turnover figures are likely to be much higher, as they used conservative estimates and lower limits in their model. They in their original calculation assumed that 20 percent of production was seized. Should this only amount to 10 percent, turnover would have amounted to EUR 41.3 billion (Van Valkenhoef & Tops, 2021). A shift in the model of just a few percent would thus result in turnover figures increasing or decreasing by hundreds of millions, or even billions.
The figures provided by Tops et al. (2018) only relate to two types of synthetic drug trade (XTC and amphetamine). The total drug economy is, of course, much larger and includes the trade in other types of synthetic drugs (e.g., methamphetamine, GHB/GBL, 4-MMC, crystal meth, and ketamine), and the trade in cocaine, heroin, herbal cannabis, or cannabis resin. The trade in precursors could be included as well. As yet, no separate models have been created to calculate the turnover and profits for all these different drug markets.
Another, exploratory study is *De achterkant van Amsterdam* (Tops & Tromp, 2019). Tops and Tromp, basing themselves on various interviews with government officials, in this study posit that, just in Amsterdam, billions of drug money would change hands. They do not know the exact number of billions however and therefore suggest additional research (Tops & Tromp 2019). According to the authors, persons active in the Amsterdam and Utrecht criminal cocaine networks would by now have amassed hundreds of millions in assets. In fact, some of them would even be billionaires.

However, no substantiation is provided. Such statements seem to be based in full on an unknown number of anonymous interviews conducted within the police organisation. The statements do not seem to have been validated, either (Kruisbergen, 2020). In addition, it remains unclear exactly *how* the drug yields are laundered.
What is sure, however, is the fact that the drug trade involves major amounts. A slightly older article finds, based on six financial registrations seized from criminals, that over EUR 277 million in cocaine profits were, in a period of 45 months, physically smuggled to South America (Soudijn & Reuter, 2016). This amount can be considered correct to a high degree of probability as some of the catches of couriers by Customs corresponded to the "loss items" included in the criminal records. Nevertheless, all these incidents only concerned the smuggling of money, which, strictly formally speaking, does not meet the definition of money laundering used in this chapter.
Finally, the trade of cannabis in the Tilburg region alone was estimated to amount to about EUR 800 million on the basis of the statements of a repentant criminal that, initially, were only laid down in a secret police report (RIEC Zuidwest, 2013)[81] (Tops & Van der Torre, 2014). Other researchers have questioned the reliability of this witness and these data, however (Argos, 2018). The RIEC report for the rest does not say much about money laundering. It states that the threatened witness was unable to provide much of an answer to the question as to how the truly large sums, to the amount of hundreds of thousands or even millions of euros, were laundered (RIEC Zuidwest, 2013). This caused Bureau Jansen & Jansen to comment that the suspect, Alain S., stated to have been a branch manager, to be well-informed of the weed industry, organisation, employment situation, about everything in fact, in Tilburg, but did not know anything regarding the gigantic money laundering operation that formed part of the industry (Bureau Jansen & Jansen, 2021). The repentant criminal only reported that criminals dealing in cannabis with a migration background were smuggling major amounts (the size of which is unknown) to their home countries for investment purposes, presumably into hotels or wind farms. In addition, cannabis cultivators in the Netherlands were said to receive assistance from facilitators from, for example, the real estate sector, car dealers, and the legal profession. It is not known how directly lawyers are involved. The report notes that it may very well be possible that they provided legitimate advice (RIEC, 2013).

10.3 Money laundering characteristics

In this section, we will look into a few of the characteristics of the laundering of drug proceeds as seen in the Netherlands. This concerns characteristics like the countries involved, the types of transactions, and the modes of laundering. For each individual topic, we will first consider what the data from the FIU show about it and may supplement this information with OM data and findings in police files. The reason for considering the data from the FIU to be leading, despite the caveats listed in the above, primarily relates to the great quantity of data. Moreover, the STs contain a short description explaining *why* a report was made and all sorts of additional information, such as the reporting entity and the place of the action. Summ-IT, in contrast, is not suited to

81 The report has, following a request under the Government Information (Public Access) Act, by now been made public and is available for download on: https://respubca.home.xs4all.nl/pdf/Integraal_Appel_Een_confronterend_straatbeeld_van_criminele_ondermijning_van_de_samenleving.pdf .

financial queries, as relevant financial data that may relate to money laundering are not registered in a uniform way.

10.3.1 Countries

Tables 10.3 and 10.4 (refer to the annexes in 10.6) provide overviews of the STs in relation to the countries moneys were sent to and received from, based on the FIU data concerning the 13,827 suspects of drug offences registered in Summ-IT between 2017 and 2020.

As can be clearly deduced form tables 10.3 and 10.4, the vast majority of transactions took place in the Netherlands. This is not surprising, as most of the suspects reside in the Netherlands. Strikingly, STs to a well-known cocaine-producing country like Colombia only make up 0.34 percent of the total, accounting for not even one million euros over four years. Destination countries like Germany, Slovakia, Luxembourg, Türkiye, Spain, Poland, and Ecuador account for a higher ST total amount.

The low percentage related to Colombia leads one to suspect that Colombia is a country of little financial importance to suspects of drug offences. This is a wrong conclusion, however. Three possible distortions should be taken into account when reading Table 10.3.

First, no country of destination is listed for over EUR 225 million. It may therefore be possible that tens of millions were indeed transferred to Colombia, but not properly registered.

Second, we are looking at STs, or transactions marked as unusual by a reporting entity and then declared suspicious by the FIU. It may very well be that drug criminals or the money launderers were able to disguise an unknown number of incorrect transactions well enough that these transactions remained inconspicuous and did not result in a report.

Third, it is very well possible that the financial sector, in particular, has its affairs in order to such an extent that drug criminals or their financial advisers try to avoid the risk of a report by not making use of official channels. This is far from a theoretical possibility. Previous investigations on the basis of seized criminal records led to the conclusion that, each month, millions of euros were smuggled to Colombia in cash, without use being made of the legitimate financial channels (Soudijn & Reuter, 2016). Police information shows that cash is still physically smuggled in major quantities, is converted into cryptocurrencies, or virtually moved outside of the legal financial system by underground bankers.

These three caveats also apply when interpreting the data relating to other countries. It is, for example, striking that well-known tax havens like Luxembourg and Monaco do not appear high on the list. In fact, only 10 euros are reported as relating to Malta. A country like Albania, which in the literature is associated with the drug mafia, also only receives EUR 640,000. Moreover, over a span of four years, barely 2 million euros sent to Mexico, Ecuador, and the Dominican Republic, countries strongly associated with the cocaine trade, are marked as STs. Also of note is that only EUR 272,706 is sent to the United Arab Emirates, including Dubai. This is difficult to reconcile with the fact that Dubai is known to be a favourite haunt for criminals and is associated with underground banking in a number of criminal investigations. Hong Kong, another favourite spot for Dutch drug criminals to set up companies using criminal assets, does not even account for EUR 3,000, either. In short, STs do not seem to be a reliable method for detecting transnational flows of criminal money.

10.3.2 Reporter type

A total of 211 parties have submitted one or more reports. When looking at which sectors these parties are active in, the banking sector reports well over 86 percent of the total number of amounts declared suspicious. Other reporters active in the financial sector include money exchange firms (1.2 percent), payment service providers (1 percent), and bitcoin traders (0.6 percent). These all concern a few individual reporters only.

While the reporters from other sectors are more diverse, they do not account for much of the total amount in STs, percentage-wise. The largest of these groups are formed by car dealers. In total, 46 different car dealers have submitted a report, for a (relatively low) total amount of 0.8 percent. The second largest group is formed by 43 notaries or notary firms (1.65%), followed by 30 companies calling themselves administrative or accountancy firms (1.3%). Also of note are the seven jewellers, whose reports jointly made up 0.16 percent of the reported amount. Both the numbers of reporters in a sector and the amounts reported go down quickly after this.

10.3.3 Amounts

In section 10.2 Size, we indicated the amount in euros declared suspicious by the FIU each year. The amounts turn out to vary wildly from year to year. That said, the individual amounts stated per report are highly diverse. On average, a report concerns an amount of EUR 31,648. The highest amount reported is well over EUR 13 million, while the lowest amount is zero cents. This latter case may for example have occurred when an account was closed because the client refused to answer questions by the bank. It would therefore seem to be more worthwhile to consider the median amount, which turns out to be EUR 1,200.

High amounts (101 reports concerned amounts of over EUR 1 million) often are the result of multiple transactions by a specific client being bundled and this total reported. For example, one bank submitted a report totalling over EUR 4 million. This amount was the total of one private client withdrawing cash from their accounts 150 times in four years.

10.3.4 Transaction type

The STs themselves also contain information, ordered by transaction type, as well as a short description of the transaction itself. This may be supplemented with some additional background information included by the reporter. This sometimes allows for also considering the potential money laundering methods reports by financial institutions. Let us first look at the transaction types. Table 10.5 (refer to 10.6 Annexes) shows the following picture.

Percentage-wise, bank transfers account for the largest ST amount (53.4%). These reports total over EUR 249 million which, over a span of four years and for some reason, was deemed unusual by the reporter and then suspicious by the FIU. This, then, concerns money already brought into the financial system. The table does not allow for finding out why the transaction was notable or what it was related to.

Though bank transfers play an important role, the one played by cash must not be overlooked - as becomes evident, for example, from the criminal investigations by the police and from police information, where it is reported that street-level, distributive, and wholesale dealings are almost always conducted in cash. The exception is the online trade via the dark web, where cryptocurrencies are used for payment. Such currencies are, by the by, often converted into cash right after.

Police investigations have also shown that suspects try to spend their money as much as possible in cash to fund a life of luxury, involving the purchase of brand clothing, watches, renting cars and houses, partying, vacation trips, et cetera. Even though, at first sight, the cash payments made by individuals do not relate to shockingly high amounts, the cash payment pattern may add up to tens of thousands of euros per month. It is, then, not surprising that a full 36.6 percent of the total amount reported to the FIU concerns transactions in cash. Such transactions include the withdrawal or deposit of cash at a bank desk or cash machine, cash payments in stores, money transfers via money transaction offices, or the exchanging of foreign currencies. The major role played by cash is also in line with the image Europol (2015) sketched a few years ago in its report entitled: *Why is cash still king?*

It has become evident from police information that subjects are aware that depositing cash, especially larger amounts in high denominations, is fraught with risk. Nevertheless, they sometimes need to put up with the risk of an unusual transaction report, in particular if no other options for laundering the money are available in the short term. Moreover, experience also shows that a report does not by default result in criminal investigations, even if it does lead to problems with the bank: the bank will ask difficult questions about the origin of the money or may even close the account. Whether cash transactions do, in fact, relate to money laundering cannot be derived from Table 10.5. Someone withdrawing cash from their account to keep it in old sock is not laundering money, in the economic sense of the term. To the contrary, in fact, as they are effectively withdrawing money from the market. However, it is a certainty that cash plays a major role in criminal circles.

The reports not relating to bank transfers or cash are of minor importance in percentage terms. The largest category is comprised of the purchase/sale of real estate, but, amounting to EUR 15,181,110, this category only makes up 3.3 percent of the total amount. 35 such transactions have been reported. Upon reading the transaction report, it becomes clear that the transaction usually concerned the transfer of a house under seemingly unusual circumstances: a residential home may, for example, be paid in cash (meaning the report could also have ended up in the cash category). Notable jumps in values or transfers from abroad are also reported. Another reporting category relating to real estate is formed by the five transactions concerning the purchase or sale of an apartment.

The purchase or sale of a company resulted in an ST in 29 cases. The description shows that this often concerned the sale of a company for an unreasonable price, but could also have to do with buyers who were seemingly put forward as straw men, persons who acquired a company only to be able to obtain a Dutch bank account, or persons who wanted to start a new enterprise but were wholly unable to explain the objective of this enterprise.

Finally, five reports concerning cryptocurrencies were submitted in the last year (2020).[82] These reports concerned “sale of cryptos to client”, “purchase of cryptos by client”, “from crypto to crypto”, “withdrawal from crypto account” and “deposit on crypto account”. A total of EUR 2,633,534 was reported (0.56%).

In the following section, we will look more closely at the possible money laundering types involved with these types of transactions.

82 Providers of services relating to the exchange between virtual currencies and fiat money acting in a professional or commercial capacity have become obliged to report in 2020.

10.4 Money laundering types

By combining the transaction type with background information presented by the reporting entity, it is possible to delve more closely into the various possible money laundering types as reported to the FIU. In order to provide some structure to this endeavour, we based ourselves on the fifteen money laundering types described as forming a risk for the Netherlands in the Money Laundering National Risk Assessment (*National Risk Assessment Witwassen – NRA*; Van der Veen et al., 2020).[83] This list was compiled on the basis of a study of the literature, a survey, an expert meeting by representatives of eighteen organisations, and interviews with 39 involved parties. All this input was ultimately submitted to a final balancing in a second expert meeting. This resulted in the following fifteen money laundering types:

1 Money laundering via wire transfers by licensed banks
2 Money laundering via structures by trust offices
3 Money laundering via offshore companies
4 Money laundering via legal entities
5 Money laundering via dealers of high-value services/goods
6 Money laundering via trade-based structures involving services
7 Money laundering via the use of intermediaries
8 Money laundering via investment institutions/firms
9 Money laundering via trade-based structures involving goods
10 Money laundering via ABC transactions
11 Money laundering via loan-back arrangements
12 Money laundering via fictitious company turnover
13 Money laundering via crypto currencies
14 Money laundering via underground banking, including via unlicensed payment service providers
15 Money laundering via physical movement of cash

Source: NRA Witwassen (Van der Veen et al., 2020, p. 11).

In the following sections, we will investigate the extent to which the money laundering types described as forming the greatest risks do actually appear in the reports to the FIU.

1 Money laundering via wire transfers by licensed banks

This money laundering method was not clearly defined in the 2020 NRA. Criminals were said to inter alia misuse the services of licensed banks to have their moneys enter the financial system. What forms this misuse take, exactly, is not explained, however. Once criminal moneys have been deposited on an account, it can be laundered on by transferring it from this account, for example by purchasing real estate, establishing a company or foundation, or paying invoices. Other professions, such as notaries, real estate agents, accountants, lawyers, tax advisers, trust firms, and insurers may be engaged in this connection. Or, as the NRA notes: money laundering via wire transfers

83 Multiple (international) studies provide overviews of money laundering types (cf. Soudijn & Akse 2012, Soudijn, 2018; UNODC, 2017; Teichmann, 2019). However, the NRA Witwassen is the most recent such study and specifically focuses on the Netherlands.

by licensed banks is often part of other money laundering methods (Van der Veen et al., 2020).
But why would this not be the case? It is customary when making payments in the Netherlands to transfer the money via licensed banks. The NRA therefore also notes that if a bank does not have its anti-money laundering policies, Know Your Customer (KYC) policy, or Customer Due Diligence (CDD) in order, it runs an increased risk of being misused, which in turn may lead to a fine or settlement in connection with a violation of anti-money laundering regulations - quite apart from the negative publicity. One example is formed by the EUR 775 million fine imposed by the Public Prosecution Service on ING in 2018 in connection with its long-term and systemic violation of the Money Laundering and Terrorist Financing (Prevention) Act (Wwft).
It cannot be deduced from the many reports made by the banking sector to the FIU whether the anti-money laundering policies in place are weak. The reports do indicate that attempts to launder money using bank transfers are very common.

2 Money laundering via structures by trust offices
The NRA defines trust offices in accordance with the Trust Offices (Supervision) Act (2018). In other words, a trust office is a legal entity, partnership, or natural person providing one or more trust services in a professional or commercial capacity, individually or in cooperation with other (legal) entities or partnerships. The services provided by a trust office inter alia consist of acting as director of a legal entity or partnership, providing a postal address, providing administrative services, and acting as a conduit company. Trust offices and the services they perform are legal. However, this does not mean that no real risk of misuse exists. The NRA emphasises that interviews show that unlicensed trust offices, in particular, form a risk.
A query using the "trust office" and "trust" keywords only resulted in four relevant STs in the FIU data.[84] The first related to a foreign company that transferred well over EUR 600,000 to a Dutch company in eleven transactions. This Dutch company does not show any clear business activities, however, while the business address of the foreign company houses multiple companies providing trust-related services. The reporter suspected that the transfers related to fraudulent action. Two other STs also relate to the transfer of assets from abroad (to an amount of over EUR 2 million in total). The Dutch address results in an ST, however, as, according to the reporter, many letterbox companies and an illegal (!) trust office are established at this address. In the fourth ST report, the relationship of the transaction to a trust office is not sufficiently specified to make any statements.
To summarise, the ST reports do not show that reports of legal trust offices being involved in the laundering of money by setting up structures, are frequent.

3 Money laundering via offshore companies
It becomes apparent from the text of the NRA that this type relates to offshore companies located outside of the Netherlands. Such companies are companies with share capital established under foreign private law and possessing legal personality in the relevant foreign country. They may not conduct economic activities in the territory of jurisdiction it was established and/or has its registered office in. The beneficial

84 Hits like "the *trust*worthiness of the statement could not be verified" were, of course, not taken into consideration.

owner resides in a country other than the one the company is located in. Offshore companies often do not have a physical office or employ staff. Instead, they are managed and directed by employees of a local trust office or law firm. Setting up an offshore company also increases the anonymity of the ultimate owner, for example because the country of establishment only requires a minimum of information to be filed in a public register.
A dozen or so transactions reported as STs relate to offshore structures. Some of these transactions clearly relate to a type of loan-back scheme (also refer to money laundering type 11). This involves an amount being transferred from the offshore company's account to a private account featuring the "loan" descriptor. In other cases, a combination of factors is at play, including concealing the owner, paying for goods (also refer to money laundering type 5), and evading taxes, or VAT fraud. Countries named in this connection include Suriname, Hong Kong, Isle of Man, Jersey, Belize, Panama, and the British Virgin Islands.

4 Money laundering via legal entities
The NRA provides the following explanation for this method: in addition to offshore companies and structures by trust offices, criminals may attempt to launder money by using various kinds of legal entities (Van der Veen et al., 2020). The NRA in this connection refers to the distinction made by the Chamber of Commerce into legal entities with and without legal personality. The first category is composed of private limited companies and foundations, the second of sole proprietorships and limited partnerships. Depending on the legal form used, the capital requirements or administrative obligations are different. The NRA also notes that intermediaries may be deployed when misusing legal forms. By using such intermediaries or straw men, the ultimate beneficial owner (UBO) of the legal entity concerned, being the criminal, is concealed. The more legal entities involved, the more complex the money laundering operation.
The use of legal entities shows up often in the STs: hundreds of reports concern suspicions of misuse. Bank employees for instance comment that they suspect that, on paper, another UBO manages the entity. In case of suspected misuse, banks regularly divest themselves of the client concerned. The full legal form is not always stated, but reports at any rate concern sole proprietorships, private limited companies, public limited companies, trading companies, foundations, general partnerships, and, in one case, a limited partnership. The sectors such legal entities operate in vary considerably, as do the associated amounts.

5 Money laundering via dealers of high-value services/goods
According to the NRA, this concerns criminals (or their in-betweens) procuring goods of high value, such as cars, precious metals, jewellery, or art, by paying in cash. In consequence, according to the NRA, the criminal money is integrated in the financial system.[85] So-called "smurfing" - dividing a sum into smaller amounts - may take place as an additional laundering measure, so as to not exceed the reporting limits.

85 This is, in fact, incorrect. If a criminal pays for, for example, jewellery in cash, this is not by definition an act of concealment. Nor do the jewels bought form part of the financial system. Only when the criminal sells the jewels on and manages to put the proceeds on an account has the laundering succeeded in economic terms.

The dealer in question does not have to take any blame, especially when they report an UT afterwards. This is seen multiple times in the STs. Persons are reported because they, for example, paid for an expensive watch or car in cash. As a money laundering method, buying expensive goods using cash is, then, rather apparent.
A variant reported in the NRA is the case where the dealer consciously cooperates with the operation by, for example, valuing jewellery higher than it is, in fact, worth. The criminal is then able to legitimise criminal moneys via the fictitious value of the jewellery. It is difficult to distil such occurrences from the STs. However, it has become apparent form police files that certain car and watch dealers, but also, for example, kitchen providers, knowingly accepted criminal moneys in cash without reporting it.
It is also possible to launder money using goods or services without the intervention of dealers. While the NRA does not mention this method, the STs for example show that two clients enter into a transaction to the amount of EUR 90,000 relating to the sale of multiple art objects. When the bank asked questions, this transaction could not be properly substantiated, in particular because the objects in question not even changed ownership. This resulted in the matter being reported to the FIU as an UT.

6 Money laundering via trade-based structures involving services
The NRA uses this name to refer to a form of trade-based money laundering (TBML). It explains that this method involves the use of trade-based structures by which criminals, using international or national services, launder criminal moneys. Examples include advice not, or not fully, provided, services which did not involve any registered activities, or services the related activities were performed by others than the ones recorded.
No cases evidencing TBML in the field of service provision have become apparent in the STs. However, TBML relating to the trade in goods has taken place (also refer to money laundering type 9).

7 Money laundering via the use of intermediaries
The NRA uses the term "intermediary" to refer to straw men. In itself, the use of such intermediaries is not a specific money laundering method, but only an aspect of existing methods. By deploying intermediaries, the criminal shields himself, creating some distance. Examples listed include money mules moving cash abroad, persons buying expensive goods on behalf of others, and persons taking on the control of a company to screen the actual owner off (straw men).
Various situations involving the use of straw men are reported in the STs. For example, young directors, who are linked to a criminal, are named, as are persons wishing to open an account without knowing its purpose. Bank employees sometimes notice that clients try to screen off themselves by having an intellectually disabled person become the owner of their companies. In some cases, it also appeared that the criminal would put forward his girlfriend, wife, or mother to remain hidden from view himself.
Not named as intermediaries in the NRA but definitely worthy of mention due to the roles they play, are the so-called financial facilitators (also refer to the FATF, 2018). They in fact "facilitate" a solution for the problems in laundering money a drug criminal may face. Because of their specific financial knowledge, such facilitators are more difficult to replace than your average money mule or straw man.
Suspicions that someone acted as money laundering facilitator, for example by setting up an offshore structure or screening off a tenant, are raised multiple times in the STs. The FATF (2018) also notes that financial facilitators may work together to perform

money laundering operations, comprising "professional money laundering networks" (FATF, 2018). Financial facilitator networks have also been identified in the Netherlands (Kramer et al., 2020). Judging by the fact that they were found to service multiple criminal clients, these facilitators may act in a business-like capacity.

8 Money laundering via investment institutions/firms

This money laundering threat (Van der Veen & Heuts, 2020) is, truth be told, the odd one out in the NRA. The risk is said to be a "future" one, as the participants cannot indicate the scale on which the problem exists right now, or the mode by which it occurs. And yet, this money laundering type was still included in the NRA, as the potential risk was deemed to be very high.

The NRA uses the following definitions of investment institutions (IIs) and investment firms (IFs).[86] IIs (also referred to as investment companies or investment funds) that attract money from the public via the issue of participating interests (shares or rights to hold participating interests) and then jointly invest these funds – i.e. for all the investors collectively – in financial and non-financial assets. This includes equity funds, bond funds, hedge funds and real estate funds. IFs are companies that provide investment services such as asset management. IFs can therefore also provide their services to private clients. Both IIs and IFs require a license from the Dutch Authority for the Financial Markets (AFM) and are, under the Wwft, also officially regulated by the AFM.

Various hits result from the data of the FIU by querying the STs using keywords containing "investment". In total, seventeen of them turn out to relate to an IFII. It appears that the amounts reported are low, varying from a few thousand euros to slightly under EUR 200,000. In six cases, the report was triggered by the client having been in the news in a negative way - for example, because a drug laboratory was discovered at their house, or because they had been convicted of fraud. Other reporting reasons include the round-tripping of moneys or unclear business operations, such as being registered with the Chamber of Commerce as an investment institution that also provides garden maintenance services.[87] For verification purposes, the names of the IFIIs listed in the STs have been compared with the names of entities officially registered as an IFII by De Nederlandsche Bank (DNB). These entities did not exist in the DNB register. While these entities did call themselves investment institutions or firms, they did not possess an official license to provide such services. In short, the official, licensed IFII sector is not named in the STs.

9 Money laundering via trade-based structures involving goods

This, too, is a form of trade-based money laundering (also refer to money laundering type 6). Instead of trade-based structures used by criminals to launder their criminal moneys using international or national services, this type concerns the trade in goods. Or, as the Financial Action Task Force (FATF) has it, the process of concealing the proceeds of crime and the increase in value by using trade transactions, in order to legitimise their illegal origins. That increase in value commonly is an incorrect representation of the actual price, quantity, or quality of the goods. Overbilling and underbilling are commonly used to effect this.

86 In the compliance sector, the term commonly used is IFIIs (investment firms and investment institutions).
87 This a fictitious example, to avoid any possible identification.

The STs contain six cases where the reporter suspects the client to possibly be involved in TBML using goods. It concerns the trade in vehicles, textiles, and fruit. Each report concerns some tens of thousands of euros. TBML using goods was also identified in criminal investigations, in these cases relating to agricultural products and vehicles.

10 Money laundering via ABC transactions

ABC transactions in the real estate sector are not inherently criminal in nature. They can be used as a normal tool for selling on real estate between three parties (A, B, and C) in a short amount of time. The method can also be misused, however. In that case, each transaction commonly involves an increase in price. This increase in value creates legitimate income for the parties, even though the increase (and the occasional decrease) do not have to be real. Falsified valuations, for example, are used to sell the real estate on for more than the actual market value.

This method is occasionally seen in the STs relating to drug suspects. One building was sold on with a EUR 120,000 increase in value within a single day, for example. The bank did not trust the matter and reported it. In another example, the transaction between A and B was deemed to be much too low.

11 Money laundering via loan-back arrangements

The NRA uses the following description for money laundering via loan-back arrangements: a criminal lends his or her own illegally obtained money to himself or herself, pretending that the money belongs to someone else. In this way, it looks like a legitimate loan agreement between two parties, while in fact only one party exists. Or at any rate, while the second party is being controlled by him via a member of the family. The larger the amount, the more complex the arrangement can be, possibly involving financial institutions, companies, trust offices, and foreign offshore companies.

The STs list multiple suspected cases of loan-back arrangements. They generally relate to transfers or deposits of cash featuring the descriptions “loan” or “loan repayment”. Investigations by the bank show that no moneys were visibly loaned out, the client is unable to submit the relevant documents, or the way the moneys borrowed are spent is unusual. Most reports relate to simple loan-back arrangements. In one case, someone was transferred an amount described as “loan”. When the bank asked about the transfer, the client stated the money was to be used to set up a company. However, the amount was immediately transferred again for a totally different purpose. It will surprise no-one that the company was never founded, either. In another example, someone received EUR 20,000 in loans. The client informed the bank that the loan was taken out to buy a car. Peculiarly, though, the money was used for all sorts of things - except on a car. In another case, someone loaned out EUR 10,000 the day after having deposited the same amount in cash on his account, without being able to state an origin for the amount. Yet another person was transferred well over EUR 100,000 as a loan from company, only to transfer this amount to the Ministry of Justice and Security (*Ministerie van Justitie en Veiligheid – MinVenJ*)with the description “confiscation order”.

Police files and police information, too, show that loan-back arrangements are well known. To give one example, it turned out that a drug criminal recommended his criminal friend to have money smuggled to Dubai. He explained that this friend was then to put the money on an account held by a Dubai company. This company, in turn, transferred money to an offshore company located on the Cayman Islands. Finally, this latter company issued a mortgage loan to that friend, who was in this way able to buy a

house. This example shows that such a course of action, which, only a few years ago, was deemed to be rather complex, has become general knowledge.

12 Money laundering via fictitious company turnover

According to the definition provided by the NRA, this concerns small businesses where the use of cash is very common. The criminal cash is mixed with the legal turnover of the company, with taxes duly being paid on the totals. In this way, the cash has been laundered. Too, company investments may be funded - to some or a large extent - using criminal moneys. Examples listed include nail salons, hairdressers, ice cream parlours, but also car dealers.[88] The company is either directly owned by the criminal, or controlled by them via a straw man (money laundering type 7).

The STs contain various reports of presumed fictitious company turnover. The majority of the reports relates to persons linked to the trade in cannabis, but in some cases links also existed with the cocaine trade. The reporters note that unusually high amounts of cash are deposited (commonly 90 percent of the company turnover) and express their suspicion that these deposits have nothing to do with the business activities of the company.

The types of companies named in the NRA do not show up notably often in the STs. It turns out that a much wider range of companies and trade activities are used in this way, including diners, snack bars, fish shops, the metal trade, contractors, marketing firms, clothing shops, refurbishment companies, the trade in sport accessories and dietary supplements, packaging companies, the trade in coffee or rice, or the wholesale trade in odd lots. Sometimes, a logical connection with the underlying crime also exists. Not considering coffeeshops and grow shops, companies named in the context of cannabis are often active as lighting or growing equipment specialists, garden web stores, or flower and garden product wholesalers. In the case of the cocaine trade, import and export companies active in the trade in fruit and vegetables are specifically named.

13 Money laundering via crypto currencies

Money laundering via crypto currencies (such as bitcoin, monero, ethereum) is considered to be a relatively new method in the NRA. They are the default means of payment on the dark web. In this framework, service providers have appeared who are able to mix the crypto currencies in such a fashion that their origin or destination is concealed.

As can be noted in Table 10.5 (refer to 10.6 Annexes), the first STs relating to crypto currencies were reported only in 2020.[89] Amounting to about EUR 2.5 million, the magnitude of the phenomenon is limited. However, when reviewing other items, it seems that underreporting has taken place. Reports that relate to wire transfers, for example, appear to be partly composed of or triggered by the purchase or sale of crypto currencies.

---

88 *Een Pact voor de Rechtsstaat* indicates that criminal moneys are invested in, inter alia, wholesale and retail businesses (such as import and export companies and clothing stores), car dealers, coffeeshops, hotels, cafes, restaurants, transport companies, brothels, financial service providers, courier companies, healthcare providers, employment agencies, driving schools, money transfer offices, call shops, taxi companies, jewellers, bridal fashion companies, metal companies, and cleaning companies (Noordanus, 2020).

89 Such holds true for this data set of suspects of drug-related crime, at any rate. FIU - the Netherlands already started receiving reports of unusual transactions relating to crypto currencies in 2017.

Criminal investigations by the police and police information show that crypto currencies are very attractive to criminals. This makes sense. Over the course of the period studied, the media constantly published articles about the rising prices and the enormous profits that could be obtained by investing in crypto currencies. Various subjects have informed each other of this fact. As crypto currencies can be held on anonymous accounts and the government cannot access them, they are considered an ideal way of keeping criminal moneys out of sight of the investigative services and tax authorities, while yielding a return at the same time. Moreover, it did not prove difficult to purchase crypto currencies using criminal moneys. Police investigations have shown that various crypto currency dealers were not the strictest of adherents to the compliance rules when crypto coins were bought with cash.

14 Money laundering via underground banking, including via unlicensed payment service providers

The NRA states that this type of financial service provision is effectively offered outside of the legal financial system. It mainly consists of transferring cash abroad. Such transfers take place by way of mutual settlement by a global network of underground banking, meaning that the actual cash only has to be transported on occasion.[90] One well-known form of this method is hawala banking, which has it roots in the Middle East and India, but underground bankers from Pakistan and China are also named. The NRA understands that such systems need to exist. Informal channels would be the only way for certain groups of migrants to transfer money to family in the country of origin.[91] This applies all the more strongly when the money is to be sent to conflict areas. Nevertheless, it is also a channel used by criminals to move money unseen from the government.

The NRA considers *unlicensed* payment service providers to be underground bankers, as well. Such providers are parties, not being banks, who, without possessing the mandatory license from De Nederlandsche Bank, operate a business in providing payment services to end users. Such payment services inter alia consist of supporting and processing PIN transactions, facilitating online payment transactions, issuing and accepting payment cards (such as credit cards), and offering international money transfers. Money transfer offices, too, are payment service providers, as they perform all sorts of activities in the field of money transactions.

No clear signs indicating underground banking can be derived from the FIU reports. This is not surprising, as underground banking predominantly takes place *outside of* the financial system. The police files, on the other hand, do provide a great deal of information on underground banking in relation to the drug trade. These files allow for the following conclusions.

The underground bankers identified in the past four years mainly perform a type of hawala banking. This means that they primarily shift money virtually, instead of smuggling cash out physically. Generally, the associated costs amount to a few percent of the amount to be transferred. Codes, so-called tokens, are often used in this connection. A token could, for example, be the serial number of a 5 euro bill. The token provides the client with proof that he has deposited the money or is entitled to payment

90 Also refer to money laundering type 15, the physical movement of cash.

91 The migrant groups in question are not listed. The legal Chinese migrant community, for example, does not need to make use of such informal channels.

of the money. Roughly speaking, two different flows of money can be differentiated. The first relates to drugs sold and shipped from the Netherlands to, for example, the United Kingdom or Australia, with the proceeds then returning to the Netherlands. The second flow relates to drugs shipped to the Netherlands form abroad. This mainly concerned cocaine from South America. Once the cocaine has been sold in the Netherlands, the proceeds ultimately flow back to South America. The flows of money do not have to directly correspond to the drug route. The money is often first transported to Dubai, entered into the financial system there and used to procure legal goods destined for the South American market from China. At that point, a form of TBML is in fact performed (refer to money laundering type 9).

15 Money laundering via physical movement of cash

The NRA indicates that this is a variant of underground banking. Instead of virtually moving the entire amount in cash, it is physically smuggled across the border and then introduced into the financial system abroad.

One reason for moving cash abroad is that the local financial institutions conduct customer due diligence and/or monitor transactions in a less thorough manner than in the Netherlands. The physical movement of cash may also occur on the small scale. It can, for example, be sent by post or hidden between legitimate trade goods. The other end of the spectrum is made up of the bank-to-bank transport system, involving the transportation of the physical cash stocks of (major) banks as cargo by courier services. Physical cash transportation is extensively documented in the police files. It may also be noted in this connection that, as is the case for underground banking, the flows of money generally follow the routes the drugs are transported by in reverse.

Other

The fifteen money laundering types discussed in the above do not, of course, constitute all methods used to launder criminal moneys. The reason for discussing these fifteen types is that expert meetings showed that they constitute the greatest threat to the Netherlands. Money laundering via games of chance, for example, was not considered to have a major impact and therefore not considered. This does not mean, however, that the method is not used at all. It is, for example, clearly noted in the ST reports. Criminal moneys are, for instance, used to buy chips in casinos, which are shortly after returned to the counter as “gambling profits”. The casino is then asked to transfer the money to an account or to provide a receipt, so as to prove the “legitimate” origin (i.e., the fictitious gambling profits). Table 10.5 (refer to 10.6 Annexes) shows that the total sum of STs relating to games of chance amounts to EUR 1.9 million over four years. As the reports relate to about a hundred suspects, the method is relatively minor when considering the entire study population - or was simply not noticed often.

The NRA does not list any other forms of money laundering, as they were not discussed in the expert meetings. This by definition means that the associated risks were deemed to be relatively minor. We will list two here - domestic money transfers and fictitious employment schemes - as they were identified in the investigation files.

For it was discovered, during police investigations, that domestic money transfers may relate to money laundering. This is because it is often economically disadvantageous to perform a money transfer within the Netherlands. Compared to transferring moneys via bank accounts, the associated costs are relatively high. Nevertheless, these higher costs are sometimes put up with due to problems existing with a current account and payment is urgently required, or to introduce cash into the financial system. Whatever

the case, not even EUR 600,000 is reported in the STs in this connection over a period of four years, meaning it is not a very notable money laundering method.
It has also become apparent from criminal investigations and police information that people hand drug money in cash to an entrepreneur, who in turn puts this person on the payroll. The drug dealer will then be paid out their own money as monthly wages via bank transfer, less a specific fee.

10.5 Conclusion

The macroeconomic approach to the trade in drugs in the Netherlands is of doubtful added value, given the many estimates required. We soon find ourselves in the realm of guessonomics. A microeconomic approach, too, is limited, however. Under this approach, financial data concerning individual drug dealers or derived from individual criminal investigations are extrapolated into general statements about the drug economy. The representativeness of the data discovered is not clear, however. Moreover, it is also a question whether every single criminal euro can in fact be identified in every financial investigation.
In order to describe money laundering characteristics, we made use of the data of the FIU-the Netherlands (FIU) relating to 13,827 suspects identified in the 2017-2020 period in drug-related police investigations. The FIU has declared a transaction made in the period under investigation by over half these persons to be suspicious. This in total concerned 14,780 completed transactions, having a total value of EUR 467,759,526. The quantity of data and the description indicating why a report was made allowed for investigating whether various money laundering types deemed to be potential money laundering threats in the NRA were actually used by suspects of drug-related crimes. It was found that all fifteen money laundering types were in fact reported on, even if the financial scope of the problem is often very limited.
Various reservations and caveats must be taken account of, however. When analysing the data by the FIU, it must be considered that (1) STs do not provide a complete view into someone's financial life, (2) the data form a snapshot in time, a one-off situation, or multiple situations considered retroactively, that caused a financial institution or other reporting entity to report a UT, and (3) they are *suspicions* only. The case has been far from proven - let alone that proof exists of money laundering. It is, in this connection, striking that the financial scope and number of reports related to real estate is relatively limited, when looking at the FIU tables, while it is known from the literature that real estate is a favoured money laundering object (Kruisbergen, Kleemans & Kouwenberg, 2015).
It may be that the ownership of real estate remains hidden by the use of straw man or facilitators. However, this cannot be ascertained on the basis of the STs.
The police investigations and police information, too, indicate that great amounts of money are laundered using real estate, both domestically and abroad. Summ-IT, the investigation system in use by the police's criminal investigations and intelligence units, is not suitable for making financial queries, however, meaning that the evidence remains anecdotic in nature.
With respect to the NRA, it must also be considered that, even though fifteen money laundering types have been deemed to constitute the greatest threat, this does not mean other money laundering methods are irrelevant to drug criminals. The STs show, for example, that attempts have also been made to launder money via casinos. The total amount involved is relatively minor, however. The NRA therefore consciously did not mark fictitious gambling profits as a money laundering risk for the Netherlands.

10.6 Annexes

Table 10.3. Suspicious transactions in euros, destination countries

Destination countries	2017	2018	2019	2020	Grand total
(empty)	42,198,545	69,738,361	49,381,500	60,096,452	221,414,859
The Netherlands	44,414,923	83,579,089	28,374,017	58,263,942	214,631,972
Germany	61,409	6,313,050	566,723	724,762	7,665,944
UNKNOWN	361,360	2,012,612	1,212,168	1,210,242	4,796,382
Slovakia	4,377,890	200	1,616	1,312	4,381,018
Luxembourg		3,000,500			3,000,500
Türkiye	662,646	319,145	247,122	433,303	1,662,216
Spain	98,857	680,798	63,827	117,455	960,936
Poland	29,478	815,314	34,961	53,843	933,596
Ecuador	7,599	83,395	775,776	7,605	874,374
Colombia	379,827	146,164	279,010	13,575	818,576
Albania	17,574	605,988	4,839	12,300	640,701
Suriname	463,275	48,495	56,926	12,494	581,190
Morocco	243,465	105,678	97,020	53,538	499,702
United Kingdom	56,363	300,563	70,421	44,347	471,694
United States	334,670	14,952	9,855	5,279	364,756
Hungary	162,184	198,889	239		361,312
Belgium	10,143	76,575	113,300	86,689	286,707
Costa Rica	839	28,698	63,751	186,401	279,689
United Arab Emirates	231,090	30,574	9,451	1,591	272,706
Serbia	12,116	10,433	159,470		182,019
France	27,545	5,445	80,567	66,985	180,542
Chad		175,000			175,000
Bulgaria	67,258	39,275	41,590	15,434	163,557
Ireland			6,055	146,188	152,243
Ghana	47,378	76,719	12,650	10	136,757
Panama	57,328	47,580	1,151		106,059
Switzerland	2,997	200	100,000		103,197
Dominican Republic	37,949	35,349	12,181	14,264	99,743
China	65,098	25,967	8,185		99,250
Brazil	12,424	47,936	34,775	3,285	98,420
Thailand	29,566	12,732	24,801	23,135	90,234
Curaçao	57,516	13,786	13,887		85,189
Ukraine	15,662	5,820	24,508	34,668	80,658
Romania	44,872	8,595	14,280	5,989	73,736
Peru	6,525	64,271	1,220		72,016
Lithuania	10,518	3,300	4,000	51,770	69,588
Mexico	16,550	23,177	9,745		49,72
Montenegro	33,069	4,049			37,118
Netherlands Antilles	34,532	2,016			36,548
Armenia	19,000		15,345	2,000	36,345

Destination countries	2017	2018	2019	2020	Grand total
Portugal	8,016	14,170	9,345	2,150	33,681
Liberia	31,907				31,907
Italy	10,496	2,421	14,108	1,255	28,280
Greece	800	20,463	2,500	3,000	26,763
Togo	367	500	13,458	10,000	24,325
Vietnam	19,215	4,200			23,415
Nigeria	6,773	3,938	5,749	6,684	23,144
Indonesia	3,931	16,783	1,077	241	22,032
Bosnia and Herzegovina	10,937	2,890	6,761	185	20,773
Aruba	9,206	9,454		2,100	20,760
Gambia		3,745	11,940	4,925	20,610
Slovenia	20,000				20,000
Myanmar	2,000	8,000	6,000	2,000	18,000
Afghanistan	4,000		10,940	3,027	17,967
Singapore	6,200	10,619			16,819
Moldova	400	8,235	4,196	3,545	16,376
Russia	3,455	8,924	3,055		15,434
Latvia	15,058				15,058
Pakistan	5,105	2,990	5,855	870	14,820
Canada	6,909	5,881	1,938		14,728
Guinea	5,331	9,094			14,425
Ivory Coast	2,050	8,001		4,372	14,423
Cyprus	7,850	1,979	4,570		14,399
Kuwait	13,800				13,800
Israel	6,750		2,000	4,839	13,589
Belarus	2,300		11,202		13,502
Bolivia	12,816				12,816
Kosovo	250	12,431			12,681
Tunisia	6,933	3,437	1,309	300	11,979
Philippines	5,200	3,940	1,890	887	11,917
Congo-Brazzaville	9,523	650	270		10,443
Egypt	5,056	3,032		2,000	10,088
Senegal	341	4,459	5,058		9,858
North Macedonia	950	2,070	4,300	2,427	9,747
Laos	9,500				9,500
Sri Lanka	4,400	2,171	714	2,000	9,285
Croatia	6,300	2,360			8,660
Benin	7,909				7,909
Malaysia	4,200	3,000			7,200
Kyrgyzstan		850	5,243		6,093
Czech Republic	500	2,300	2,400	867	6,067
Uzbekistan		4,000	2,000		6,000
Paraguay			6,000		6,000
Australia	616	4,818			5,434
Uganda		1,008	1,928	1,970	4,906

Destination countries	2017	2018	2019	2020	Grand total
Cameroon	4,400	483			4,883
Kenya	1,245			3,000	4,245
India	1,450		100	2,650	4,200
Austria	4,000				4,000
Argentina	2,700	1,078	100		3,878
Jamaica	3,265				3,265
Nicaragua			3,236		3,236
Cape Verde		1,000	2,010		3,010
Sudan	1,945	1,037			2,982
Hong Kong	500			2,455	2,955
Norway	2,783				2,783
Lebanon		1,500	1,035		2,535
Iraq			1,800	500	2,300
Cuba			2,000		2,000
Guyana		1,498	262	100	1,860
Trinidad and Tobago		1,548			1,548
Monaco	1,355				1,355
Azerbaijan	1,104				1,104
Finland		1,045			1,045
Syria	150	100	200	281	731
Oman	700				700
Honduras			475		475
Denmark		400			400
Estonia	350				350
Chile	123		218		341
Tajikistan			287		287
Ethiopia		277			277
Saudi Arabia	250				250
Saint Martin (Dutch part)	200				200
Congo-Kinshasa			138		138
Mali			50		50
Malta				10	10
Grand total	**95,013,911**	**168,903,468**	**82,084,648**	**121,757,499**	**467,759,526**

Source: FIU-the Netherlands.

Table 10.4: Suspicious transactions in euros, countries of origin

Countries of origin	2017	2018	2019	2020	Grand total
(empty)	42,198,545	69,738,361	49,381,500	60,096,452	221,414,859
The Netherlands	41,408,888	74,259,969	25,940,176	43,487,407	185,096,440
Germany	1,521,489	4,762,119	1,206,878	7,100,208	14,590,694
Belgium	3,699,869	1,748,089	350,926	2,281,037	8,079,921
Poland	606,417	5,108,962	98,511	657,026	6,470,915
Spain	189,320	4,784,900	148,822	331,975	5,455,017
Romania		45,499	1,200	4,575,165	4,621,864
UNKNOWN	35,029	1,225,637	1,353,344	984,809	3,598,819
Türkiye	108,817	1,065,489	1,686,483	79,400	2,940,189
United Kingdom	1,362,783	232,381	122,497	101,249	1,818,910
France	43,907	487,996	6,378	1,142,366	1,680,647
Ghana		599,430	800,750		1,400,180
Albania	129,107	639,465	387,562	138,940	1,295,074
Ukraine		1,114,560	2,189		1,116,749
Hong Kong	761,881	39,605	54,645		856,132
Luxembourg	30,200	724,729			754,929
Greece	632,335	350	2,000	54,150	688,835
Cyprus	629,850			1,540	631,390
Serbia	4,100	603,279	5,000		612,379
Hungary	555,444	2,000	17,129	8,994	583,567
Lithuania	4,000	205,214	10,012	271,146	490,372
Estonia	9,254	355,975	28,189	14,211	407,628
Switzerland	308,562	32,346		20,850	361,758
Niger		342,277	12,115		354,392
United Arab Emirates	126,627	163,798	1,182		291,607
Finland	7,748	31,000	24,500	158,729	221,977
Russia	2,500	209,084	1,509		213,093
Latvia	172,147	2,000			174,147
Bulgaria	52,708		8,000	70,000	130,708
South Africa	99,290	2,000			101,290
Gabon			96,970		96,970
Bosnia and Herzegovina	950	79,930		15,000	95,880
Denmark	1,709	5,030	77,382	3,306	87,427
Nigeria		59,624	21,000	2,351	82,975
Pakistan	18,872		15,000	40,900	74,772
Singapore	34,280		34,775		69,055
Austria	20,925	1,059	23,100	21,330	66,414
Gibraltar	65,000				65,000
Colombia	4,238	41,327	15,716		61,281
Slovenia	500	40,000	12,973		53,473
Saudi Arabia	1,000		197	47,950	49,147
Portugal	3,300	24,717	13,796	2,000	43,813
United States	8,545	30,275	2,421	2,000	43,240
Suriname	18,388	16,467	3,601	1,060	39,516

Countries of origin	2017	2018	2019	2020	Grand total
Jordan		600	36,475		37,075
Morocco			34,000		34,000
Italy	19,516	2,444	1,345	4,368	27,673
Argentina	12,340	4,144	8,063		24,546
Ireland	9,056	10,906	2,829		22,791
Egypt	22,000				22,000
Croatia	1,000			21,000	22,000
Sweden	3,560	10,700		4,559	18,819
Thailand	1,332	13,095			14,427
Netherlands Antilles	14,278				14,278
Sierra Leone				14,021	14,021
North Macedonia	6,940	3,500	2,000		12,440
Liechtenstein	12,000				12,000
Slovakia	2,575		9,000		11,575
Liberia			10,400		10,400
Iraq	4,266	4,432			8,698
Canada	3,600	2,728			6,328
Iceland		5,617			5,617
Lebanon	5,577				5,577
China	2,103	3,000			5,103
Kosovo	1,000	4,000			5,000
Burkina Faso		4,301			4,301
Czech Republic		1,000	2,500		3,500
Philippines		400	3,050		3,450
Israel		1,908	1,527		3,435
Ecuador	1,040	1,990			3,030
Qatar	2,600				2,600
Brazil			2,530		2,530
Dominican Republic	350	1,157	1,000		2,507
Togo	2,286				2,286
Central African Republic	2,157				2,157
Chile	1,000	950			1,950
Indonesia	378	1,062			1,440
Kazakhstan	895		430		1,325
Bolivia	1,300				1,300
Trinidad and Tobago				1,000	1,000
Peru				1,000	1,000
Curaçao	805	91			896
Senegal	798				798
Syria			786		786
Honduras	636				636
Benin		500			500
Cameroon			285		285
Grand total	**95,013,911**	**168,903,468**	**82,084,648**	**121,757,499**	**467,759,526**

Source: FIU-the Netherlands.

Table 10.5. Transactions by type, in euros

Transaction type	2017	2018	2019	2020	Grand total
Wire transfer	53,184,188	103,805,581	31,437,766	61,182,447	249,609,982
Deposit on account	17,700,847	28,576,725	29,501,909	20,967,959	96,747,441
Withdrawal from account	6,758,422	8,319,963	6,040,447	8,818,319	29,937,151
Withdrawal from cash machine	1,271,083	4,371,030	2,014,030	8,715,491	16,371,634
Purchase/sale of real estate	1,030,569	2,206,777	2,639,535	9,304,229	15,181,110
Deposit via cash machine	2,102,350	404,430	5,776,834	5,033,965	13,317,579
Purchase/sale of enterprise	1,448,000	10,819,135	72,650	716,451	13,056,236
Other	5,227,082	4,869,783	162,806	745,117	11,004,788
Cash payment upon purchase by client	2,477,387	1,385,775	1,356,181	420,516	5,639,859
Money transfer from the Netherlands	1,548,434	1,024,563	706,523	373,541	3,653,060
Purchase of gambling chips by client	468,180	380,890	397,146	629,622	1,875,838
Purchase/sale of apartment		225,000	87,642	955,000	1,267,642
Debit card payment using Dutch card	21,500	999,844	13,710	34,923	1,069,976
Sale of cryptos by client				1,041,133	1,041,133
Money transfer to the Netherlands	436,087	278,935	210,027	90,193	1,015,242
Purchase of cryptos by client				852,819	852,819
Crypto to crypto (from A to B)				703,582	703,582
Money transfer within the Netherlands	197,041	192,556	96,844	73,341	559,782
Export of cash from the Netherlands	258,644	68,155	148,366	57,050	532,215
Credit card / prepaid card payment using Dutch card	16,367	106,022	303,618	91,332	517,340
Conclusion of loan agreement		430,000			430,000
Import of cash into the Netherlands	98,175		257,115	40,900	396,190
Keeping high cash balance or liquid assets	165,000	100,000	90,000		355,000
Deposit			299,540	40,000	339,540
Suspected tax fraud	172,430	73,900	66,550	0	312,880
Conclusion of pledge agreement		16,116	6,944	234,002	257,062
Purchase/sale of other property subject to registration		15,000		181,500	196,500
Cash payment for services	36,004	148,298			184,302
Purchase of FC by reporter[92]	50,036	15,052	113,339	3,503	181,930
Deposit on prepaid card	81,906	55,640	17,056		154,602
Payment of invoice by third parties				138,250	138,250
Payments without invoice	68,200			50,077	118,277
Management of company/ legal entity		100	0	110,000	110,100
Lacunae in the records			105,322		105,322
Termination of client relationship	0	5	33,285	56,475	89,765
Use of presumably false invoices	83,594	466			84,060
Cash payment upon sale by client			53,000		53,000
Purchase of FC by reporter	29,910	6,254	12,616	4,001	52,781

92 Foreign currency.

Transaction type	2017	2018	2019	2020	Grand total
Credit card / prepaid card payment using foreign card				39,847	39,847
Sale of gambling chips by client		3,800	23,420		27,220
Foundation of company/legal entity	20,000	800	0	101	20,901
Exchange of small into large denominations	13,400	1,440	2,100	3,400	20,340
Withdrawal from crypto account				20,000	20,000
Negative cash balance			10,000	9,689	19,689
Payment in cash via bank	19,000				19,000
Cash deposit when the administrative cash balance was already high			17,826		17,826
Deposit into crypto account				16,000	16,000
Transit of cash through the Netherlands	14,408				14,408
Sale of securities by client	11,891				11,891
Unknown	1,222	0	10,000	2	11,224
Withdrawal from prepaid card	2,555	433			2,988
Money transfer refund				2,120	2,120
Credit card withdrawal from account		1,000		600	1,600
Exchange of large into small denominations			500		500
Opening of new account	1	1		2	4
Grand total	95,013,911	168,903,468	82,084,648	121,757,499	467,759,526

Source: FIU-the Netherlands.

References

Literature

Abraham, M., B. van Dijk, D. Hofstra & A. Spapens (2021). *Aanpak georganiseerde drugscriminaliteit: Een terugblik op 25 jaar beleid en uitvoering.* Amsterdam & Tilburg: DSP-Groep & Tilburg University.

ACIC (2021). Australian Criminal Intelligence Commission. *Annual report 2019-2020*. S.l.: Commonwealth of Australia.

Algemene Rekenkamer (2008). *Bestrijden witwassen en terrorismefinanciering.* Tweede

Kamer, vergaderjaar 2007–2008, 31 477, nrs. 1–2. Den Haag.

Algemene Rekenkamer (2014). *Bestrijden witwassen: stand van zaken 2013.* Den Haag.

Baravalle, A., M.S., Lopez & S.W. Lee (2016). Mining the dark Web: Drugs and fake Ids. Data Mining Workshops (ICDMW), *2016 IEEE 16th International Conference*, 350-356.

Basra, R. (2019).*Terrorism and drugs in Europe. Background paper commissioned by the EMCDDA for the EU Drug Markets Report 2019*. International Centre for the Study of Radicalisation, Department of War Studies, King's College London. S.l: EMCDDA.

Bervoets, E., K. van den Akker, A. Verweij & A. van Wijk (2021). *'Iedereen doet het toch?' Drugsgebruik onder schoolgaande jeugd in Gouda*. S.l.: Bureau Bervoets.

Blok, G. (2016). 'Heroïne is een vloek!' Hoe de opiaat-'epidemie' in Nederland werd bedwongen. *Het Tijdschrift voor de Politie*, 78(1), 6-9.

Boerman, F. (2016). *Handel in en smokkel van heroïne. Nationaal dreigingsbeeld 2017*. Internal [not published].

Boerman, F., M. Grapendaal, F. Nieuwenhuis & E. Stoffers (2017). *Nationaal dreigingsbeeld 2017. Georganiseerde criminaliteit.* Driebergen: Landelijke Eenheid, Dienst Landelijke Informatieorganisatie.

Borgatti, S.P. & V. Lopez-Kidwell (2014). Network theory. In J. Scott & P.J. Carrington (eds.), *The Sage Handbook of Social Network Analysis* (pp. 40-54). London: SAGE.

Burt, R.S. (1992). *Structural Holes*. Cambridge, MA: Harvard University Press.

Broséus, J., D. Rhumorbarbe, M. Morelato, L Staehli & Q. Rossy (2017). A geographical analysis of trafficking on a popular darknet market. *Forensic science international*, 277, 88-102.

Bunt, H.G. van de & E.R. Kleemans (2007). *Georganiseerde criminaliteit in Nederland: Derde rapportage op basis van de Monitor Georganiseerde Criminaliteit*. Den Haag: Boom Juridische Uitgevers.

Bureau Jansen & Janssen (2021, 23 februari). *Integraal Appel, Nepwetenschap van Tilburg University.* Derived from https://justitieenveiligheid.nl/integraal-appel-nepwetenschap-van-tilburg-university.

CAM (2019). Coördinatiepunt Assessment en Monitoring nieuwe drugs. *Risicobeoordeling lachgas*. Bilthoven: Rijksinstituut voor Volksgezondheid en Milieu.

CBS (2018). Centraal Bureau voor de Statistiek. *Nationale rekeningen. Revisie 2015.* Den Haag.

Chalmers, J., D. Bradford & C. Jones (2010). The effect of methamphetamine and heroin price on polydrug use: A behavioural economics analysis in Sydney, Australia. *International Journal of Drug Policy*. 21, 381-389.

Christin, N., & J. Thomas (2019). *Analysis of the supply of drugs and new psychoactive substances by Europe-based vendors via darknet markets in 2017-18*. Background paper commissioned by the EMCDDA. United States: Hikari Labs.

Colman, C. (2018). Naar een geïntegreerde aanpak van de invoer en doorvoer van cocaïne via de haven via Antwerpen. *Panopticon*, 39(2), 130-140.

Colman, C, F. De Middeleer, A. Spapens, S. Van Nimwegen, R. Ceulen, S. Gerbrands, L. Paoli, & E. Roevens (2018). *De grens voorbij – Belgische en Nederlandse drugsmarkten in beweging.* Den Haag: Boom Criminologie.

Cornish, D. (1994). *The procedural analysis of offending and its relevance for situational prevention.* Crime prevention studies. (3), 151-196.

Daniel, M.R. (2021, 28 juni). *Interne memo handelingskader lachgas en APV*. Politie [not published].

DEA (2020). Drug Enforcement Administration. *2020 National Drug Threat Assessment*. S.l.: US Department of Justice.

Décary-Hétu, D., M. Paquet-Clouston & J. Aldridge (2016). Going International? Risk Taking by Cryptomarket Drug Vendors. *International Journal of Drug Policy.* 35, 69-76.

Dierick, M., M. Ansseau, H. D'Haenen, J. Peuskens & P. Linkowski (red.) (2003). *Handboek psychofarmacotherapie*. Gent: Academia Press.

Dolliver, S. D., S. P. Ericson & K. L. Love (2016). A geographic analysis of drug trafficking patterns on the tor network. *Geographical Review*, 108(1), 45-68.

Douane (2017). Een scherpe kijk op scan en detectie. *Douane in zicht* (3). Derived from https://douane-inzicht.nl/article/313408034.

Douane (2021). *Douane Nederland in 2020.* Derived from https://www.rijksoverheid.nl/documenten/jaarverslagen/2021/07/08/douane-nederland-in-2020.

Duijn, P.A.C., V. Kashirin & P.M.A. Sloot (2014). The relative ineffectiveness of criminal network disruption. *Scientific Reports*, 4(4238), 1-15.

Duijn, P.A.C. (2016). *Detecting and disrupting criminal networks: A data driven approach (Proefschrift Universiteit van Amsterdam)*. Consulted on http://dare.uva.nl.

Duyne, P.C., van (2006). Witwasonderzoek, luchtspiegelingen en de menselijke maat. *Justitiële Verkenningen*, 32(2), 34-40.

Duyne, P.C., van, J.H. Harvey & L.Y. Gelemerova (2018). *The Critical Handbook of Money Laundering Policy, Analysis and Myths.* London: Palgrave Macmillan.

EMCDDA (2017). Perspectives on drugs: Changes on Europe's cannabis resin market. Derived from https://emcdda.europa.eu/topics/pods/cannabis-resin-market-europe.

EMCDDA (2019a). European Monitoring Centre for Drugs and Drug Addiction. *European drug report 2019: Trends and developments*. Luxembourg: Publications Office of the European Union.

EMCDDA (2019b). European Monitoring Centre for Drugs and Drug Addiction. *Drug precursor developments in the European Union.* EMCDDA Papers. Luxembourg: Publications Office of the European Union.

EMCDDA (2019c). European Monitoring Centre for Drugs and Drug Addiction. *Developments in the European cannabis market*. EMCDDA Papers. Luxembourg: Publications Office of the European Union.

EMCDDA (2020a). European Monitoring Centre for Drugs and Drug Addiction. *European drug report 2020: Trends and developments*. Luxembourg: Publications Office of the European Union.

EMCDDA (2020b). European Monitoring Centre for Drugs and Drug Addiction. *Emerging evidence of Afghanistan's role as a producer and supplier of ephedrine and methamphetamine*. EU4MD Special Report. Luxembourg: Publications Office of the European Union.

EMCDDA (2020c). European Monitoring Centre for Drugs and Drug Addiction. *EU drug markets report. Impact of COVID-19 2020*. Luxembourg: Publications Office of the European Union.

EMCDDA (2021a). European Monitoring Centre for Drugs and Drug Addiction. *European drug report 2021: Trends and developments*. Luxembourg: Publications Office of the European Union.

EMCDDA (2021b). European Monitoring Centre for Drugs and Drug Addiction. *Drug-related deaths and mortality in Europe: update from the EMCDDA expert network*, Technical report. Luxembourg: Publications Office of the European Union.

EMCDDA (2021c). European Monitoring Centre for Drugs and Drug Addiction. *Impact of Covid-19 on drug markets, use, harms and drugs services in the community and prisons: results from a EMCDDA trendspotter study*. Luxembourg: Publications Office of the European Union.

EMCDDA & Europol (2012). European Monitoring Centre for Drugs and Drug Addiction & Europol. *EU drug markets report 2012*. Luxembourg: Publications Office of the European Union.

EMCDDA & Europol (2019). European Monitoring Centre for Drugs and Drug Addiction & Europol. *EU drug markets report 2019.* Luxembourg: Publications Office of the European Union.

Europol. (2015). *Why is cash still king? A strategic report on the use of cash by criminal groups as a facilitator for money laundering.* The Hague: Europol.

Europol (2018). *Operational updates from O21 – AP Heroin illegal heroin production and trafficking*. Drug supply reduction 7th Programme Board Meeting. Den Haag, 2018, 15 november [not published].

Europol (2021a). *European Union serious and organised crime threat assessment, A corrupting influence: the infiltration and undermining of Europe's economy and society by organised crime (EU SOCTA 2021)*. Luxembourg: Publications Office of the European Union.

Europol (2021b). *Afghanistan. The impact of the Afghan situation on terrorism and organised crime in the EU* [not published].

Faber, K.,T. Gedden,, P. Jansen, & I. Schepens (2015). *Nieuwe Psychoactieve Stoffen: Een inzicht in de bedrijfsstructuur van NPS-bedrijven binnen Nederland op basis van een Sociale Netwerk Analyse.* Apeldoorn: Politieacademie.

FATF (2018). *Financial Action Taskforce. Professional Money Laundering*. Paris: FATF. Derived from www.fatfgafi.org/publications/methodandtrends/documents/professional-moneylaundering.html.

FGP Antwerpen (2019). Federale Gerechtelijke Politie. *Analyse voor Nationaal Politioneel Veiligheidsbeeld* [not published].

FGP Antwerpen (2020). Federale Gerechtelijke Politie Antwerpen. *Overzicht 2020*. S.l.

Derived from https://www.politie.be/5998/sites/5998/files/attachments/JaarverslagFGPAntwerpen2020.pdf.

FIU-Nederland (2016). Financial Intelligence Unit. *Jaaroverzicht 2015.* Zoetermeer: FIU-Nederland.

FIU-Nederland (2018). Financial Intelligence Unit. *Jaaroverzicht 2017.* Zoetermeer: FIU-Nederland.

FIU-Nederland (2019). Financial Intelligence Unit. *Jaaroverzicht 2018.* Zoetermeer: FIU-Nederland.

FIU-Nederland (2020). Financial Intelligence Unit. *Jaaroverzicht 2019.* Zoetermeer: FIU-Nederland.

FIU-Nederland (2021). Financial Intelligence Unit. *Jaaroverzicht 2020.* Zoetermeer: FIU-Nederland.

Giessen, M., D.E.G. Moolenaar, D.E.G. & M.M.J. van Ooyen-Houben (2014). *De export van in Nederland geteelde cannabis. Een schatting van de omvang en een bespreking van de mogelijkheden en beperkingen van het onderzoek.* Cahier 2014-19. Den Haag: WODC.

Goor, M. van (2020). *Factsheet lachgas.* Utrecht: Trimbos Instituut.

Gruter, P., & D. van de Mheen (2005). *Cocaïnehandel in Nederland. Impressies van deelnemers aan drugsdistributienetwerken*. Rotterdam: IVO.

Hendriks, H. (2017). *Kennisdocument azijnzuuranhydride*. Belastingdienst / FIOD [not published].

IAT (2020). Informatie Analyse Team, Staf Korpsleiding. *Analyse lachgas incidenten*. Politie [not published].

INCB (2021a). International Narcotics Control Board. *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances 2020*. S.l.: United Nations publication.

INCB (2021b). International Narcotics Control Board. *Report of the International Narcotics Control Board for 2020*. S.l.: United Nations publication.

InSight Crime (2021*). Latin America Organized Crime Study for the Kingdom of the Netherlands.* Consulted on: https://www.rijksoverheid.nl/documenten/rapporten/2021/02/26/latin-america-organized-crime-study-for-the-kingdom-of-the-netherlands

Jansen, F. (2012). *Georganiseerde hennepteelt. Criminaliteitsbeeldanalyse 2012*. Driebergen: KLPD, Dienst Nationale Recherche.

Kleemans, E.R., E.A.I.M. van den Berg & H.G. van de Bunt (1998). *Georganiseerde criminaliteit in Nederland. Rapportage op basis van de WODC Monitor.* Den Haag: WODC.

Kleemans, E.R., M.E.I. Brienen, & H.G. van de Bunt (2002). *Georganiseerde criminaliteit in Nederland: tweede rapportage op basis van de WODC-monitor.* Den Haag: WODC.

KLPD, Dienst Nationale Recherche (2012). *Synthetische drugs en precursoren. Criminaliteitsbeeldanalyse 2012.* Driebergen: KLPD, Dienst Nationale Recherche.

KMar (2021). Koninklijke Marechaussee, Afdeling Intelligence, sectie Analyse en Onderzoek. *Hoofdlijnen verdovende middelen luchthavens t.b.v. fenomeenbeeld verdovende middelen Nationale Politie* [not published].

Kramer, J.A., A. A. J. Blokland & M. R. J. Soudijn (2020). Witwassen als bedrijfsmatige activiteit: de verborgen netwerken van witwassers. *Tijdschrift voor Criminologie 62(4)*, 365-382.

Krekel, A. (2019). *Crime script cocaïne* (Scriptie recherchekunde, afstudeerrichting criminaliteitsanalyse). Apeldoorn: Politieacademie.

Kruisbergen, E. (2021). Het witwassen van criminele winsten. Over feiten, fabels en vragen die je eigenlijk (nog) niet zou moeten stellen. *Justitiele Verkenningen*, 4, 47-68.

Kruisbergen, E.W., H.G. van de Bunt & E.R. Kleemans (2012). *Georganiseerde criminaliteit in Nederland. Vierde rapportage op basis van de Monitor Georganiseerde Criminaliteit.* Den Haag: Boom Lemma.

Kruisbergen, E. W., E.R. Kleemans & R.F. Kouwenberg (2015). Profitability, power, or proximity? Organized crime offenders investing their money in legal economy. *European Journal on Criminal Policy and Research, 21(2)*, 237-256.

Kruisbergen, E.W., E.R. Leukfeldt, E.R. Kleemans & R.A. Roks (2018). *Georganiseerde criminaliteit en ICT. Rapportage in het kader van de vijfde ronde van de Monitor Georganiseerde Criminaliteit.* Den Haag: WODC.

Kruisbergen, E.W., R.A. Roks & E.R. Kleemans (2019). *Georganiseerde criminaliteit in Nederland: daders, verwevenheid en opsporing. Rapportage in het kader van de vijfde ronde van de Monitor Georganiseerde Criminaliteit.* Den Haag: WODC.

Kruisbergen, E. (2020). *Een pamflet is geen onderzoek Tops en Tromp stellen in "De achterkant van Amsterdam" veel, maar onderbouwen bitter weinig.* CIROC. Derived from https://www.ciroc.nl/uploads/ciroc/ciroc_nieuwsbrief_pdf/nl/2020_ciroc_nieuwsbrief_januari.pdf.

Laar, M.W. van, A.A.N. Cruts & C.J.A. van Miltenburg (red.) (2020). *Nationale Drug Monitor. Jaarbericht 2019.* Utrecht: Trimbos-instituut.

Laar, M.W. van, E.M.T. Beenakkers, A.A.N. Cruts, A.P.M. Ketelaars, M.C. Kuin, R.F. Meijer, C.J.A. van Miltenburg, A. Mujcic & L. Strada (red.) (2021). *Nationale Drug Monitor. Jaarbericht 2020.* Utrecht: Trimbos-instituut.

Mayntz, R. (2004). *Organizational forms of terrorism. Hierarchy, network, or a type sui generis?* (MPIfG Discussion Paper 04/4). Köln: Max-Planck-Institut für Gesellschaftsforschung.

McDermott, J., J. Bargent, D. den Held, M. Fernanda Ramírez (2021). The cocaine pipeline to Europe. Global Initiative Against Transnational Organized Crime & InSight Crime. Derived from

https://globalinitiative.net/wp-content/uploads/2021/02/The-cocaine-pipeline-to-Europe-GI-TOCInsightCrime.pdf.

Mennes, R., Pieper, I., Schoonbeek & B. Bieleman (2021), *Coffeeshops in Nederland 2020. Aantallen coffeeshops en gemeentelijk beleid 1999-2020.* Den Haag: WODC.

Middeleer, F. de, & B. De Ruyver (2017). De verschuiving van illegale drugsmarkten van Nederland naar België. Perceptie of realiteit?. *Justitiële Verkenningen*, 43(2), pp. 103-119.

Middeleer, F. de, S. van Nimwegen, R. Ceulen, S. Gerbrands & E. Roevens (2018). *Illegale drugsmarkten in België en Nederland: Communicerende vaten?* S.l.: Belgian Science Policy Office (BELSPO).

Ministerie van Justitie & Veiligheid (2020, 22 mei). *Financieringsregeling drugsafvaldumpingen.* (Brief aan de Voorzitter van de Tweede Kamer der Staten-Generaal, kenmerk 2903470).

Monshouwer, K., C. van Miltenburg, R. van Beek, W. den Hollander, F. Schouten, M. van Goor, M. Blankers & M. van Laar (2021). *Groot Uitgaansonderzoek 2020.* Utrecht: Trimbos Instituut.

Morselli, C. (2009). *Inside criminal networks.* New York: Springer.

Morselli, C. & J. Roy (2008). Brokerage Qualifications in Ringing Operations. *Criminology. 46(1*): 71–97.

Nabben, T. & A. Benschop (2020). *Antenne 2019: Trends in alcohol, tabak en drugs bij*

jonge Amsterdammers. Amsterdam: Rozenberg Publishers.

NADIC NY/NJ. (2009). *Drug Market Analysis 2009*.

Niesink, R. & M. van Laar, (2012). *THC, CBD en gezondheidseffecten van wiet en hasj: recente inzichten.* Utrecht: Trimbos-instituut.

Noordanus, P.G.A. (2020). *Een Pact voor de Rechtsstaat: Een sterke terugdringing van drugscriminaliteit in tien jaar.* Den Haag: Strategisch Beraad Ondermijning.

NVIC (2021). Nationaal Vergiftigingen Informatie Centrum. *Acute vergiftigingen bij mens en die*r. *Jaaroverzicht 2020.* Utrecht: Universitair Medisch Centrum Utrecht.

Olde Kalter, J. (2021). De cocaïne-economie. *Quote*, 8, 62-71.

Onderzoeksraad voor Veiligheid (2018). *Omgevingsveiligheid hennepkwekerijen. Onderzoek naar de fysieke veiligheidsrisico's voor omwonenden van bedrijfsmatig opgezette hennepkwekerijen.* Den Haag: Onderzoeksraad voor Veiligheid.

Pardal, M, C. Colman & T. Surmont (2021). Synthetic Drug Production in Belgium – Environmental Harms as Collateral Damage? *Journal of Illicit Economies and Development, 3(1)*: pp. 1–14. DOI: https:// doi.org/10.31389/jied.84

Politie (2021a). ERISSP Landelijk overzicht Synthetische Drugs 2020.

Politie (2021b). *Drugs Prijzen Overzicht 2020 NL* [not published].

RIEC Zuidwest, Integraal Afpakteam & Tilburg University (2013). *Integraal Appèl*. Oosterhout/Breda/Tilburg.

Rigter, S., M. van Laar & M. Bossong (2019). *Aanbod en gebruik van cannabisproducten in de coffeeshop*. Utrecht: Trimbos-instituut.

Rijksoverheid (2020). Brochure Experiment Gesloten coffeeshopketen. Derived from https://www.rijksoverheid.nl/documenten/brochures/2020/11/26/brochure-experiment-gesloten-coffeeshopketen

Roks, R., & J. Hendriksen (2021). Laat je niet misleiden door afwijkende prijzen. *Tijdschrift voor Criminologie*, 63(2), 212-235.

Rouwenhorst, A. (2018). *Drugs- en wapenhandel op het darkweb. Een verkennend onderzoek naar de modus operandi en persoonskenmerken van personen die drugs- en/of wapendelicten plegen op het darkweb*. Master Criminologie Vrije Universiteit Amsterdam.

Saggers, T. (2019). *An assessment of the extent of Albanian(-speaking) organised crime groups involved in drug supply in the European Union: characteristics, role and the level of*

influence, United Kingdom: StraTac Logical Limited.

Sampó, C. (2019). Cocaine Trafficking between Latin America and West Africa. *URVIO Revista Latinoamericana de Estudios de Seguridad*, (24), 187-203.

Soska, K., & N. Christin (2015). *Measuring the Longitudinal Evolution of the Online Anonymous Marketplace Ecosystem*. USENIX Security Symposium, 33-48.

Soudijn, M. & T. Akse (2012). *Witwassen: Criminaliteitsbeeldanalyse 2012.* Driebergen: Korps landelijke politiediensten, Dienst Nationale Recherche.

Soudijn, M. R. J. & P. Reuter (2016). Cash and carry: the high cost of currency smuggling in the drug trade. *Crime, Law & Social Change*, 66(3), 271-290.

Spapens, A.C.M. (2012). *Netwerken op niveau: criminele micro-, meso- en macronetwerken* (Inaugurele rede Tilburg University). Tilburg: Prisma Print.

Spapens, T., E. Kolthoff & W. Stol (2016). Georganiseerde misdaad in de 21ste eeuw. *Tijdschrift voor criminologie,* 58(2), 3, pp. 3-18.

Staring, R., L. Bisschop, R. Roks, E. Brein & H. van de Bunt (2019). *Drugscriminaliteit in de Rotterdamse haven: aard en aanpak van het fenomeen*, Erasmus Universiteit Rotterdam, Erasmus School of Law.

Stevanović, K. (2020). Social ties between criminal networks in cocaine trafficking in Europe. *CRIMEN* (XI) 3/2020, 325–345.

Teichmann, F. (2019). Recent trends in money laundering. *Crime, Law & Social Change, 73(2),* 237-247.

Tops, P.W. & E. van der Torre (2014). *Wijkenaanpak en ondermijnende criminaliteit.* Den Haag: Boom-Lemma uitgevers.

Tops, P., J. van Valkenhoef, E. van der Torre & L. van Spijk (2018). *Waar een klein land groot in kan zijn. Nederland en synthetische drugs in de afgelopen 50 jaar*. Den Haag: Boom criminologie.

Tops, P. & J. Tromp (m.m.v. N. Rombouts & J. van Valkenhoef) (2019). *De achterkant van Amsterdam: Een verkenning van drugsgerelateerde criminaliteit.* Amsterdam: Gemeente Amsterdam.

TorProject. (2021, 11 29). *Tor Browser User Manual*. Opgehaald van TorProject: tb-manual.torproject.org/about/

UNCTAD (2021), United Nations Conference on *Trade and Development. COVID-19*

and Maritime Transport Impact and Responses. *Transport and Trade Facilitation.*

Series No 15. Geneva: United Nations. Derived from https://unctad.org/system/files/official-document/dtltlb2021d1_en.pdf.

United Nations (1961). *Single Convention on Narcotic drugs, 1961*. S.l.: United Nations publication Consulted on https://www.unodc.org/pdf/convention_1961_en.pdf

United Nations (1988) *Convention against illicit traffic in narcotic drugs and psychotropic substances 1988*. New York: United Nations.

UNODC (2010). United Nations Office on Drugs and Crime. *World Drug Report 2010. Vol.1: Transnational drug market analysis.* S.l.: United Nations publication.

UNODC (2011). *Estimating illicit financial flows resulting from drug trafficking and other transnational organized crimes.* Vienna: United Nations Office on Drugs and Crime.

UNODC (2017). United Nations Office on Drugs and Crime. *World Drug Report 2017.* Vol. 5: *The drug problem and organized crime, illicit financial flows, corruption and terrorism* S.l.: United Nations publication.

UNODC (2018). United Nations Office on Drugs and Crime. *World Drug Report 2018.* Vol. 3: *Analysis of drug markets. Opiates, cocaine, cannabis, synthetic drugs*. S.l.: United Nations publication.

UNODC (2019a4). United Nations Office on Drugs and Crime. *World Drug Report 2019. Vol. 4: Stimulants*. S.l.: United Nations publication.

UNODC (2019a5). United Nations Office on Drugs and Crime. *World Drug Report 2019. Vol. 5: Cannabis and Hallucinogens.* S.l.: United Nations publication.

UNODC (2020a3). United Nations Office on Drugs and Crime. *World Drug Report 2020*. Vol. 3: *Drug supply*. S.l: United Nations publication.

UNODC (2020b). United Nations Office on Drugs and Crime. *Global Synthetic Drug Assessment 2020*. Vienna: United Nations.

UNODC (2021a2). United Nations Office on Drugs and Crime. *World Drug Report 2021. Vol. 2: Global overview: Drug demand drug supply.* S.l.: United Nations publication.

UNODC (2021a3). United Nations Office on Drugs and Crime. *World Drug Report 2021*. Vol. 3: *Drug market trends: cannabis opioids*. S.l.: United Nations publication.

UNODC (2021a4). United Nations Office on Drugs and Crime. *World Drug Report 2021*. Vol. 4: *Drug market trends: cocaine amphetamine-type stimulants*. S.l.: United Nations publication.

UNODC (2021b). United Nations Office on Drugs and Crime. *UNODC Drugs Monitoring Platform Brief: Possible impact of the COVID-19 pandemic on trafficking in opiates and methamphetamine originating in Afghanistan*. S.l: UNODC.

UNODC & EUROPOL (2021), *The illicit trade of cocaine from Latin America to Europe – from oligopolies to freefor-all?, Cocaine Insights 1*, UNODC, Vienna, September 2021.

Unger, B., G. Rawlings, M. Siegel, J. Ferwerda, W. de Kruijf, M. Busuioic, & K. Wokke (2006). *The amounts and effects of money laundering (Report for the Ministry of Finance)*. Utrecht: Utrecht School of Economics, Australian National University.

Unger, B., J. Ferwerda, I. Koetsier, B. Gjoleka, A. van Saase, B. Slot & L. de Swart (2018). *Aard en omvang van criminele bestedingen: Eindrapportage.* Utrecht/ Rotterdam: Universiteit Utrecht, Ecorys, Vrije Universiteit Amsterdam.

Valkenhoef, J. van & P. Tops (2021). Fear of drowning by numbers? Omzetberekeningen van synthetische-drugsproductie in Nederland. *Tijdschrift voor Criminologie. (63)2,* 236-252.

Van Buskirk, J., R. Bruno, T. Dobbins, C. Breen, L. Burns, S. Naicker & A. Roxburgh (2017). The recovery of online drug markets following law enforcement and other disruptions. *Drug and alcohol dependence* 173, 159-162.

Veen, H.C.J. van der & L.F. Heuts (m.m.v. E.C. Leertouwer) (2020). *National Risk Assessment Witwassen 2019* (Cahier 2020-11). Den Haag: WODC.

Vermeulen, I., W. van der Leest & V. Dirksen (2018). *De doorvoer van cocaïne via Nederland. Distributielijnen en doorvoermethoden.* Driebergen: Dienst Landelijke Informatieorganisatie.

Vermeulen, I. (2019). *De malafide logistiek dienstverlener. Sleutelfiguur in de doorvoer van verdovende middelen van Nederland naar het buitenland.* Driebergen: Dienst Landelijke Informatieorganisatie.

Vermeulen, I., M. Soudijn & W. van der Leest (2021). Open heimelijke netwerken in de Nederlandstalige georganiseerde synthetische drugscriminaliteit. *Tijdschrift voor Criminologie*, 63(2), 187-211.

Visser, I. (2020). *De illegale fentanyl markt*. Politie [not published].

Vries, Joost de (2020, 1 juli). *Volkskrant*. Krijgen Mexicaanse drugskartels voet aan de grond in Nederland? Derived from https://www.volkskrant.nl/nieuws-achtergrond/krijgen-mexicaanse-drugskartels-voet-aan-de-grond-in-nederland~b6fbe344/

Wax, P. M. (2002). Just a Click Away: Recreational Drug Web Sites on the Internet. *PEDIATRICS* 109(6):e96.

Wijk, A. van, E. van der Torre, G. van Barneveld & J. Wolsink, (2020). *Ondermijning op en rond luchthaven Schiphol.* Arnhem: Bureau Beke.

Zeehavenpolitie (2021). Specialisten opsporing. *Sfeer proces-verbaal uithalers*. Rotterdam: zeehavenpolitie.

Zhilla, F., & B. Lamallari (2016). *Evolution of the Albanian organized crime groups*. Tirana: Open Society Foundation Albania, Tirana. Derived from http://www. osfa. al/ sites/default/files/evolution_of_the_albanian_organized_crime_groups. pdf.

News items

1Limburg (2019, 6 May), Tientallen zakken met hennepafval gedumpt in berm. (Deborah Parren). Derived from https://www.1limburg.nl/tientallen-zakken-met-hennepafval-gedumpt-berm

Algemeen Dagblad (2017, 28 August). Politie deelt flinke klappen uit op darkweb met Operation Bayonet (Simone van Zwienen). Derived from https://www.ad.nl/binnenland/politie-deelt-flinke-klappen-uit-op-darkweb-met-operation-bayonet~a817ff06/

Algemeen Dagblad (2020, 2 January). Justitie: deelnemer ayahuasca-healing kwam mogelijk door geweld om het leven. (S. van Mersbergen). Derived from https://www.ad.nl/binnenland/justitie-deelnemer-ayahuasca-healing-kwam-mogelijk-door-geweld-om-het-leven~a74bc655/

Algemeen Dagblad (2020, 9 September). Grote hoeveelheid hennepafval gedumpt in bos bij Bergen op Zoom. (Ties Cleven). Derived from https://www.ad.nl/bergen-op-zoom/grote-hoeveelheid-hennepafval-gedumpt-in-bos-bij-bergen-op-zoom~a30a3b4b/

Algemeen Dagblad (2021, 17 September). Bizarre aanhouding in Rotterdamse haven: 14-jarige verdacht van zoeken naar partij drugs (Eric Oosterom). Derived from

https://www.ad.nl/rotterdam/bizarre-aanhouding-in-rotterdamse-haven-14-jarige-verdacht-van-zoeken-naar-partij-drugs~af9741c2/

Argos (2018, 6 October). Belangrijk rapport over wietteelt gebaseerd op dubieuze bron. Derived from https://www.vpro.nl/argos/lees/nieuws/2018/Belangrijk-rapport-over-wietteelt-gebaseerd-op-dubieuze-bron-.html

BN De Stem (2019, 10 January). Brabantse onderwereld bedreigt politiemedewerker met de dood. (S. van Mersbergen). Derived from https://www.bndestem.nl/breda/brabantse-onderwereld-br-bedreigt-politiemedewerker-met-de-dood~a327ecc3/?referrer=https%3A%2F%2Fwww.omroepzeeland.nl%2F

BN DeStem (2019, 1 February). Tientallen potten met hennepafval aan de rand van het bos: 'Bizar dat ze dit zo makkelijk kunnen dumpen' (E. Luiten). Derived from https://www.bndestem.nl/bergen-op-zoom/tientallen-potten-met-hennepafval-aan-de-rand-van-het-bos-bizar-dat-ze-dit-zo-makkelijk-kunnen-dumpen~a4604bd1/?referrer=https%3A%2F%2Fwww.google.com%2F

Crimesite (2021, 14 January). Uithalers van cocaïne Rotterdamse haven zwaarder bestraffen. Derived from https://www.crimesite.nl/uithalers-van-cocaine-rotterdamse-haven-zwaarder-bestraffen/

De Gelderlander (2019, 27 June). Grootste hoeveelheid drugsafval ooit gevonden in loods Voorthuizen. Derived from https://www.gelderlander.nl/de-vallei/grootste-

hoeveelheid-drugsafval-ooit-gevonden-in-loods-voorthuizen~a47eef0a/?referrer=https%3A%2F%2Fwww.google.nl%2F

De Telegraaf (2021, 15 September). Politie en OM wachten met smart op nieuwe wet. Nog slechts 16 van 110 opgepakte coke uithalers zitten vast (Mick van Wely). Derived from

https://www.telegraaf.nl/nieuws/766564166/nog-slechts-16-van-110-opgepakte-coke-uithalers-zitten-vast

De Volkskrant (2020, 10 October). De burgemeester van Antwerpen denkt aan legalisering cocaïne. Derived from https://www.volkskrant.nl/nieuws-achtergrond/de-burgemeester-van-antwerpen-denkt-aan-legalisering-cocaine~b235d8cd/?referrer=https%3A%2F%2Fwww.google.nl%2F

Algemeen Dagblad (2021, 5 January). Cae una banda en Fuengirola tras interceptar un tráiler con destino Holanda con 66 kilos de marihuana y otros cinco de hachís. Derived from https://www.diariosur.es/sucesos/interceptan-trailer-destino-20210105164212-nt.html

Douanes (2021). *740 kg de résine de cannabis saisis par les*

douaniers du Perthus. Derived from https://www.douane.gouv.fr/sites/default/files/2021-07/09/CP-740-kg-de-cannabis-saisis-par-les-douaniers-du-Perthus-09-07-2021.pdf

Een Vandaag (2021, 21 August). Mee met de douane in de haven van Antwerpen op jacht naar cocaïne in zeecontainers: een kat-en-muisspel, derived from https://eenvandaag.avrotros.nl/item/mee-met-de-douane-in-de-haven-van-antwerpen-op-jacht-naar-cocaine-in-zeecontainers-een-kat-en-muisspel/

Eindhoven Dagblad (2018, 8 October). Twaalf appartementen ontruimd na brand in vrachtwagen vol drugsafval. (C. Beenen, J. Krekels, W. van Arensbergen & I. Cup), Derived from https://www.ed.nl/eindhoven/twaalf-appartementen-ontruimd-na-brand-in-vrachtwagen-vol-drugsafval-in-woonwijk-eindhoven-dit-is-gestoord~a13afe18/

Europol (2020, 1 October). Joint investigation team leads to dismantling of one of Europe's most active Albanian-speaking networks trafficking cocaine into Europe. Derived from

https://www.europol.europa.eu/media-press/newsroom/news/joint-investigation-team-leads-to-dismantling-of-one-of-europe%E2%80%99s-most-active-albanian-speaking-networks-trafficking-cocaine

Guardia Civil (2021, 1 June). *Incautado un pesquero en alta mar al este de Canarias con 15 toneladas de hachís a bordo.* Derived from https://www.guardiacivil.es/es/prensa/noticias/7856.html

HLN (2018, 24 May). Dokwerker ongedeerd na ongeval met straddler. Derived from https://www.hln.be/antwerpen/dokwerker-ongedeerd-na-ongeval-met-straddler~a10f7ad9/

HLN (2019, 27 November). Europese douanediensten steken in Antwerpen koppen bij elkaar over internationale drugshandel. Derived from https://www.hln.be/antwerpen/europese-douanediensten-steken-in-antwerpen-koppen-bij-elkaar-over-internationale-drugshandel~ab485675/

InSight Crime (2020a, 19 March). Honduras Goes From Transit Nation to Cocaine Producer.

(Hector Silva Avalos). Derived from https://insightcrime.org/news/analysis/honduras-transit-nation-cocaine-producer/

InSight Crime (2020b, 28 May). Cocaine Seizures Expose Flaws at Guatemala, Honduras Ports (Alex Papadovassilakis). Derived from https://insightcrime.org/news/analysis/cocaine-central-america-caribbean-ports/

La Vanguardia (2019, 12 January). 25 detenidos con casi 3 toneladas de marihuana en Catalunya, el mayor alijo intervenido en España. Derived from https://www.lavanguardia.com/sucesos/20190111/454072293658/mayor-alijo-marihuana-catalunya.html

Louisville Courier Journal (2021, 28 October). Narco-submarines' play a growing role in ferrying drugs bound for the United States and elsewhere. (Karol Suárez). Derived from

https://eu.usatoday.com/story/news/nation/2021/10/28/narco-submarines-ferry-cocaine-other-drugs-across-ocean-waters/8581150002/

Netbeheer Nederland (2021, 11 March). In 2020 voor 110 miljoen kWh energiediefstal door hennepkwekerijen opgespoord. Derived from https://www.netbeheernederland.nl/nieuws/in-2020-voor-110-miljoen-kwh-energiediefstal-door-hennepkwekerijen-opgespoord-1439

NRC (2020, 3 May). Heroïnegebruikers wenden zich vaker tot methadon (M. Kuiper). Derived from https://www.nrc.nl/nieuws/2020/05/03/heroinegebruikers-wenden-zich-vaker-tot-methadon-a3998636

NOS (2017, 20 January). Waterzuivering Baarle-Nassau ontregeld door drugsafval. Derived from https://nos.nl/artikel/2153965-waterzuivering-baarle-nassau-ontregeld-door-drugsafval

NOS (2018, 24 May). Hoe schat je de waarde van illegale economie (B. Kamphuis). Derived from https://nos.nl/artikel/2233362-hoe-schat-je-de-waarde-van-illegale-economie

NOS (2021, 16 September). Recordaantal drugsuithalers in Rotterdamse haven, OM wil snel nieuwe wet. Derived from https://nos.nl/artikel/2398008-recordaantal-drugsuithalers-in-rotterdamse-haven-om-wil-snel-nieuwe-wet

NOS (2021, 2 December). Lachgas afgelopen jaren gevonden bij 1800 ongelukken met tientallen doden. Derived from https://nos.nl/artikel/2407852-lachgas-afgelopen-jaren-gevonden-bij-1800-ongelukken-met-tientallen-doden.

Omroep Brabant (2019, 25 April). Politie stopt omstreden healingsessie na overlijden man. Derived from https://www.omroepbrabant.nl/nieuws/2988202/politie-stopt-omstreden-healingsessie-na-overlijden-man-31

Omroep Brabant (2020, 14 July). Steeds meer cocaïne onderschept in haven van Antwerpen, derived from https://www.omroepbrabant.nl/nieuws/3229468/steeds-meer-cocaine-onderschept-in-haven-van-antwerpen

Omroep Brabant (2020, 4 November). Bospad waar vrachtwagen met drugsafval uitbrandde in Deurne volledig afgegraven. Derived from https://www.omroepbrabant.nl/nieuws/3285878/bospad-waar-vrachtwagen-met-drugsafval-uitbrandde-in-deurne-is-volledig-afgegraven

Omroep Zeeland (2020, 29 April). Douane onderschept 4500 kilo cocaïne in Vlissingse haven. Derived from https://www.omroepzeeland.nl/nieuws/12543718/douane-onderschept-4500-kilo-cocaine-in-vlissingse-haven

Openbaar Ministerie (2018, 16 January). OM eist 5 jaar gevangenisstraf tegen politiemol Mark M. Derived from https://www.om.nl/actueel/nieuws/2018/01/16/om-eist-5-jaar-gevangenisstraf-tegen-politiemol-mark-m

Openbaar Ministerie (2020, 2 July). Aardschok voor georganiseerde misdaad. Derived from https://www.om.nl/actueel/nieuws/2020/07/02/aardschok-voor-georganiseerde-misdaad

Openbaar Ministerie (2021, 23 February). Informatie National Crime Agency leidt tot enorme heroïnevondst. Derived from https://www.om.nl/actueel/nieuws/2021/02/23/informatie-national-crime-agency-leidt-tot-enorme-heroinevondst

Openbaar Ministerie (2022, 3 January). Twee uithalers aangehouden op Rotterdamse haven. Ontleend aan https://www.om.nl/actueel/nieuws/2022/01/03/twee-uithalers-aangehouden-op-rotterdamse-haven

Oxford Analytica Daily Brief (2021, 11 October). Afghan drug production could boom. Oxford Analytica, Daily Brief. Derived from https://dailybrief.oxan.com/Analysis/DB264651/Afghan-drug-production-could-boom

Politie (2021, 24 February). 11 recordvangsten 23 ton cocaïne onderschept. Derived from https://www.politie.nl/nieuws/2021/februari/24/11-recordvangsten-23-ton-cocaine-onderschept.html

Politie (2021, 22 April). Aantal ontmantelde hennepkwekerijen blijft dalen. Derived from

https://www.politie.nl/nieuws/2021/april/22/aantal-ontmantelde-hennepkwekerijen-blijft-dalen.html

PZC (2020, 8 October). Met dossier 'Makreel' komt Antwerpens grootste drugsbende vandaag voor rechter; twee verdachten vermoord, één advocaat in de cel. Ontleend aan https://www.pzc.nl/antwerpen/met-dossier-makreel-komt-antwerpens-grootste-drugsbende-vandaag-voor-rechter-twee-verdachten-vermoord-een-advocaat-in-de-cel~a319f955/

PZC (2021, 25 February). Octopusbende vergat diepvries aan te zetten tijdens creatieve drugstrafiek: "Cocaïne verstopt in rotte inktvis". Derived from https://www.pzc.nl/antwerpen/octopusbende-vergat-diepvries-aan-te-zetten-tijdens-creatieve-drugstrafiek-cocaine-verstopt-in-rotte-inktvis~a42c7f8b/

RTL Nieuws (2021, 6 May). Politie Amsterdam vindt tientallen kilo's witte heroïne, man (46) aangehouden. RTL Nieuws. Derived from https://www.rtlnieuws.nl/nieuws/nederland/artikel/5229352/politie-vindt-grote-hoeveelheid-witte-heroine-46-jarige-man

RTL Nieuws (2021, 14 September). Uithalers teisteren Rotterdamse haven om drugs uit containers te halen. Derived from https://www.rtlnieuws.nl/editienl/artikel/5254261/rotterdamse-haven-containers-cocaine-drugs-uithalers

RTV Oost (2021, 6 September). Vijftig zakken met hennepafval gedumpt in Enschede. Derived from https://www.rtvoost.nl/nieuws/2004153/Vijftig-zakken-met-hennepafval-gedumpt-in-Enschede

The Brussels Times (2020, 5 November). Belgian police seize 11.5 tons of cocaine in shipment from Guyana. Derived from https://newsroom.gy/2020/11/05/belgian-police-seize-11-5-tons-of-cocaine-in-shipment-from-guyana/

The Guardian (2019, 13 January). Kings of cocaine: how the Albanian mafia seized control of the UK drugs trade (Mark Townsend). Derived from https://www.theguardian.com/world/2019/jan/13/kings-of-cocaine-albanian-mafia-uk-drugs-crime

Trimbos Instituut (2018, 11 December). Cijfers over GHB: gebruikers en incidenten. Derived from https://www.trimbos.nl/actueel/nieuws/bericht/cijfers-over-ghb-gebruikers-en-incidenten

Trimbos Instituut (2020, 16 November). THC-gehaltes cannabis coffeeshops stabiel. Derived from https://www.trimbos.nl/actueel/nieuws/bericht/thc-gehaltes-cannabis-coffeeshops-stabiel

Trouw (2019, 22 November). In Schotland zijn de jaren 80 springlevend: drugs en hiv (R. Abels). Derived from https://www.trouw.nl/buitenland/alsof-de-jaren-80-er-springlevend-zijn-in-schotland-vallen-elke-dag-drie-drugsdoden~bef8593a/

Trouw (2021, 1 February). Hardnekkig probleem in de Rotterdamse haven: de smokkelaars die drugs uit containers veiligstellen (Isabel Baneke). Derived from https://www.trouw.nl/binnenland/hardnekkig-probleem-in-de-rotterdamse-haven-de-smokkelaars-die-drugs-uit-containers-veiligstellen~b5994a50/?referrer=https%3A%2F%2Fwww.google.nl%2F

VRT (2021, 27 July). Politie waarschuwt voor gevaarlijke drug: "Hasj gemengd met heroïne maakt je sneller verslaafd". Derived from https://www.vrt.be/vrtnws/nl/2021/07/27/drugs-hasselt/

Websites

https://baggage.nl/koerier-informatie/, consulted on 8-2-2022.

https://www.belastingdienst.nl/wps/wcm/connect/nl/douane_voor_bedrijven/content/wat-is-een-eori-nummer; consulted on 7-2-2022.

https://www.bol.com/nl/nl/p/smartmix-100-gram/9200000085974764/; consulted on 12-08-2021.

https://www.bsf.nl/fcl-lcl, consulted on 10-06-2021.

https://www.cbs.nl/nl-nl/cijfers/detail/81947NED, consulted on 13-08-2021.

http://dataunodc.un.org/data/drugs/Wholesale%20drug%20price, consulted on 15-07-2021.

https://www.definitions.net/definition/STRADDLE+CARRIER consulted on 14-08-2021.

https://diplomatie.belgium.be/nl/Diensten/Op_reis_in_het_buitenland/reisadviezen/brazilie; consulted on 12-08-2021.

https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates; consulted on 23-11-2021.

https://drugsforum.nl/threads/nederland-heroine-en-fentanyl; consulted on 30-08-2021.

https://drugsforum.nl/threads/oxys-of-pentanyl-pleisterspleisters; consulted on 12-10-2021.

https://www.drugskompas.nl/drugs-abc/heroine; consulted on 03-03-2021.

https://www.emcdda.europa.eu/data/stats2021; consulted on 29-06-2021.

https://www.emcdda.europa.eu/stats07/PDU/methods; consulted on 19-10-2021.

https://www.encyclo.nl/begrip/srv; consulted on 22-09-2021.

https://www.ensie.nl/piet-van-der-ploeg/metaboliet; consulted on 20-09-2021.

https://www.exchangerates.org.uk/USD-EUR-spot-exchange-rates-history-2019.html#:~:text=Average%20exchange%20rate%20in%202019%3A%200.8931%20EUR; consulted on 23-09-2021.

https://www.europol.europa.eu/crime-areas-and-trends/crime-areas/drug-trafficking/cocaine-and-heroin; consulted on 01-09-2021.

https://www.ggd.amsterdam.nl/geintegreerde-voorzieningen/medische-heroine; consulted on 18-10-2021.

https://www.jellinek.nl/informatie-over-alcohol-drugs/drugs/heroine/algemeen; consulted on 03-03-2021.

https://www.jellinek.nl/vraag-antwoord/neemt-het-aantal-coffeeshops-af/; consulted on 26-04-2021.

https://www.jellinek.nl/vraag-antwoord/wat-is-de-geschiedenis-van-heroine; consulted on 14-05-2021.

https://www.jellinek.nl/vraag-antwoord/waarmee-wordt-cocaine-versneden-wat-is-het-risico/; consulted on 14-06-2021.

https://www.jellinek.nl/vraag-antwoord/wat-is-spice/; consulted on 07-07-2021.

https://www.jellinek.nl/vraag-antwoord/wat-is-cbd/; consulted on 07-07-2021.

https://www.jellinek.nl/vraag-antwoord/wat-is-qat-of-khat; consulted on 07-09-2021.

https://www.jellinek.nl/informatie-over-alcohol-drugs/drugs/heroine/algemeen;consulted on 08-11-2021.

https://www.jellinek.nl/vraag-antwoord/hoe-wordt-cocaine-gemaakt/; consulted on 23-11-2021.

https://www.jellinek.nl/vraag-antwoord/hoe-wordt-cocaine-gemaakt/; consulted on 23-11-2021.

https://www.jellinek.nl/vraag-antwoord/wat-zijn-de-risicos-van-spacecake/; consulted on 07-02-2022.

https://maxius.nl/wetboek-van-strafrecht/artikel461; consulted on 04-10-2021.

https://www.rechtspraak.nl; consulted on various dates in the period from July through Seprember 2021.

https://www.rijksoverheid.nl/documenten/publicaties/2022/01/10/coalitieakkoord-omzien-naar-elkaar-vooruitkijken-naar-de-toekomst; consulted on 03-02-2022.

https://toxicologie.org/opioiden; consulted on 03-03-2021 and 28-09-2021.

https://www.trimbos.nl/kennis/corona/drugs-en-corona/drugsmarkt-en-corona; consulted on 18-05-2021.

https://www.trimbos.nl/kennis/cijfers/cijfers-drugs; consulted on 7-09-2021.

https://www.trimbos.nl/kennis/feiten-cijfers-drugs-alcohol-roken/rioolwateronderzoek; consulted on 25-11-2021.

https://www.trimbos.nl/kennis/feiten-cijfers-drugshandel-drugsincidenten/monitoring-drugsincidenten/; consulted on 29-11-2021.

https://www.urbandictionary.com; consulted on 04-10-2021.

https://waarzitwatin.nl/stoffen/natriumhypochloriet; consulted on 21-10-2021.

https://www.waypointports.com/covid-19/; consulted on 10-11-2021.

https://zoek.officielebekendmakingen.nl/kst-24077-452.html; consulted on 15-09-2021.

https://zoek.officielebekendmakingen.nl/kst-24077-471.html; consulted on 15-09-2021.

https://zoek.officielebekendmakingen.nl/stb-2021-544.html; consulted on 08-02-2021.

Criminal investigations by the police and interviews

A total of 72 criminal investigations conducted by the police in the 2017-2020 period have been studied. Various chapters are partly based on information derived from these criminal investigations. The following codes are used:

Information from criminal investigations

	Cannabis	Cocaine	Synthetic drugs	Heroin
Code	O-41 through O-46	O-51 through O-57	O-601 through O-654	O-71 through -O-75
Total	6	7	54	5

Eleven semi-structured interviews were held with members of staff of various units of the National Police of the Netherlands (*politie*), the Fiscal Intelligence and Investigation Service (*Fiscale Inlichtingen- en Opsporingsdienst – FIOD*), Europol, the UNODC, and the EMCDDA. The interviews are denoted by a code in the chapters. The following codes have been used:

Interviews

Interview	Position(s)	Organisation	Crim. investigation	Date
I-41	Operational Specialist A Senior Intelligence	Regional Intelligence Division, Zeeland-West Brabant Regional Unit	-	31-08-2021
I-42	Senior Intelligence	Regional Intelligence Division, Den Haag Regional Unit	-	01-09-2021
I-43	Operational Expert	Generic Investigations, RIS, Midden-Nederland Regional Unit	-	
I-61	Operational Specialist B Operational Specialist C	Expertise and Science Team - Investigation Support Department, NIS, Central Unit	-	12-01-2022
I-62	Specialist Drugs and Crime	UNODC (Interpol meeting meth from Afghanistan)	-	19-05-2021
I-63	Head of Sector markets, crime and supply reduction.	Risks to public safety and security unit, EEMCDDA (Interpol meeting meth from Afghanistan)	-	19-05-2021
I-71	Operational Specialist A Operational Specialist B Operational Expert	Generic Investigations - NIS, Central Unit (Zwolle)	O-71	26-08-2021

Interview	Position(s)	Organisation	Crim. investigation	Date
I-72	Senior Adviser	Precursors Centre -Tax and Customs Administration / FIOD (Eindhoven)	-	07-09-2021
I-73	Operational Specialist A Specialist	Team Dutch Desk - NCILA, NPIU, Central Unit Analysis Project Heroin, O2-12 Drugs, Europol	-	13-09-2021
I-74	Operational Specialist C Operational Specialist B Operational Specialist C	Support Desk Team Expertise and Science Team - Investigation Support Department, NIS, Central Unit National Dismantling Support Unit - National Forensic Service Centre, SSS, Central Unit	-	24-09-2021
I-75	Senior Intelligence	Intelcel CTER, IK, NCILA, NPIU, Central Unit	-	05-10-2021

Quantitative data

Use has been made of the quantitative data originating from the National Police of the Netherlands (*politie*), Royal Marechaussee (*Koninklijke Marechaussee, KMar*), Customs (Douane), *Fiscale Inlichtingen- en Opsporingsdienst* – FIOD), Antwerp FGP, and Europol. The below table provides an overview and explanation of the police systems and data so used.

Summ-IT

Summ-IT is the investigation system used by the investigation service and by intelligence. A data set of drug-related criminal investigations and the natural and legal persons registered in these cases as suspects was aggregated from this system. These criminal investigations were all conducted by the police in the 2017-2020 period.

No information derived from the Criminal Intelligence Team (CIT) and/or embargo investigations have been included. Nor have the data been processed in order to discover any drug-related criminal investigations not given the proper criminal activity (CA) code.

According to the query results, a total of 4,089 criminal investigations related to the following drug types:

Cocaine, herbal cannabis, cannabis resin, heroin, amphetamine, MDMA, methamphetamine, GHB, NPS, ketamine, fentanyl, oxycodone, buprenorfine, and (pre)precursors.

The total number of suspects of drug-related crimes was 13,827, while the total number of suspect legal entities was 219.

We found that, in many cases, no complete or correct CA code for the various drug types was given in Summ-IT. In consequence, we have manually cleaned the data set covering the years of 2019 and 2020 so as to be able to use it for the thematic chapters. We can only make general statements with respect to 2017 and 2018.

BVH

BVH is the national law enforcement database, an application used by the police to perform primary policing.

We have aggregated a data set of heroin and cocaine production sites in the 2017-2020 from this database. This set was supplemented by information from the National Dismantling Support Unit (LFO) of the National Operational Cooperation Unit (DLOS) of the Central Unit. This resulted in the creation of a file listing both the production and storage sites of chemicals required to produce heroin or cocaine. The list contains a total of 20 heroin-related production or storage sites and a total of 77 cocaine-related production or storage sites (these may be combined production or storage sites).

Closed-down cannabis nurseries are registered in BVH. The figures are derived from the various police units and are collected under the drug portfolio. A total of 16,289 incidents related to cannabis nurseries were registered in the period from 2017 through the first half of 2021.

Data on production, storage, and dump locations of synthetic drugs, precursors, and NPS were obtained from the Dutch report in the context of the European Reporting on Illicit Synthetic Substance Production (ERISSP). This report is drawn up by the Intel & Expertise cell of the Synthetic Drugs Cluster of the National Unit. The report is drawn up on the basis of the Cognos report on the production of (hard) drugs, the Cognos report on dumpings, reports, and supplements received from the Units, and reports received via the National Dismantling Support Unit. This information derives from BVH and Summ-IT.

Over the period from 2017 through 2020, 362 synthetic drug production sites were found, as well as 339 chemicals and hardware storage sites, while 1,181,691 liters/kilograms of synthetic drug waste were found.

To prevent repetition from data derived from Summ-IT and because the study focused on organised crime, no aggregation of drug-related criminal investigations and drug-related suspects registered in BVH has taken place.

The registration of seizures in BVH was such that we could only make use of these data to a very limited extent, as quantities were not registered in a uniform manner. Various measures are used, including grams, liters, pieces, bags, etc. Moreover, in many cases, the quantities seized were unknown, as was the type of drugs concerned. The seizure figures maintained by the DLIO's National Information Exchange, as retrieved from the various police units, did not provide a complete picture, either. The same holds for the data derived from the Seizure Portal, the system used by the central repository for seized goods and the Public Prosecution Service to register and follow the status of seized goods, as the various quantities are not separately registered. For this reason, we primarily had to rely on the data provided by Customs and the Royal Marechaussee for the Dutch seizure figures.

Explanation of police data sets

LURIS

LURIS, the national uniform international mutual legal assistance registration database, is used to register all international mutual legal assistance requests received and submitted. LURIS is kept by the Public Prosecution Service.
Between 2017 and 2020, a total of 103,482 legal assistance requests were registered. 15,447 - or some 15% - of them were drug-related. While this percentage appears to be small, it must be noted that mutual legal assistance requests cover a great many topics. A major segment concerns traffic violations. It must also be noted that a registration number relating to, for example, a traffic fine only contains one or two notifications, while a registration number relating to drugs often contains multiple notifications.
Mutual legal assistance requests concerning drugs as registered in LURIS are classified into the following categories:
Cannabis, soft drugs, cocaine, synthetic drugs, heroin, and general narcotics.
The *general narcotics* category was found to be the largest, with 12,260 mutual legal assistance requests. Close to 79.4 percent of all drug-related investigations was given this label. In consequence, the mutual legal assistance requests that were labelled as relating to cannabis, cocaine, synthetic drugs, or heroin only provide an indication of the total mutual legal assistance provided with respect to those themes.

Customs, the Royal Marechaussee, the FIOD, the Antwerp FGP, and Europol have provided seizure figures. The figures provided by Customs and the Royal Marechaussee are overviews of drugs and chemicals seized by them in the Netherlands in the 2017-2020, listed in kilos. Figures were obtained covering the following main categories: cocaine, opiates, cannabis, synthetic drugs, chemicals, and khat. Each main category was divided into subcategories of drugs and chemicals identified.
The FIOD provided an overview of chemical and precursor seizure figures covering the period from 2017 through the first half of 2021, listed in kilos or liters. This concerns a file of all chemicals and precursors seized by the Dutch investigative services in the said period.
The Antwerp FGP has provided a file listing the Belgian cocaine seizure figures in the 2017-2020 period, listed in kilos.
Europol (*Analysis Project Heroin*) provided an overview of the (foreign) heroin seizures (in kilos) from 2019 through the first half of 2021 known to it where Dutch criminal networks were involved.

Annexe

Annexe

List of questions to the National Strategic Assessment of Drug-Related Serious and Organised Crime

List of questions as drawn up following the intake with the Drug Portfolio Holder of the National Police of the Netherlands,, 10 November 2021.

The topics to be addressed in this National Strategic Assessment of Drug-Related Serious and Organised Crime are the following:

A. Cocaine

B. Cannabis
Herbal cannabis, cannabis resin.

C. Synthetic drugs
Synthetic drugs: ecstasy, methamphetamine / crystal meth, amphetamine / speed, GHB, LSD, NPS / designer drugs, MDMA/MDA/MDEA, DMT.
Synthetic drugs (medicines): ketamine, captagon.
Precursors /: BMK, PMK, apaan, apaa, mapa, eapa,
Chemicals: hydrochloric acid, tartaric acid, caustic soda, formic acid *(not definitive yet)*

D. Heroin and illegal synthetic opioids
Heroin, opium, morphine.
Synthetic opioids (medicines): fentanyl, oxycodone.

E. Other
Khat
Nitrous oxide
Cutting agents - manitol, caffein, levamisole, lidocaine, other.

F. Overarching

Topics A through D are considered from the organised crime perspective. Topic E will primarily be considered from the perspective of trends and developments in the consumption of those substances in the Netherlands and the possible (criminogenic) consequences this has for the work of the police. Information on cutting agents will be included in the thematic chapters (A through D). Each topic is subdivided into subquestions that, for topics A through D, are to be similar to the extent possible.

Per drug type (topics A through E)

Delimitation:

Territory of the Netherlands and/or involvement of Dutch criminal networks and/or Dutch subjects. Only subquestions 1 and 2 are relevant for topic E; the answers to questions 2 through 5 are identical for topics A through D.

Definitions:

1. What is meant by cocaine / cannabis / etc.?
2. What is meant by territory of the Netherlands? (*NB: including international criminal networks using the Netherlands*)
3. What is meant by organised crime in the context of cocaine / cannabis / etc.?
4. What is meant by criminal networks?
5. What is meant by subject?

Size: developments in size in the 2017-2020 period (A through E)

1. How much cocaine / cannabis / etc. was produced and traded on the global level in 2017, 2018, 2019, and 2020?
2. What are the global trends and developments (size) as concerns the production, trade, and sales of cocaine / cannabis / etc. in the 2017-2020 period?

With respect to other drugs - only the other drugs identified in the query are described in the global overview.

3. How much cocaine / cannabis / etc. was seized in the Netherlands in 2017, 2018, 2019, and 2020?
   Cocaine, cannabis, opiates (heroin) - 1 kilo or over
   Synthetic drugs: 50 grams or over
   Synthetic drugs / medicines: all reports
   Synthetic opioids / medicines: all reports
   Precursors / chemicals: 1 kilo / 1 liter or over
   Cutting agents: 1 kilo / 1 liter or over
   Other drugs - all reports
4. What was the origin of the batches seized (per type of drug and polydrug)?
5. What were the intended destinations of the batches seized (per type of drug and polydrug)?
6. How many of the batches seized were polydrug in nature?
7. What drug combinations exist, and which combinations are relatively most common?
8. How many criminal investigations were conducted in the Netherlands in 2017, 2018, 2019, and 2020 that related to organised crime in the field of cocaine / cannabis / etc. (A through D) **and polydrug production and/or trade**?
9. With respect to polydrug production and/or trade: what drug combinations exist, and which combinations are relatively most common?
10. What trends and developments (size) as concerns the production, trade, and sales of cocaine / cannabis / etc. (A through D) and polydrug production and/or trade exist that have a connection with the Netherlands?
    (is the number of seizures increasing or decreasing, were no / smaller / larger batches seized during the COVID-19 period, ...)

Nature: (development of the) organisation and performance in the 2017-2020 period (A through D)

NB: Territory of the Netherlands (*including international criminal networks that make use of the Netherlands)* and/or involvement of Dutch criminal networks and/or Dutch subjects

1. What is the nature of the organisation of and performance by (organisation and performance variants) drug-related organised crime in connection with cocaine / cannabis / etc. (A through D) and polydrug production and/or trade in the 2017-2020 period?
2. What trends and developments exist with respect to the organisation of and performance by drug-related organised crime in connection with cocaine / cannabis / etc. (A through D) and polydrug production and/or trade?

Questions 1 and 2 are answered by using the crime scripts, while also looking at the extent to which the organisation and performance do or do not correspond to the crime scripts.

3. a. What countries or regions are the most important to organised crime as concerns the origin, transit, and destination (smuggling routes) of cocaine / cannabis / etc. (A through D) and polydrug production and/or trade in the 2017-2020 period?
   (NB: overview of the number mutual legal assistance requests (incoming and outgoing) as concerns organised crime in the field of cocaine / cannabis / etc. (A t/m D) in the 2017-2020 period by country (origin, transit, and destination)
   b. What trends and developments exist in organised crime with respect to the origin, transit, and destination (smuggling routes) of cocaine / cannabis / etc. (A through D) and polydrug production and/or trade?
4. a. What smuggling routes were used for cocaine / cannabis / etc. (A through D) and polydrug production and/or trade in the 2017-2020 period?
   b. What trends and developments exist in the context of the smuggling routes of cocaine / cannabis / etc. (A through D) and polydrug production and/or trade?
5. a. What production methods were used for cocaine / cannabis / etc. (A through D) and polydrug production and/or trade in the 2017-2020 period?
   - how many production sites and production site types (extraction site, nursery, etc.) have been discovered in the Netherlands in the context of cocaine / cannabis / etc. (A through D) in the 2017-2020 period?
   - With respect to combined production sites: what combinations were identified (2017-2020 period)?

   b. What trends and developments exist in the context of the production methods with respect to cocaine / cannabis / etc.?
6. To what extent were the following methods used with respect to cocaine / cannabis / etc. (A through D) and polydrug production and/or trade in the 2017-2020 period?
   - violence level
   - corruption
   - abuse of legal entities
   - counterstrategies (including the use of cryptocommunications)
7. What trends and developments exist in the context of the following methods with respect to cocaine / cannabis / etc. (A through D) and polydrug production and/or trade?
   - violence level
   - corruption
   - abuse of legal entities
   - counterstrategies (including the use of cryptocommunications)

Financial flows of money & money laundering
Territory of the Netherlands (*including international criminal networks that make use of the Netherlands)* and/or involvement of Dutch criminal networks and/or Dutch subjects.

1. How many unusual transactions were reported to the FIU-NL in 2017, 2018, 2019, and 2020 that related to cocaine / cannabis / etc.?
2. What amounts were involved?
3. How are the import and transit of cocaine / cannabis / etc. funded?
4. How are the production and/or processing of cocaine / cannabis / etc. funded?
5. How are payments / money transports arranged (MO and routes in the context of cocaine / cannabis / etc.)?
6. How are the proceeds of cocaine / cannabis / etc. laundered (money laundering methods)?
7. Via what countries are the proceeds of cocaine / cannabis / etc. laundered?
8. Where are the proceeds of cocaine / cannabis / etc. spent, and what on?
9. In the context of crime scripts: what can per scene and/or role be stated about the costs and yields?
10. How are the financial facilitators paid (cash / percentage of the trade / etc.)?
11. Who pay the costs when a batch is seized?

(development of the) size and nature of the parties involved: criminal networks and subjects
Dutch criminal networks and/or Dutch subjects and/or international criminal networks and/or foreign subjects that make use of the Netherlands.
Size:

1. Number, arrested yes/no, sex, age (categories), nationalities and place + country of origin, on the basis of suspects identified by BVH incident codes in the context of cocaine / cannabis / etc. (A through **E**) in 2017, 2018, 2019 and 2020 per unit (Section 2 and 3 Expropriation Act)?
2. Number, sex, age (categories), nationalities and place + country of origin, on the basis of Summ-IT suspects in the context of cocaine / cannabis / etc. (A through **D**) in 2017, 2018, 2019 and 2020 per unit?
3. How many (indication) national and international criminal networks have been active in the Netherlands in the context of cocaine / cannabis / etc. (A through **D**) in 2017, 2018, 2019, and 2020?
4. Indication of the size of criminal networks and the number of subjects in the context of cocaine / cannabis / etc. (A through D) and polydrug trade and/or production on the basis of PGP data.

Nature:

5. What types of criminal networks existed in the 2017-2020 period in the context of cocaine / cannabis / etc. (A through **D**) and polydrug trade and/or production? (crime script scenes and roles serve as guidelines: networks of rip-off crews, logistics services providers, producers, combined networks, etc.)
6. What other forms of organised crime do they commit? (polycrime)
7. What level of interconnectedness exists between the criminal networks on the national level? (mode and degree of cooperation; persistent structures, opportunity-based structures)

8. What level of interconnectedness exists between the criminal networks on the international level? (mode and degree of cooperation; persistent structures, opportunity-based structures)
9. What criminal relationships exist between the Netherlands and foreign countries in the context of cocaine / cannabis / etc. (A through D) and polydrug trade and/or production, and how do such relationships work (countries of origin, transit countries, and destination countries)?
10. What is known about Dutch clients abroad in the context of cocaine / cannabis / etc (A though D) and polydrug trade and/or production? (what, where, how?)
11. What trends and developments exist in the context of criminal networks dealing in cocaine / cannabis / etc. (A through D) and polydrug trade and/or production? (such as shifts)
12. PGP:
    a. What level of interconnectedness exists between cocaine / cannabis / etc. (polydrug trade and/or production)?
    b. What (type of) key actors in the field of cocaine / cannabis / etc. (A through D) can be distilled on the basis of PGP data?
    c. To what extent are these key actors involved in overlapping / polydrug trade and/or production?

Overarching

Crime-relevant factors (SEPTED)
2017-2020 period and a view of the future.

1. What developments in terms of (new) drug use in the Netherlands are visible? (such as the possible impact of the COVID-19 pandemic)
2. What developments in terms of drug use in neighbouring countries / our (possible) markets are visible? (such as the possible impact of the COVID-19 pandemic)
3. What is the political and security context in the Netherlands with respect to drugs and their possible effects on the trade in and/or production of drugs? (such as changes in legislation, political climate, border closings due to COVID)
4. What is the political and security context in the countries/regions and what are the regional relationships and geopolitical relations when considering countries of origin, transit countries, and destination countries? (such as changes in legislation, political climate, border closings due to COVID)
5. What economic developments have taken place in the Netherlands that may have an impact on the production of and trade in drugs via the Netherlands? (COVID may play a part in this context as well)
6. What economic developments have taken place in the countries of origin, transit countries, and destination countries that may have an impact on the production of and trade in drugs via the Netherlands? (COVID may play a part in this context as well)
7. How does the police currently cooperate with countries of origin, transit countries, and destination countries?

Online / dark web

Territory of the Netherlands and/or involvement of Dutch criminal networks and/or Dutch subjects.

To be determined whether this is to form its own chapter or is included in the thematic chapters.

1. What was the scope of the online trade in cocaine / cannabis / etc. via the Netherlands in 2017, 2018, 2019, and 2020?
2. What trends and developments are visible in the scope of the online trade in cocaine / cannabis / etc. via the Netherlands?
3. What was the nature of the online trade in cocaine / cannabis / etc. via the Netherlands and/or the involvement of Dutch criminal networks and/or Dutch subjects in 2017, 2018, 2019, and 2020?
4. What trends and developments are visible in the nature of the online trade in cocaine / cannabis / etc. via the Netherlands and/or the involvement of Dutch criminal networks and/or Dutch subjects?
5. What were the primary destination countries for cocaine / cannabis / etc. traded online via the Netherlands / by Dutch criminal networks and/or subjects in the 2017-2020 period?
6. What trends and developments are visible in the context of the destination countries of cocaine / cannabis / etc. traded online?
7. What do the financial flows of money and money laundering in the context of cocaine / cannabis / etc. traded online look like? (including crypto currencies)
8. What is the nature of the subjects / criminal networks involved in cocaine / cannabis / etc. traded online?

Main features identified in the previous chapters

1. What important central themes can be distilled on the basis of the study results?
2. What expectations for the future can be expressed on the basis of the study results?
3. What recommendations could be provided to the portfolio holder on the basis of the study results?