INTERNATIONAL NARCOTICS CONTROL BOARD

Precursors

and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances

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The Report of the *International Narcotics Control Board for 2017* (E/INCB/2017/1) is supplemented by the following reports:

Narcotic Drugs: Estimated World Requirements for 2018—Statistics for 2016 (E/INCB/2017/2)

Psychotropic Substances: Statistics for 2016—Assessments of Annual Medical and Scientific Requirements for Substances in Schedules II, III and IV of the Convention on Psychotropic Substances of 1971 (E/INCB/2017/3)

Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2017 on the Implementation of Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (E/INCB/2017/4)

The updated lists of substances under international control, comprising narcotic drugs, psychotropic substances and substances frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, are contained in the latest editions of the annexes to the statistical forms ("Yellow List", "Green List" and "Red List"), which are also issued by the Board.

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Report of the International Narcotics Control Board for 2017 on the Implementation of Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988

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Foreword

I am pleased to present the 2017 report on precursors of the International Narcotics Control Board.

In accordance with the Board's mandate under the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, the present report provides an overview of the most important actions taken to implement article 12 of that Convention and to strengthen the functioning of the international precursor control system.

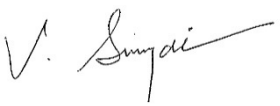
The report also provides a detailed account of the latest trends and developments in legitimate international trade and in trafficking in precursor chemicals under international control, as well as their non-scheduled substitutes and alternatives.

In compiling this and its past reports on precursors, the Board has carefully balanced the need to provide Governments with the most comprehensive data available with the need to withhold details so as not to endanger any investigations that might bring to justice the criminals behind larger-scale diversion schemes. I believe that the reports on precursors represent an important source of information and, viewed together, constitute a comprehensive source of reference for global precursors-related data.

Throughout the year, INCB assists Governments on a daily basis in preventing diversion and in facilitating investigations. In particular, the Board promotes contacts and information-sharing between Governments affected by multinational diversion schemes; it helps to overcome obstacles between regulatory and law enforcement authorities investigating precursor incidents; and it devises and conducts, in cooperation with the INCB Precursors Task Force, international operations aimed at closing existing control gaps and generating strategic intelligence related to trafficking in precursors.

I would like to thank all Governments for the cooperation and confidence that the Board has enjoyed over the past year in precursor matters. The significant worldwide increase since the beginning of 2016 in incidents involving acetic anhydride, which has required very close, fast and trusting cooperation across borders and along the regulatory–law enforcement continuum, demonstrates the type of cooperation and the speed and level of detail of information exchange that will be required in the future.

The Board stands ready to support Governments in this endeavour, as well as in meeting other challenges of the future, including those related to emerging, non-scheduled "designer" chemicals, Internet-facilitated trade in chemicals and the growing sophistication of traffickers' attempts to obtain the chemicals they require for illicit drug manufacture.



Viroj **Sumyai**
President of the International
Narcotics Control Board

Preface

The United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 provides that the International Narcotics Control Board shall submit a report annually to the Commission on Narcotic Drugs on the implementation of article 12 of the Convention and that the Commission shall periodically review the adequacy and propriety of Table I and Table II of the Convention.

In addition to its annual report and other technical publications (on narcotic drugs and psychotropic substances), the Board has prepared its report on the implementation of article 12 of the 1988 Convention in accordance with the following provisions, contained in article 23 of the Convention:

> 1. The Board shall prepare an annual report on its work containing an analysis of the information at its disposal and, in appropriate cases, an account of the explanations, if any, given by or required of parties, together with any observations and recommendations which the Board desires to make. The Board may make such additional reports as it considers necessary. The reports shall be submitted to the Economic and Social Council through the Commission which may make such comments as it sees fit.
>
> 2. The reports of the Board shall be communicated to the parties and subsequently published by the Secretary-General. The parties shall permit their unrestricted distribution.

Contents

* The annexes are not included in the printed version of the present report but are available on the website of the International Narcotics Control Board (www.incb.org).

Figures

Explanatory notes

The designations employed and the presentation of the material in the present publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Countries and areas are referred to by the names that were in official use at the time the relevant data were collected.

Multiple government sources of data were used to generate the present report, including the information provided each year on form D (information on substances frequently used in the illicit manufacture of narcotic drugs and psychotropic substances), notifications made through the Pre-Export Notification Online system (PEN Online), the Precursors Incident Communication System (PICS) and other official communications with competent national authorities. Unless otherwise specified, data provided on form D are referred to by the calendar year to which they apply; the cut-off date for reporting the data is 30 June of the following year. The reporting period for data from the PEN Online system and PICS is from 1 November 2016 to 1 November 2017, unless otherwise specified. In cases in which PEN Online system data are used for multiple years, calendar years are used. Additional information was also provided through regional and international partner organizations, as indicated in the report.

With regard to data on seizures, readers should bear in mind that reported seizures generally reflect the corresponding level of regulatory and law enforcement activity at that specific time. In addition, as seizures are often the result of law enforcement cooperation among several countries (e.g., through controlled deliveries), the occurrence of seizures and the volumes seized in a given country should not be misinterpreted or overestimated when assessing that country's role in the overall situation of trafficking in precursors.

Reference to "tons" is to metric tons, unless otherwise stated.

The following abbreviations have been used in the present report:

ANPP	4-anilino-*N*-phenethylpiperidine
APAA	*alpha*-phenylacetoacetamide (2-phenylacetoacetamide)
APAAN	*alpha*-phenylacetoacetonitrile
GBL	*gamma*-butyrolactone
GHB	*gamma*-hydroxybutyric acid
MDMA	3,4-methylenedioxymethamphetamine
3,4-MDP-2-P	3,4-methylenedioxyphenyl-2-propanone
NPP	*N*-phenethyl-4-piperidone
P-2-P	1-phenyl-2-propanone
PEN Online	Pre-Export Notification Online system
PICS	Precursors Incident Communication System

Summary

The present report contains both the most recent statistical data on Governments' implementation of article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 and related resolutions by the General Assembly, the Economic and Social Council and the Commission on Narcotic Drugs and information on the extent and level of utilization of the tools for information exchange made available by the International Narcotics Control Board (INCB). The report also contains an overview of major trends in the licit movement of and trafficking in precursors under international control, as well as information on internationally non-scheduled chemicals that can be used in the illicit manufacture of drugs.

In March 2017, the Commission on Narcotic Drugs, in decisions 60/12 and 60/13, unanimously decided to follow the Board's recommendation to include two precursors of fentanyl and of a number of fentanyl analogues, ANPP and NPP, in Table I of the 1988 Convention. Those decisions brought the number of substances controlled under the Convention to 26.

The Board is pleased to note that some Governments have already added ANPP and NPP to their national lists of controlled substances. In addition, to respond to current challenges, a number of Governments have amended their legislation on precursors. The Board observed that, during the reporting period, several countries, such as Argentina, Bangladesh, Bolivia (Plurinational State of), Georgia, Switzerland and the United States of America, introduced various measures to strengthen their national precursor control systems and that the 28 States members of the European Union further enhanced their monitoring of non-scheduled "designer" precursors.

INCB also observed increasing discrepancies between official precursor seizure information shared by Governments through different mechanisms, including form D, country reports and presentations at meetings of the subsidiary bodies of the Commission on Narcotic Drugs, and annual report questionnaires and individual seizure reports. It is important to reduce those discrepancies and ensure that Governments are in a position to generate, gather and consolidate national precursor seizure data and report the most comprehensive data possible to INCB. From the data available, the following major trends are discernible in precursor trafficking.

With regard to acetic anhydride, the key chemical for heroin manufacture, there was a substantial worldwide increase in incidents. The number of incidents involving the substance was the highest in more than two decades and involved quantities that would be enough for up to three and a half years of potential global illicit heroin manufacture. While investigations in many countries are still ongoing, INCB-facilitated cooperation between Governments has helped to establish links between incidents that originally appeared to be isolated cases and has improved knowledge of the current modi operandi of traffickers.

Increased demand over the Internet for acetic anhydride was also observed, namely in the form of suspicious requests for supplies of sizeable amounts of the substance on online trading platforms. The requests for supplies ranged from one-time shipments of several hundreds of litres to monthly supplies of container-sized shipments. An analysis of available information on Internet-facilitated trade in precursors is contained in chapter IV of the present report.

With regard to cocaine precursors, although there is evidence of illicit manufacture of potassium permanganate, the main oxidizing agent, and of use of substitute chemicals, the extent of such activities is unknown. What is known is that most of the chemicals used in the illicit manufacture of cocaine were diverted from within the countries in which they were seized, indicating a need to address the situation domestically.

With regard to synthetic drugs, pre-precursors and substitute chemicals continued to constitute a challenge for established precursor control systems. International operations conducted as part of Project Prism provided, for the first time, evidence of the use of APAAN in the illicit manufacture of the amphetamine found in fake "captagon" tablets in countries in the Middle East. Under those operations, seizures were made of non-scheduled amphetamine and methamphetamine "designer" precursors of the methyl glycidic acid family for the first time outside Europe.

There is also evidence of significant illicit manufacture of certain chemicals that are not controlled internationally but are controlled at the national level in some countries. Such manufacture occurs for methylamine, a key chemical in the illicit manufacture of a number of amphetamine-type stimulants, the precursor ephedrine, and new psychoactive substances. Seizures of precursors of new psychoactive substances also indicate the occurrence of the illicit manufacture of such substances, in particular synthetic cathinones and substances that have recently been scheduled under the Convention on Psychotropic Substances of 1971.

In the light of those developments, the Board calls on national competent authorities to review their domestic control mechanisms, in particular the procedures for granting or refusing registration of chemical operators, and the system and requirements for end-user declarations, as well as any related thresholds, that may be exploited by traffickers. It has also become clear that there is a need to better integrate monitoring of legitimate trade with law enforcement follow-up, such as through the investigation of incidents, including shipments objected to through PEN Online, before they become criminal cases, in order to extract important intelligence.

The integrity of controls on a Government's territory also remain of concern to the Board, in particular with regard to the increasing number of territories where conflict, unresolved territorial disputes or other circumstances hinder the exercise of effective governmental control, thus increasing the risk of such territories being exploited by traffickers for the diversion of chemicals.

The collaborative work during the reporting period has shown that a willingness to cooperate across geographical and institutional borders and acting in the spirit of the 1988 Convention, i.e., preventing illicit drug manufacture through chemical diversion control, are important elements for success in the area of international drug control. PICS and the international initiatives conducted under Project Prism and Project Cohesion provide the framework for such cooperation at the global level, by allowing for modi operandi to be identified and links between otherwise isolated incidents to be established. They also prevent traffickers from replicating diversion schemes by targeting the weakest links.

I. Introduction

1. The International Narcotics Control Board (INCB) monitors Governments' control over precursor chemicals and assists Governments in preventing the diversion of such chemicals from licit into illicit channels, pursuant to the provisions of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988. The present report has been prepared pursuant to the provisions of that Convention.

2. Substantive reporting begins in chapter II, which contains statistical data and other information on action taken by Governments and the Board pursuant to article 12 of the 1988 Convention.

3. Chapter III provides information on the extent of legitimate trade in individual precursor chemicals; on major trends in trafficking in and illicit use of those chemicals; on relevant cases of suspicious and stopped shipments; on diversions or attempted diversions of those chemicals from legitimate trade; and on seizures of those chemicals, including from clandestine laboratories. The data and information contained in chapters II and III are drawn from a number of sources, including the following: form D; the PEN Online system; PICS; results achieved under Project Prism and Project Cohesion, which are the international operational initiatives regarding chemicals used in the illicit manufacture of, respectively, synthetic drugs, and cocaine and heroin; and official national reports on the drug and precursor control situation.

4. As has been the practice since 2011, one precursor-related theme is addressed in greater depth in the report. In this year's report, the theme explored in chapter IV is Internet-facilitated trade in precursors.

5. Specific recommendations and conclusions are highlighted throughout the report to facilitate the taking of specific actions by Governments to prevent diversion.[1]

6. Annexes I–XI to the report contain updated statistics and practical information to assist competent national authorities in carrying out their functions. The annexes are not included in the printed copies of the present report but are available on the INCB website.

[1] A compilation of the recommendations relating to international precursor control made by INCB in previous years is available on the Board's website (www.incb.org).

[2] World Customs Organization, *Harmonized Commodity Description and Coding System*, 6th ed. (Brussels, 2017).

II. Action taken by Governments and the International Narcotics Control Board

7. The present chapter provides information on action taken by Governments and the Board since its 2016 report on precursors.

A. Scope of control

8. On 16 March 2017, the Commission on Narcotic Drugs decided, in accordance with the Board's recommendation, to add NPP and ANPP, two precursors of fentanyl and of a few "designer" fentanyls, to Table I of the 1988 Convention. The decision was taken unanimously and became effective on 18 October 2017, 180 days after it was communicated by the Secretary-General to parties.

9. As has been common practice in the past, and pursuant to Economic and Social Council resolution 1992/29, INCB is working with the World Customs Organization to ensure that new, unique Harmonized System codes are established for the newly scheduled chemicals. However, given the cycle of the Harmonized System nomenclature, individual codes for the two chemicals will not be available before January 2022. Therefore, **INCB encourages Governments to adopt, on a voluntary basis, interim, discrete codes based on Harmonized System nomenclature,** [2] **in which both chemicals are currently covered by the generic code 2933.39**.

B. Adherence to the 1988 Convention

10. As at 1 November 2017, the 1988 Convention had been ratified, acceded to or approved by 188 States and formally confirmed by the European Union (extent of competence: article 12). There have been no changes since the publication of the Board's 2016 report on precursors, leaving nine States — five in Oceania, three in Africa and one in West Asia (see annex I)[3] — that have yet to become parties to the Convention. To reduce the vulnerability of those States to precursor trafficking, **INCB again urges the nine States that have yet to become parties to the 1988 Convention to implement the provisions of article 12 and accede to the Convention without further delay**.

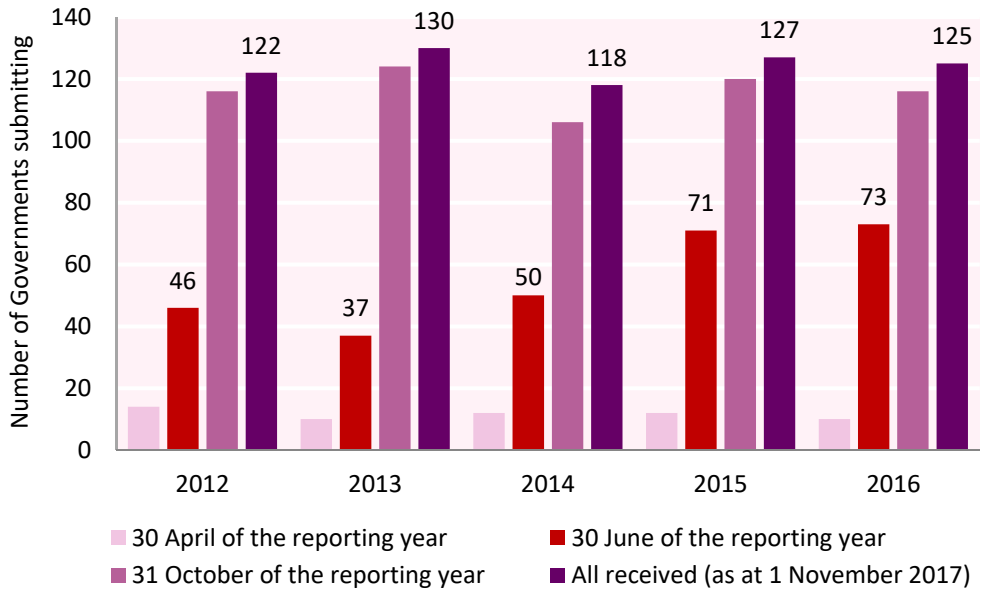
[3] Equatorial Guinea, Kiribati, Palau, Papua New Guinea, Solomon Islands, Somalia, South Sudan, State of Palestine and Tuvalu.

C. Reporting to the Board pursuant to article 12 of the 1988 Convention

11. Under article 12, paragraph 12, of the 1988 Convention, States parties are required to submit annually to INCB aggregated information pertaining to the previous year on: seizures of substances in Table I and Table II of the Convention and, when known, their origin; any substance not included in Table I or Table II that is identified as having been used in illicit manufacture of narcotic drugs or psychotropic substances; and methods of diversion and illicit manufacture. The deadline for submission of the 2016 questionnaire (form D) was 30 June 2017, although INCB continued to encourage earlier submission (30 April) to facilitate its analysis and ensure sufficient time for any necessary clarification of the information provided.

12. As at 30 June 2017, 73 States parties had submitted form D for 2016, a rate slightly higher than last year and the highest in five years; as at 1 November 2017, the cut-off date for the present report, the number had increased to 125 (see figure I). In addition, seven States parties had submitted form D for the previous reporting cycle (calendar year 2015). INCB also noted that a number of States parties, as in the past, had submitted blank forms or incomplete information, a situation that continued to impact the Board's analysis of regional and global precursor patterns and trends. For 2016, incomplete information was submitted by 52 States parties, corresponding to 42 per cent of all submissions. **Governments are reminded to submit a consolidated, completed form D, using the latest version [4] of the form and submit it as soon as practically possible but no later than 30 June of the year following the reporting period.**

Figure I. Form D submissions by States parties to the 1988 Convention, by date of submission, 2012–2016



13. For the 2016 reporting cycle, 60 States parties to the 1988 Convention failed to report to the Board.[5] Of those, 2 States parties (Gabon and Marshall Islands) have never submitted form D, and 28 States parties have not done so in the past five years (see table). Angola and Dominica resumed submission after failing to submit form D for five years. Comprehensive information about the submission of form D by Governments is included in annex VII.

[4] The latest version of form D is available, in the six official languages of the United Nations, on the INCB website.

[5] The Holy See and San Marino did not furnish form D separately as their data are included in the report of Italy. Similarly, the data for Liechtenstein are included in the report of Switzerland.

Table. States parties failing to report as required under article 12, paragraph 12, of the 1988 Convention, 2016

Antigua and Barbuda[a]	Ethiopia	Niger[a]
Bahamas[a]	Gabon[b]	Niue[a]
Bangladesh	Grenada[a]	Norway
Barbados	Guinea[a]	Qatar
Belize	Guinea-Bissau	Rwanda
Benin	Haiti	Saint Kitts and Nevis[a]
Botswana[a]	Iran (Islamic Republic of)	Samoa
Burkina Faso[a]	Kuwait	Sao Tome and Principe[a]
Burundi	Kyrgyzstan	Sierra Leone[a]
Cambodia	Lesotho[a]	Suriname[a]
Cameroon	Liberia[a]	Swaziland[a]
Central African Republic[a]	Libya[a]	The former Yugoslav Republic of Macedonia[a]
Chad	Malawi[a]	Timor-Leste
Comoros[a]	Mali	Togo
Congo[a]	Marshall Islands[b]	Tonga[a]
Cook Islands[a]	Mauritania[a]	Uganda
Cuba[a]	Mauritius	Vanuatu[a]
Djibouti[a]	Micronesia (Federated States of)	Viet Nam
Dominican Republic	Nauru[a]	Yemen
Eritrea	Nepal	Zambia

Note: See also annex VII.

[a] Government that failed to submit form D for any year during the period 2012–2016.

[b] Government that has never submitted form D.

14. In 2016, 89 States parties provided the mandatory information on form D on seizures of substances in Table I or Table II of the 1988 Convention. (For details on the reported seizures of those substances, by region, see annex VIII.) However, only 62 parties provided information in enough detail to support the identification of weaknesses and emerging trends with a view to preventing future diversions. Such detail includes information about substances not in Table I or Table II (60 Governments, or 48 per cent of all 125 submitting States parties) and information on methods of diversion and illicit manufacture (35 Governments, or 28 per cent). INCB regrets that such information is often reported by the media or in national reports, included in official conference presentations and sometimes communicated through PICS, but is too often not included on form D. **INCB encourages Governments to include on form D all relevant details about seizures of substances listed in Table I and Table II and of alternate substances; in particular, information on origin, where known, and methods of diversion and illicit manufacture. INCB also encourages Governments to respond to its requests for clarification or confirmation regarding the seizure information provided on form D or taken from other sources, including official government websites**.

15. On form D for 2016, 16 countries reported 177 stopped shipments, a reflection of vigilance on the part of the competent national authorities, although the majority of shipments were stopped for administrative reasons. Those shipments involved 13 different substances. The substances in Table I of the 1988 Convention most frequently involved in stopped shipments were acetic anhydride (32 shipments; including attempts to purchase the substance), potassium permanganate (14 shipments), phenylacetic acid (6 shipments), piperonal (5 shipments), pseudoephedrine (2 shipments) and ergotamine (1 shipment). The stopped shipments that were actual diversion attempts are discussed in the relevant subsections of chapter III below.

D. Legislation and control measures

16. In accordance with the provisions of article 12 of the 1988 Convention and the relevant resolutions of the General Assembly, the Economic and Social Council and the Commission on Narcotic Drugs, Governments are requested to adopt and implement national control measures to effectively monitor the movement of precursor chemicals. In addition, Governments are requested to further strengthen existing precursor control measures if any weaknesses are identified. The following changes in control measures have come to the attention of INCB since the publication of its last report on precursors.

17. Effective 1 July 2016, a decree of the Government of Georgia established implementing rules for the import and export of precursors in list IV of the Georgian law on narcotic drugs, psychotropic substances, precursors and narcological aid; import and export authorizations are now required for all substances in Table I and Table II of the 1988 Convention.

18. In Argentina, the Federal Council of Chemical Precursors was created, by Law No. 27283 of 20 October 2016, as an advisory body for the National Registry of Chemical Precursors (RENPRE), the competent authority. Among other things, the Council is mandated to analyse any issues related to substances listed under articles 24 and 44 of law 23737; assess precursor chemicals to be controlled; maintain a national map of production of, trade in and distribution of precursor chemicals; and propose new policies and improve control mechanisms on the production of, trade in and distribution of precursor chemicals. In November 2016, Argentina passed a bill criminalizing the intentional diversion of precursor chemicals.[6]

19. On 22 February 2017, the Drug Control Committee of the Government of Bangladesh cancelled the registration of all pseudoephedrine-based medicines with a view to curbing diversion from licit distribution channels into illicit methamphetamine manufacture. The measures became effective in May 2017, following a three-month transition period, and included the termination of all activities related to pseudoephedrine manufacture, trade and distribution.

20. On 16 March 2017, the Plurinational State of Bolivia implemented a new law, No. 913, on combating trafficking in controlled substances. Among other things, the law requires the implementation of a system of registration of controlled substances and permits the sale of seized precursor chemicals only to persons or companies authorized to carry out industrial activities.

21. In April 2017, the European Commission amended the European Union voluntary monitoring list of non-scheduled substances, the European Union equivalent of the limited international special surveillance list of non-scheduled substances. Further to a decision made at the meeting of the European Union Group of Experts on Drug Precursors in November 2016, the list is now divided into two parts: substances with known legal use and trade; and substances with no known legal use and trade beyond limited research and laboratory analytical purposes (i.e., so-called "designer" precursors or "made-to-order" precursors). The second part is to be further developed and to be used in conjunction with an amendment made to the European Union precursors legislation in December 2013, prohibiting the introduction of consignments of non-scheduled substances into the customs territory of the European Union or their departure from it where there is sufficient evidence that those substances are intended for the illicit manufacture of narcotic drugs or psychotropic substances (the so-called "catch-all clause").

22. Effective January 2017, the United States of America revised the regulations for the import and export of controlled substances, listed chemicals and tableting and encapsulating machines, and the regulations regarding the reports required for domestic transactions involving listed chemicals and tableting and encapsulating machines. The revision implements a broader presidential executive order to streamline the import and export process through electronic data transfer. Compliance with the revised regulations was required by 28 June 2017.

23. Switzerland introduced the mandatory registration of all operators involved in the trade in acetic anhydride and potassium permanganate above defined threshold levels, including brokers, in October 2017. Pharmaceutical preparations containing ephedrine and pseudoephedrine and a number of "designer" precursors of amphetamine-type stimulants were also placed under control.

24. A number of countries informed the Board of the implementation at the national level of recent scheduling decisions by the Commission on Narcotic Drugs. Those countries included El Salvador, Mexico and Switzerland, where NPP and ANPP were added to the list of controlled chemicals, effective 4 May 2017, 19 July 2017 and 1 October 2017, respectively.

25. In accordance with Economic and Social Council resolution 1992/29, information on the specific control measures applied to the substances in Table I and Table II of the 1988 Convention, as well as to additional chemicals under national control, are available on the secure website of INCB. To ensure that the INCB information package on the control of precursors is up to date at all times, **INCB encourages all Governments to inform it regularly of relevant changes to their national precursor legislation**.

26. Additional materials that were added in 2017 to the INCB secure website for competent national authorities included: Harmonized System classifications of selected non-scheduled chemicals used in the illicit manufacture of drugs; a precursor chemical information resource providing detailed technical information for about 120 chemicals used in the illicit manufacture of amphetamine-type stimulants and other drugs; and a compilation of all precursor-related recommendations made by the Board during the period 2000–2016.

27. In March 2017, the Commission on Narcotic Drugs adopted resolution 60/5, entitled "Increasing international coordination relating to precursors and non-scheduled

[6] Law No. 27302 of 8 November 2016. It repeals several articles of Law No. 23737, which contains basic provisions on drugs.

precursor chemicals used in the illicit manufacture of narcotic drugs and psychotropic substances". In the resolution, the Commission invited States to take a range of voluntary measures and to enhance cooperation among Governments and with INCB to address the issue of non-scheduled precursor chemicals used in the illicit manufacture of narcotic drugs and psychotropic substances. Such measures could include: improved cooperation with and information-sharing by relevant industrial sectors on suspicious orders and transactions; adopting measures authorizing the suspension of suspicious consignments; sharing the names of frequently diverted non-scheduled chemicals with INCB for possible inclusion in the limited international special surveillance list of non-scheduled substances; and compiling lists of non-scheduled chemicals with no known legitimate uses but known to be used for illicit drug manufacture. **INCB welcomes the adoption of the resolution, which reflects a number of items that it has repeatedly highlighted as critical in addressing the challenges of non-scheduled chemicals, including "designer" precursors.**

E. Submission of data on licit trade in, uses of and requirements for precursors

28. In accordance with Economic and Social Council resolution 1995/20, INCB requests the provision, on form D, of data on licit trade in, use of and requirements for substances in Table I and Table II of the 1988 Convention. Provision of those data is on a voluntary and confidential basis and allows INCB to help Governments to prevent diversion by cross-checking data from trading partners.

29. The number of Governments submitting data on licit trade was similar to previous years: as at 1 November 2017, the Governments of 117 States parties had provided information on licit trade in substances in Table I or Table II of the 1988 Convention and 114 had furnished data on licit uses of and/or requirements for one or more of the substances in Table I or Table II of the 1988 Convention (see annex IX). The Governments of Angola, Fiji, Iraq and Paraguay submitted licit trade data for the first time in five years. **INCB commends those Governments that have provided comprehensive licit trade data for substances in Table I or Table II of the 1988 Convention. The data are important for understanding patterns of regular trade, with a view to facilitating the identification of suspicious activity and preventing diversion of those substances.**

30. Voluntary provision of licit trade data also gives some indication of the volume of trade from and to Taiwan Province of China. As INCB has previously noted,[7] a number of countries regularly report such trade on form D, thus providing evidence of the Province's role as a major exporter of precursors, although pre-notifications of its exports are not provided through the PEN Online system. Based on available information, Taiwan Province of China accounted for 6.5 per cent of all pseudoephedrine exports reported on form D during the period 2012–2016. In that period, on average, 12 countries reported imports from Taiwan Province of China on their form D; nearly 70 per cent of all imports were reported by the Syrian Arab Republic (see para. 54 below).

31. Analysis and understanding of licit trade are complicated by the fact that shipments of chemicals under international control traded within countries that are part of regional customs unions, such as the European Union single market, are not reported through the PEN Online system or on form D. **Relevant competent national and regional authorities should devise effective mechanisms to adequately monitor the movement of precursors within their customs union borders and ensure the legitimate ultimate end use of those precursors.**

F. Annual legitimate requirements for imports of precursors of amphetamine-type stimulants

32. In its resolution 49/3, the Commission on Narcotic Drugs requested Member States to provide to the Board annual estimates of their legitimate requirements for certain substances frequently used in the manufacture of amphetamine-type stimulants, namely 3,4-MDP-2-P, pseudoephedrine, ephedrine and P-2-P, and, to the extent possible, preparations containing those substances that could be easily used or recovered by readily applicable means. The information is provided each year on form D, in the section entitled "Licit uses and needs", and can be updated by Governments and provided to the Board at any time during the year.

33. The number of Governments that have provided at least one estimate continued to increase, as did the number of estimates. Since the publication of the Board's 2016 report on precursors, three Governments submitted estimates of their legitimate requirements for the first time: the Government of Fiji submitted an estimate for ephedrine preparations (1 kg); the Government of Seychelles submitted estimates for ephedrine preparations (1 kg) and pseudoephedrine preparations (1 kg); and the Government of the Sudan submitted estimates for the annual legitimate requirements for ephedrine preparations (50 kg), pseudoephedrine raw material (1,500 kg) and

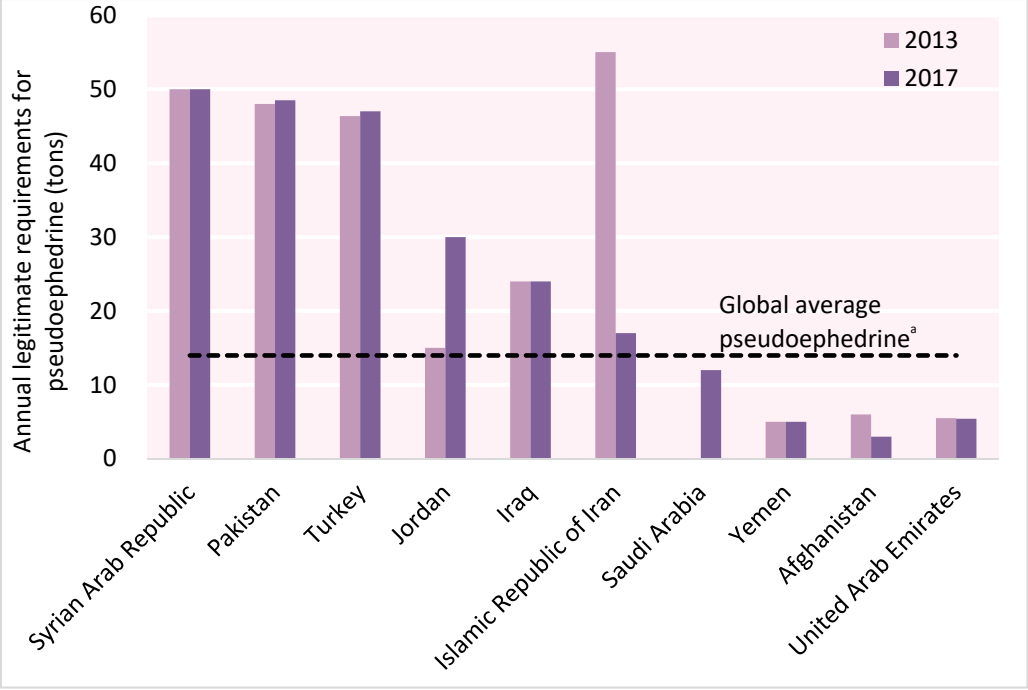
[7] E/INCB/2011/4, para. 31, and E/INCB/2012/4, para. 32.

pseudoephedrine preparations (3,000 kg). The Government of the Sudan also confirmed that ephedrine raw material and 3,4-MDP-2-P did not need to be imported into the country. The above submissions brought the total number of Governments providing estimates of annual legitimate requirements to 166. The estimates of annual legitimate requirements submitted by Governments as at 1 November 2017 are listed in annex II, and are regularly updated on the Board's website.

34. Since the Board's last report on precursors, the most significant update regarding the estimated annual legitimate requirements was the reduction of the estimate for pseudoephedrine from 49 to 0 tons by Bangladesh (see para. 19 above). Other notable updates were reported by Italy and Zimbabwe. Italy revised its annual legitimate requirement for the import of pseudoephedrine preparations from 0 to 10 tons. The Government of Zimbabwe revised its annual legitimate requirement for the import of pseudoephedrine (to be used in the manufacture of pharmaceutical products) from 150 to 400 kg. INCB is also in the process of clarifying the proposed significant revisions of estimates provided by the authorities of Honduras, India and South Africa, in particular with regard to ephedrine and pseudoephedrine and their preparations. The Government of China decreased its estimates for ephedrine (from 60 to 24 tons) and for pseudoephedrine (from 200 to 86 tons).

35. An area that has for some time[8] been of concern to INCB and the authorities of a number of exporting countries are pre-export notifications and the unusually high estimated annual legitimate requirements for imports of pseudoephedrine by some countries in West Asia (see figure II and para. 84 below). Although several Governments have reduced their estimates in recent years, the annual legitimate requirements in a number of countries in the region continue to be between 1.5 and 3.5 times larger than the global average. Between 2013 and 2017, Jordan was the only country in the region recording a major increase in its estimated requirements. **INCB wishes to commend Governments, in particular those of Afghanistan and Iran (Islamic Republic of), that have made efforts to more accurately estimate their import requirements, and urges all others to carefully assess whether estimates and actual imports meet national needs, so as to prevent any diversion.**

Figure II. Annual legitimate requirements for combined bulk and pharmaceutical preparations containing pseudoephedrine for selected countries in West Asia, 2013 and 2017



Note: Totals include annual legitimate requirements for pseudoephedrine both in bulk and in the form of pharmaceutical preparations.
[a] Global average of annual legitimate requirements for pseudoephedrine for Governments requiring a minimum of 10 kg in 2017

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[8] For example, E/INCB/2011/4, para. 23.

36. Operation "Missing links" (see para. 56 below) was designed in part to address concerns by the authorities of exporting countries and INCB about the final destination of ephedrine and pseudoephedrine shipped to or through conflict areas, in particular in North Africa and the Middle East.

37. Over the years, the estimates of annual legitimate requirements have proved to be an effective tool for Governments in assessing the legitimacy of shipments of precursor chemicals. Nevertheless, there have been some persistent challenges related to the use of annual legitimate requirements as a precursor control tool, as a result of which they have not yet been used to their full potential (see box below).

Box. Challenges related to the use of annual legitimate requirements as a precursor control tool

- A total of 35 States parties to the 1988 Convention have not yet provided any estimates to the Board; 46 per cent of those States parties are from Africa, 20 per cent are from Oceania, 17 per cent are from the Americas, 11 per cent are from Asia and 6 per cent are from Europe.
- A number of Governments, including Governments of major trading countries, have provided only some estimates of the annual legitimate requirements and have not provided estimates for all four substances and their preparations.
- While many Governments update their estimates of annual legitimate requirements annually to reflect changing market conditions, some have not done so for years. In 2017, more than 100 countries and territories reconfirmed or updated the annual legitimate requirement for at least one of the four substances and their preparations, and almost half of those countries and territories reconfirmed or updated the annual legitimate requirements for all relevant substances. However, some estimates date back to 2006 and have never been updated.
- A number of Governments appear to have built in a "safety margin" of significant proportions when establishing their requirements and actually import significantly less than their estimated annual legitimate requirements.
- In other cases, Governments report on form D imports of amounts of certain substances that are much larger than the estimated annual legitimate requirements.
- In some cases, Governments indicate on form D the use of a substance or a number of substances for specific purposes; however, they do not provide any indication regarding the estimated amounts required.

38. To more accurately establish their estimates, Governments may refer to the *Guide on Estimating Requirements for Substances under International Control*, developed by INCB and the World Health Organization, as well as the document entitled "Issues that Governments may consider when determining annual legitimate requirements for ephedrine and pseudoephedrine". Both are available on the Board's website.

39. **The Board invites all Governments to establish and regularly review all estimates of annual legitimate requirements, taking into account the prevailing market conditions, and inform the Board of any changes. Furthermore, the Board invites Governments to list specific needs and uses for each substance and to clearly indicate if there is no need for those substances by inserting a value of "zero". In cases where the proposed imports exceed the estimated annual legitimate requirements of the substance in question, the Board invites Governments of the exporting countries to obtain an explicit confirmation through**
PEN Online from the authorities of the importing country regarding the legitimacy of the planned shipment, or to contact INCB, as necessary.

G. Pre-export notifications and utilization of the Pre-Export Notification Online system

40. Pre-export notifications are at the core of the system of monitoring international trade in substances in Table I and Table II of the 1988 Convention. In order for the pre-export notification system to be effective, Governments must formally invoke article 12, subparagraph 10 (a), to make it mandatory for the authorities of exporting countries to send pre-export notifications. Although not a treaty-mandated requirement, Governments should also register with the Board's automated

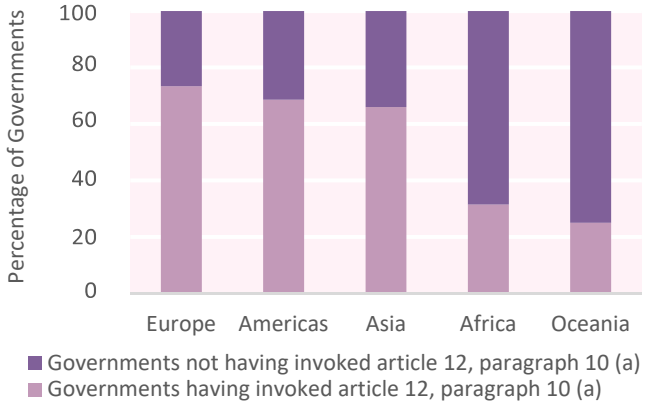
online system for the exchange of pre-export notifications, PEN Online, to ensure that they receive information in real time about all relevant planned shipments of chemicals destined for their territory, before those shipments leave the exporting country.

1. Pre-export notifications

41. As at 1 November 2017, 112 States and territories had formally requested pre-export notifications pursuant to article 12, subparagraph 10 (a), of the 1988 Convention. There have not been any new requests since the publication of the Board's 2016 report on precursors (see annex X).

42. Whereas in Europe, Asia and the Americas, approximately two thirds of Governments have officially requested pre-export notifications, the percentage of Governments in Africa and Oceania having invoked article 12, subparagraph 10 (a), remains low (see figure III). Those Governments therefore run the risk of not receiving pre-export notifications at all and being vulnerable to traffickers of precursor chemicals.

Figure III. Governments having invoked article 12, subparagraph 10 (a), of the 1988 Convention, by region (as at 1 November 2017)



43. **INCB would once again like to remind Governments that registration with the PEN Online system does not automatically invoke article 12, subparagraph 10 (a), or vice versa, and reminds importing Governments that exporting authorities are not obliged to send notifications unless the importing party has officially requested such notifications.**

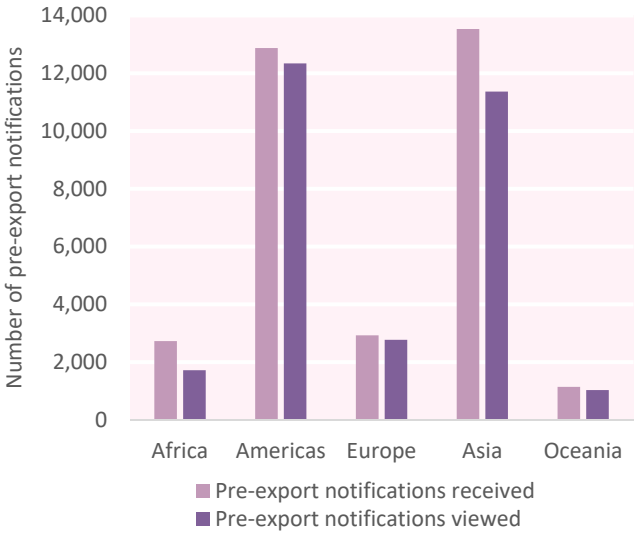
2. Pre-Export Notification Online system

44. The PEN Online system, launched by INCB in March 2006, is an automated, cost-free tool that enables Governments to communicate in a timely manner, monitor international trade in scheduled substances and rapidly identify suspicious shipments.

45. During the reporting period, four additional Governments (Kuwait, Maldives, South Sudan and Timor-Leste) received authorized access to the PEN Online system, bringing the total number of registered Governments to 157. **The Board encourages the Governments that have not registered with the PEN Online system[9] to do so without delay.** In particular, the Board has noted that, whereas in the Americas, Europe and Asia, almost all Governments have registered with the system, only 59 per cent (32 Governments) and 31 per cent (5 Governments) in Africa and Oceania, respectively, have registered.

46. Since the publication of the Board's 2016 report on precursors, approximately 34,000 pre-export notifications have been submitted using the PEN Online system. The Board is pleased with the level of active utilization of the system by registered Governments with regard to the viewing of pre-export notifications received, although improvements in that regard could be made by users in countries in Africa and Asia, where only about 60 per cent and 80 per cent, respectively, of pre-export notifications received are viewed (see figure IV). **Governments are furthermore encouraged to make additional use of the reply function in the system to provide timely feedback to the exporting authority in order to ensure a continuous chain of monitoring through the system.**

Figure IV. Number of pre-export notifications received and viewed, by region, 1 November 2016–1 November 2017



[9] Angola, Antigua and Barbuda, Botswana, Cameroon, Central African Republic, Comoros, Democratic People's Republic of Korea, Democratic Republic of the Congo, Djibouti, Dominica, Equatorial Guinea, Fiji, Gabon, Guinea, Guinea-Bissau, Guyana, Kiribati, Lesotho, Liberia, Malawi, Mauritania, Monaco, Mongolia, Mozambique, Nauru, Niger, Palau, Papua New Guinea, Saint Kitts and Nevis, Samoa, San Marino, Sao Tome and Principe, Somalia, Swaziland, the former Yugoslav Republic of Macedonia, Togo, Tonga, Turkmenistan, Tuvalu and Vanuatu.

47. In monitoring notifications communicated through the PEN Online system, INCB noted a large proportion of objections relating to the import authorization number not being included on the pre-export notification form. To avoid unnecessary administrative objections and delays in shipments, **INCB recommends that the authorities of exporting countries include all available details, including authorization numbers, in the relevant sections of the PEN Online pre-export notification form. Where necessary, Governments are also encouraged to initiate bilateral meetings to discuss the issue, or seek INCB support to establish contacts where they do not exist**.

48. INCB wishes to remind Governments that shipments dispatched without pre-export notifications are at greater risk of being diverted, in particular those shipments destined for countries that do not have in place a control system based on individual import permits. Information on the systems of authorization that Governments apply to the import (and export) of substances in Table I and Table II of the 1988 Convention is available in the Board's information package on the control of precursors, which is accessible to competent national authorities on the Board's secure website.

49. In its last report on precursors, INCB raised concerns over the integrity of controls on a Government's territory. Those concerns related specifically to territories where conflict, unresolved territorial disputes or other circumstances hinder the exercise of effective governmental control and to the risk of such territories being exploited by traffickers for the diversion of chemicals.[10]

50. The situation also creates difficulties for the authorities of exporting countries, as they will often be unable to send a pre-export notification to an officially recognized counterpart who has both the legal authority and the de facto capacity to provide adequate oversight and assurance regarding a shipment's end purpose or destination.

51. Such a situation occurs regularly in relation to proposed exports to northern Cyprus and the Kurdistan region in Iraq. According to PEN Online data, a substantial amount of pharmaceutical preparations containing pseudoephedrine is exported from Jordan to the Kurdistan region of Iraq. The competent national authorities in Iraq have objected (and continue to object) to all shipments to that region. However, pharmaceutical preparations are not under international control and not all countries have followed the recommendations contained in various resolutions of the Commission on Narcotic Drugs and implemented legislation to treat preparations containing ephedrine and pseudoephedrine in the same manner as the precursors they contain. Therefore, INCB is not in a position to assess the actual scale of such preparations being traded and any discrepancies with actual needs, although from data shared voluntarily through the PEN Online system, traded amounts are in the range of several tons. In the absence of clear national regulations, such as those in States members of the European Union, where preparations were added to category 4 of the European Union precursors legislation in December 2013, competent national authorities may face difficulties objecting to exports, even when they are suspicious.

52. In 2016, Indian authorities stopped a shipment of 500 kg of pseudoephedrine to northern Cyprus on the grounds of lack of recognition of the territory by the Government of India.

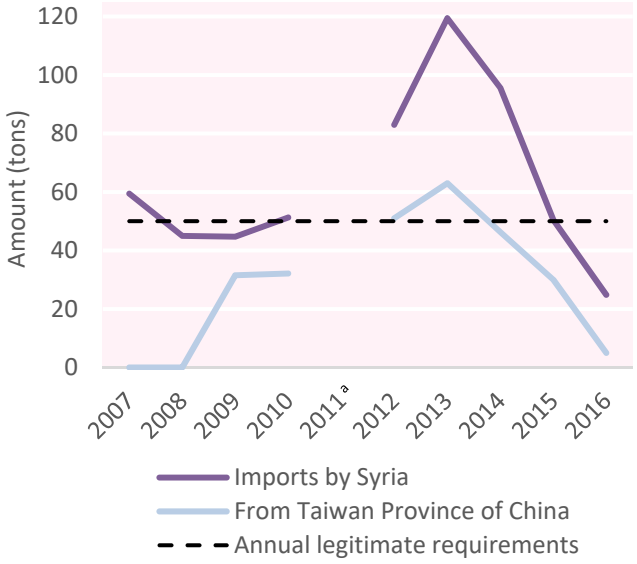
53. Given Governments' limited ability to interact with, and INCB's limited ability to respond to communications relating to, territories whose status is unclear, contested or, at any given time, not effectively within the scope of control of a recognized entity's competent national authorities, there are serious risks that trade will proceed without any oversight or assurance about its end purpose or destination. A heightened risk would be present in cases where both the importing company and the exporting company are located in areas beyond the relevant competent authorities' control. At the same time, there is also restricted capacity to support States in complying with the objectives of the 1988 Convention and ensuring the availability of substances in Table I and Table II for legitimate purposes in all regions of the world, irrespective of their status.

54. Another country that has been of concern to INCB and exporting countries in this context is the Syrian Arab Republic, in particular because of its previously thriving pharmaceutical industry and the impact of the lasting conflict on that industry, as well as on the competent authorities' ability to effectively control the trade in precursors in their territory. While imports of pseudoephedrine into the country largely matched the estimated annual legitimate requirements before 2011, they reached an all-time high in 2013 (see figure V). Taiwan Province of China was the major exporter of pseudoephedrine to the Syrian Arab Republic and accounted, on average, for 50 per cent of reported amounts during the period 2012-2016. The decline in the amount imported since 2013 is a result of increased awareness by exporting countries and a series of measures taken by the Government of the Syrian Arab Republic, including a temporary moratorium, from late 2015 to mid-2016, on the approval of pseudoephedrine imports.[11] INCB understands that the moratorium was renewed twice in 2017.

[10] E/INCB/2016/4, paras. 207–210.

[11] E/INCB/2016/4, para. 30.

Figure V. Imports and estimated annual legitimate requirements for imports of pseudoephedrine reported by the Government of the Syrian Arab Republic on form D, 2007–2016



[a] No form D submitted for 2011.

H. Activities and achievements in international precursor control

1. Project Prism and Project Cohesion

55. Project Prism and Project Cohesion are the two INCB platforms for international cooperation in matters related to chemicals used in the illicit manufacture of drugs, specifically synthetic drugs (Project Prism) and heroin and cocaine (Project Cohesion). During the reporting period, the INCB Precursors Task Force, which leads the two projects, coordinated the following initiatives:

(a) Operation "Missing links", which was designed to address concerns by the authorities of exporting countries and INCB about the final destination of precursors of amphetamine and methamphetamine shipped to or through conflict areas, in particular in North Africa and the Middle East, as well as to close intelligence gaps concerning the types and sources of chemicals used in the illicit manufacture of fake "captagon" tablets;[12]

(b) Operation "Follow me", which is aimed at facilitating and enhancing the exchange of operational information on identified and suspected diversion attempts and trafficking in acetic anhydride among countries that have been targeted recently by acetic anhydride traffickers;

(c) A global survey to identify the sources and modi operandi used by traffickers to obtain illicitly manufactured fentanyl, fentanyl analogues, other opioid-type new psychoactive substances, and related precursors, which was conducted jointly with the INCB New Psychoactive Substances Task Force.

56. Operation "Missing links" was launched in October 2016 and concluded in mid-January 2017, followed by an eight-week post-operational consolidation period. Thirty-seven countries and territories and four international organizations participated; three countries made use of the possibility to submit samples from 65 "captagon" seizures for detailed forensic profiling to the laboratory of the German Federal Criminal Police. The Operation also benefited from the German liaison officers' network, which facilitated communication on the ground.

57. With regard to licit trade monitoring, the authorities of participating countries recorded no irregularities in international trade in the target chemicals and destinations and no indications of diversions during the operational period. Forensic profiling and seizure information suggested, for the first time, the availability of recently scheduled (APAAN) and non-scheduled (P-2-P methyl glycidic acid derivatives) chemicals for the illicit manufacture of the active ingredient in fake "captagon" tablets. **INCB wishes to commend all Governments that participated in the Operation and encourages continued vigilance and enhanced sharing of information that may help to further elucidate the modi operandi of traffickers engaged in acquiring precursor chemicals for and illicitly manufacturing fake "captagon" tablets.**

58. Operation "Follow me" was preceded by a closed, operational meeting that was convened in March 2017 and provided an initial platform for informal information-sharing among all interested countries affected by one or more recent incidents involving acetic anhydride. The Operation and the related information exchange, in which INCB assumed a coordinating role, have improved knowledge of current modi operandi of traffickers and helped to establish links between incidents that otherwise appeared to be isolated cases. They have also helped to identify loopholes in national precursor control systems, especially in relation to the procedures for granting or refusing registration of precursor operators. At the practical, operational level, a number of challenges have been highlighted, including issues related to: (a) information ownership; (b) cooperation and information-sharing between regulatory and law enforcement authorities; (c) legal

[12] The term "fake 'captagon'" is used to refer to what is available today on the illicit market in countries in the Middle East. The composition of the product has nothing in common with Captagon, the pharmaceutical product that was available from the early 1960s and contained the substance fenethylline.

constraints, limited capacity and/or limited willingness to investigate incidents, including shipments objected to through the PEN Online system, before they become criminal cases; and (d) legal constraints regarding the bilateral sharing of information before an investigation is concluded. These challenges need to be addressed by Governments in order to prevent diversions and allow for related criminal activities to be fully investigated and prosecuted.

59. With regard to the global illicit fentanyls survey mentioned in paragraph 55 (c) above, from among the 58 countries and territories for which information was provided, one or more relevant precursor chemicals were reported as having been encountered in 11 countries (Canada, Colombia, the United States and 8 countries in Europe). Chemicals included NPP and ANPP, as well as their precursors, substitutes and other necessary chemicals.

60. Additional information on trends and findings of the operations and the survey are discussed in the relevant sections of chapter III of the present report.

61. As in the past, Project Prism and Project Cohesion focal points were alerted to major trends in precursor trafficking, diversions and attempted diversions, modi operandi and newly emerging precursors by means of special alerts. During the reporting period, seven alerts were issued and disseminated. They related to the interim and final results of Operation "Missing links", trafficking in acetic anhydride, the identification in Lebanon of a non-scheduled chemical for use in the illicit manufacture of fake "captagon", the identification of masked derivatives of amphetamine-type stimulants (see paras. 116 and 142 below) and the suspension of the granting of import authorizations for pseudoephedrine and related substances by the authorities of the Syrian Arab Republic.

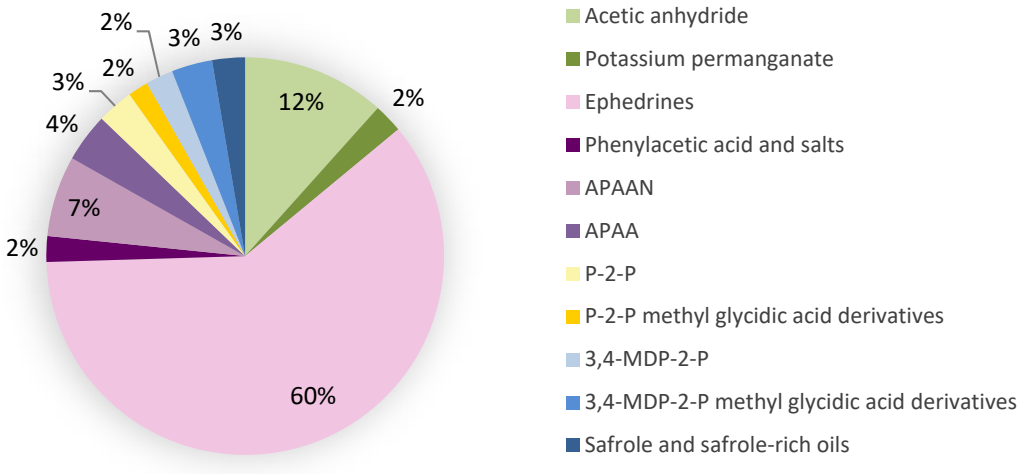
2. Precursors Incident Communication System

62. PICS, which is available in English, French, Russian and Spanish, continues to provide registered users with a free platform for the exchange of real-time information on incidents involving substances in Table I and Table II, as well as substances not under international control. Incidents include seizures, shipments stopped in transit and dismantled illicit laboratories. A growing number of users include details in the free text fields of the system about modi operandi and other operationally relevant information. In several cases, INCB has established direct contact between competent authorities to exchange information on specific incidents and has also issued alerts on new trends and specific incidents (see para. 61 above).

63. Since the publication of the last report on precursors, the number of registered PICS users has grown to nearly 480,[13] the number of agencies to more than 240 and the number of Governments to 104. The number of incidents communicated through PICS had reached nearly 2,050 as at 1 November 2017, an increase of more than 300 since the last report. Those incidents had involved more than 60 different countries and territories.

64. Since the launch of PICS in March 2012, incidents involving nearly 200 different substances (substances in both Table I and Table II of the 1988 Convention, and non-scheduled chemicals) have been communicated through the system. To date, the substances most frequently mentioned have been ephedrine and pseudoephedrine (60 per cent), followed by acetic anhydride (12 per cent) and APAAN (7 per cent) (see figure VI). Chemicals not under international control, including substances on the limited international special surveillance list of non-scheduled substances, have accounted for 44 per cent of all references to substances.

Figure VI. References to substances in the Precursors Incident Communication System, selected substances, 2012–2017



[13] Governments that have not yet registered PICS focal points for their relevant national authorities involved in precursor control may request an account by writing to pics@incb.org.

65. During the reporting period, there were several examples where information shared through PICS helped to build cases involving what would otherwise have appeared as isolated incidents.[14] To further enhance the operational value of PICS and facilitate the launching of investigations in the countries concerned, **INCB wishes to remind PICS users to share actionable information, such as routing information (source, transit and destination), company information, relevant documentation and the names used to disguise the identity of chemicals.**

III. Extent of licit trade in precursors and the latest trends in precursor trafficking

66. The present chapter provides an overview of the major trends and developments in the licit trade in precursor chemicals and in trafficking therein. It contains a summary of information on seizures and cases of diversion or attempted diversion from international trade, as well as activities associated with illicit drug manufacture. The analysis is based on data provided by Governments on form D for 2016 and through PEN Online, Project Prism and Project Cohesion and PICS, as well as in other information from Governments, including national reports, and covers the period up to 1 November 2017.

67. Readers are reminded that the intention of the present chapter is to describe trends and developments with a view to addressing gaps and weaknesses in precursor control mechanisms. More important than seizures and the amounts seized, which reflect successful diversions, is the information generated from a seizure, a stopped or suspended shipment, a theft, an attempted diversion or a suspicious order or even enquiry, as it is critical for preventing future diversions of chemicals. **INCB therefore again encourages all governments to improve the quality and comprehensiveness of their annual form D submissions and to make better use of PICS.**

68. INCB also observes increasing discrepancies between official information shared by Governments on different occasions, including through form D, country reports and presentations at meetings of the subsidiary bodies of the Commission on Narcotic Drugs, and annual report questionnaires and individual seizure reports. **INCB would like to remind Governments that the reporting of seizures of substances in Table I and Table II on form D is mandatory, pursuant to article 12, paragraph 12, of the 1988 Convention, and should represent the most comprehensive set of precursor seizure data available.**

A. Substances used in the illicit manufacture of amphetamine-type stimulants

1. Substances used in the illicit manufacture of amphetamines

69. Ephedrine and pseudoephedrine are among the most widely used precursors for the illicit manufacture of methamphetamine. They are also both used legitimately for medical purposes and are therefore among the most frequently and widely traded of the substances in Table I of the 1988 Convention, in the form of both raw materials and pharmaceutical preparations. P-2-P, phenylacetic acid and APAAN, as well as a number of non-scheduled substances, may be used as alternatives to ephedrine and pseudoephedrine in illicit methamphetamine manufacture (see paras. 114–124 and annex IV).

(a) Ephedrine and pseudoephedrine

Licit trade

70. During the reporting period, information regarding more than 5,000 planned shipments of ephedrine and pseudoephedrine was submitted through the PEN Online system. Of those notifications, 33 per cent involved substances in bulk and 67 per cent involved pharmaceutical preparations, respectively. The shipments consisted of a total of about 1,020 tons of pseudoephedrine and slightly more than 100 tons of ephedrine; they originated in 38 exporting countries and territories and were destined for 165 importing countries and territories. As in the past, the largest exporter in terms of volume was India, followed by Germany, and the largest importer was the United States, followed by Switzerland.

71. Between 1 November 2016 and 1 November 2017, almost 320 planned shipments of ephedrine and pseudoephedrine were objected to through the PEN Online system by the authorities of 40 importing countries, often for administrative reasons or, as in the case of Iraq, because the competent authorities had no control over the part of the country in which the importing companies were located. The competent authorities in Iraq objected to 71 pre-export notifications for

[14] For further details about PICS and the minimum action for sharing information about precursor incidents through the system, see E/INCB/2015/4, box 3 (p. 11).

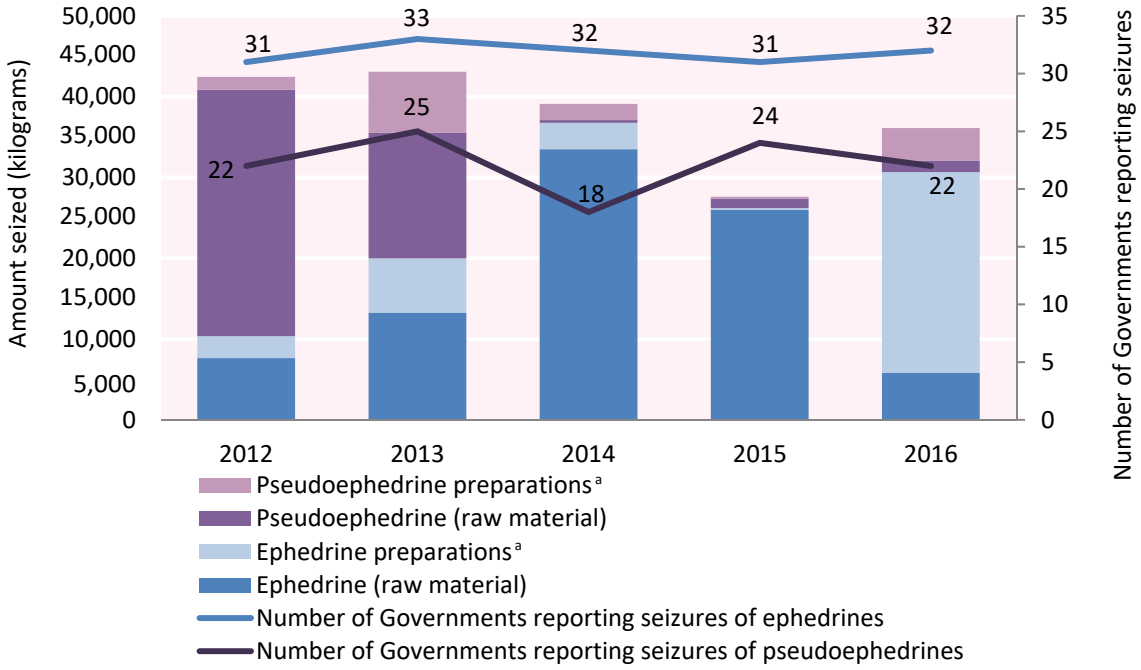
that reason. On its form D for 2016, India reported stopped shipments of a total of 1.1 tons of pseudoephedrine that had been destined for Iraq and northern Cyprus.

72. Canada was the only country that reported thefts of ephedrine and pseudoephedrine on form D for 2016.

Trafficking

73. The amounts of ephedrines seized in 2016 continued to fluctuate between 35 and 40 tons, much lower than the amounts reported seized in the preceding five-year period. At the substance level, there continued to be significant fluctuations in the statistics for different types of ephedrines (see figure VII).

Figure VII. Seizures of ephedrine and pseudoephedrine reported by Governments on form D, 2012–2016



[a] Excludes preparations reported as tablets.

74. In 2016, 23 countries and territories reported, on their form D, seizing raw (bulk) ephedrine amounting to more than 5.8 tons, and 14 countries and territories reported seizures of nearly 25 tons of ephedrine in the form of pharmaceutical preparations. India reported seizing a record amount of more than 21 tons of preparations containing ephedrine. The second-largest amount of preparations containing ephedrine seized was reported by China (more than 3.3 tons). China also accounted for the largest amount of ephedrine raw material seized (more than 1.4 tons), followed by New Zealand (1.2 tons) and Australia (1.1 tons). The amount of ephedrine (raw material) seized in China in 2016 was the lowest in 15 years.

75. Seizures of pseudoephedrine were reported by 22 countries and territories. Australia reported seizures of 1.1 tons, while the total amount of all pseudoephedrine raw material that was reported seized in other countries was less than 400 kg. By contrast, seized preparations containing pseudoephedrine amounted to more than 4 tons. A single country, Thailand, accounted for more than 95 per cent of those seizures.

East and South-East Asia

76. During the period 2012–2016, global seizures of ephedrines were dominated by seizures in East and South-East Asia. Within the region, China accounted for by far the largest proportion of seized ephedrine (both as raw material and in the form of pharmaceutical preparations). During that period, China noted widespread illicit manufacture of ephedrine from 2-bromopropiophenone, an internationally non-scheduled substance that was placed under control in China in May 2014. In 2016, China dismantled 27 clandestine ephedrine laboratories and warehouses where ephedrine and 2-bromopropiophenone were being illicitly manufactured or stored; the authorities also noted an expansion of such activities north of the Yangtze River.[15]

[15] China, National Narcotics Control Commission, *Annual Report on Drug Control in China 2017* (Beijing, 2017), pp. 30 and 59.

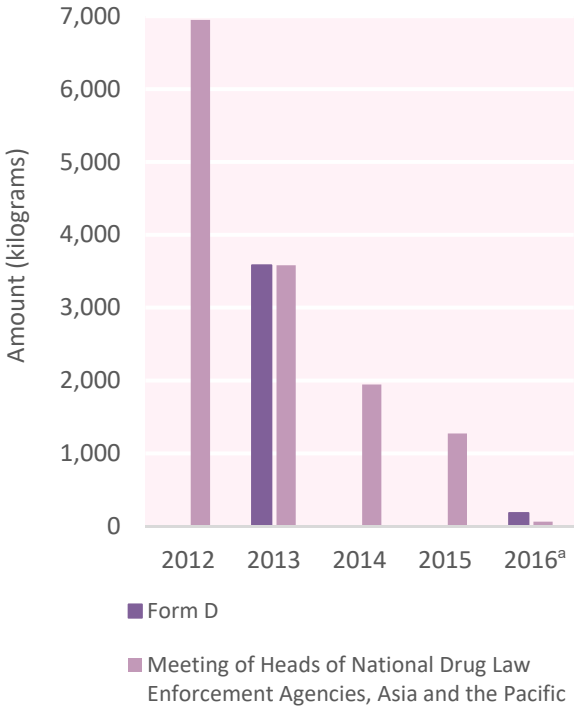
77. The Philippines reported seizures of ephedrine every single year during the period 2012–2016; however, amounts fluctuated between less than 1 kg (2013) and more than 500 kg (2014). In addition, authorities in the country regularly dismantle illicit methamphetamine laboratories. In recent years, those authorities have observed a move away from large-scale (industrial) manufacture to smaller-scale ("kitchen") laboratories and a trend of splitting the manufacturing process into different stages in different locations. Laboratories where ephedrine-based methamphetamine is manufactured also continued to be dismantled in East and South-East Asia in 2017. In one illicit laboratory in Malaysia, more than 100 kg of ephedrine were seized; the chemicals used for processing were believed to be from domestic sources.

78. With 55 per cent of global seizures of pseudoephedrine preparations reported for the period 2012–2016 taking place in the subregion, countries in East and South-East Asia also accounted for the majority of seizures of such preparations, as a result of the high number of seizures in Myanmar and Thailand. Those two countries accounted for 42 per cent and 45 per cent, respectively, of the amounts of pseudoephedrine preparations seized in the subregion during the period.

79. The largest seizure of pseudoephedrine preparations ever reported in Thailand was a seizure of 3.8 tons that was made in 2016. It should be seen against the classification of such products as psychotropic substances in category II of the Psychotropic Substances Act as of April 2012. Unfortunately, no information was shared on the sources of the preparations and the methods of diversion, limiting the value of the information provided; this applies to the information submitted by most countries.

80. INCB is concerned that authorities in several countries in East and South-East Asia appear to seize amphetamine and methamphetamine precursors, or have information about their use in illicit laboratories, but do not submit a form D for the relevant year or do not systematically report all seizures, even though such reporting is an obligation under article 12, paragraph 12, of the 1988 Convention. That situation is demonstrated by data from Myanmar (see figure VIII), but is also applicable to other countries in the region.

Figure VIII. Seizures of pseudoephedrine (raw material and preparations) reported by Myanmar on form D and to the Fortieth Meeting of Heads of National Drug Law Enforcement Agencies, Asia and the Pacific, 2012–2016



[a] Data provided to the Fortieth Meeting cover only January–June 2016.

81. Although Viet Nam only reported seizures of ephedrine and pseudoephedrine and their preparations in 2013 and 2014 (totalling about 50 kg each year), the country has regularly been identified as a point of embarkation for consignments of ephedrine and pseudoephedrine smuggled into Australia. On form D for 2016, the authorities of Hong Kong, China, also identified Viet Nam as the origin of seized ephedrine.

82. The low number of reported seizures of ephedrine and pseudoephedrine and the limited amounts reported seized in countries in East and South-East Asia continue to contrast sharply with seizure data for methamphetamine end products (both crystalline methamphetamine and methamphetamine tablets), for which there is a large and growing market in the region. With a few exceptions, most countries in East and South-East Asia do not seize (or report the seizure of) other methamphetamine precursors (see paras. 114-124 below), which could explain the availability of illicitly manufactured methamphetamine from substitute chemicals.

West Asia

83. In West Asia, seizures of ephedrine and pseudoephedrine, as raw material and in the form of pharmaceutical preparations, have rarely been reported on form D; the amount seized totalled less than 165 kg for

the entire region during the period 2012–2016. Although no seizures of ephedrine and pseudoephedrine were reported by the Islamic Republic of Iran during the period 2012–2016, authorities in the country reported the dismantling of 181 "kitchen" laboratories in 2016, in which methamphetamine was being manufactured from ephedrine, iodine and red phosphorous. That figure represents a further decline from the 216 laboratories dismantled in 2015[16] and may be partly the result of the relocation of illicit methamphetamine manufacture to different places along the country's border with Afghanistan. Concerns about methamphetamine trafficking, abuse and illicit manufacture have led the Afghan authorities to reduce the annual legitimate requirements for imports of ephedrine and pseudoephedrine (see figure II above) and introduce import and export controls for pharmaceutical preparations containing those substances. In 2016, Afghanistan reported a seizure of pseudoephedrine for the first time; it was suspected that the 16 kg that were seized had originated in the Islamic Republic of Iran.

84. Pakistan is another country in the region regarding which INCB has expressed concern about unusually high annual legitimate requirements but, unlike other countries, they have remained unchanged in recent years (see figure II above). A court case on the alleged domestic diversion of significant amounts of ephedrine in Pakistan has been ongoing since March 2012,[17] with no conclusion as at the finalization of the present report. The country was also identified as the origin of some 7,000 ephedrine tablets reported seized by authorities in Hong Kong, China.

85. During 2016 and the first 10 months of 2017, countries in the Gulf area were identified as transit countries for shipments of ephedrine and pseudoephedrine from India bound for destinations in Africa.

South Asia

86. South Asia, in particular India, remains a source of ephedrines for countries in Africa, East and South-East Asia and Oceania. On form D for 2016, India reported 9 seizures of ephedrine preparations, amounting to nearly 22 tons, and 11 seizures of pseudoephedrine preparations, amounting to 155 kg; the origins in all instances were unknown. No seizures of ephedrine or pseudoephedrine raw materials were reported in 2016, which contrasts with information about a seizure of almost 20 tons of ephedrine and pseudoephedrine in April 2016.[18] INCB has requested clarification about that seizure; however, no reply has been received from the authorities. Seizures of ephedrines in India also continued to be communicated through PICS in 2017. They typically concerned amounts of less than 20 kg that had been diverted from domestic distribution channels and were destined for countries in Africa and East and South-East Asia. Incidents also included two large seizures that took place during the first 10 months of 2017: a seizure at Bangalore Airport of a consignment of 475 kg of ephedrine hidden among bags of ammonium chloride bound for Malaysia, and a seizure of 260 kg of ephedrine in an illicit laboratory located at the premises of a manufacturer of basic chemicals.

87. No other country in South Asia reported any seizures of ephedrines on form D for 2016, or in fact during the last 15 years. That includes Nepal, where, in 2016, authorities had provided information relating to a case of domestic diversion of nearly 500 kg of pseudoephedrine from the premises of a company in Kathmandu.[19] **INCB would therefore once again like to remind all Governments of the importance of thoroughly investigating all seizures and diversion attempts, and of communicating relevant findings to INCB and any other countries concerned so that the underlying weaknesses in domestic monitoring systems or shortcomings at the international level can be addressed**.

Oceania

88. Of the countries in Oceania, only Australia and New Zealand submitted form D for 2016. Both countries remained significant targets for trafficking in ephedrines. While ephedrine seized in Australia was reported to have typically originated in countries and territories in East and South-East Asia, the origin of most seized pseudoephedrine was unknown. Authorities in both countries noted a trend towards fewer seizures being made, but larger amounts being seized in each incident. In June and September 2017, Australian authorities seized, respectively, 1.4 tons of ephedrine and about 3.9 tons of liquid ephedrine at the port in Sydney, the largest ephedrine seizures on record in Australia and the biggest seizures of precursor chemicals at the Australian border; investigations are ongoing.

89. Not including those seizures, air cargo (44 per cent), followed by sea cargo (35 per cent), international mail and air passengers and crew accounted for the largest proportion, by weight, of amphetamine and methamphetamine precursors detections at the Australian border during the period 2015/16.[20] The most common point of embarkation for those precursors

[16] Islamic Republic of Iran, Drug Control Headquarters, *Drug Control in 2016* (Tehran, 2017), p. 39.
[17] E/INCB/2012/4, para. 22.
[18] E/INCB/2016/4, para. 69.
[19] Ibid., para. 70.
[20] Australian Criminal Intelligence Commission, *Illicit Drug Data Report 2015-16* (Canberra, 2017), p. 158.

during that period was China (including Hong Kong); however, Viet Nam, Malaysia and India, in that order, were also identified as points of embarkation.

90. According to the Australian Criminal Intelligence Commission, forensic profiling indicated that about 78 per cent of the methamphetamine samples seized at the Australian border in the first six months of 2016 had been illicitly manufactured from ephedrine or pseudoephedrine, the largest proportion in five years; only about 10 per cent were found to have been manufactured using P-2-P-based methods. When considered on a weight basis, the corresponding figures are 62 per cent and 1.4 per cent, respectively. Similarly, analysis of samples of methamphetamine seized on Australian territory showed that the substances had been predominantly manufactured from ephedrine and pseudoephedrine, typically using the hypophosphorous method of manufacture. Overall, there was a decrease in the number of clandestine amphetamine and methamphetamine laboratories dismantled in Australia, although there was an increase in the number of laboratories being dismantled where pseudoephedrine was being manufactured from preparations. Although remaining at a low level, authorities also noted an increase in the proportion of laboratories that could be classified as industrial-scale laboratories in 2015/16.

91. In New Zealand, the amount of ephedrine seized in 2016 totalled more than 1.2 tons, the largest amount ever reported, reflecting a shift in substances seized, from pseudoephedrine to ephedrine; that shift started in 2013. Almost the entire amount of ephedrine (98 per cent) was seized at the border, with the bulk reported to have originated in China, including Hong Kong. International mail and air freight remained the most common means for those methamphetamine precursors entering New Zealand.

92. In the first six months of 2017, the volume of methamphetamine precursors (ephedrine and pseudoephedrine) seized at the borders of New Zealand decreased significantly, according to information from the National Drug Intelligence Bureau.

Africa

93. In 2016, Namibia and Nigeria were the only countries in Africa that reported seizures of ephedrines on form D. Seizures in Nigeria were mostly of ephedrine being shipped to other countries in Africa, in particular Mozambique and South Africa. Totalling more than 440 kg, individual amounts varied from 1 kg to 144 kg; seizures were typically effected at Nigerian airports or seaports and the substance had been either misdeclared or mingled with other goods. An amount of 100 kg of ephedrine was seized on a highway to Cameroon; one seized consignment was destined for Malaysia. As in the past, the amounts of ephedrine seized in Nigeria were initially diverted from domestic distribution channels. INCB is aware that the Nigerian authorities, in cooperation with UNODC, have commissioned a study on estimating national requirements for ephedrine and pseudoephedrine, among other substances, to address concerns about domestic diversion. The study was expected to be finalized in late 2017.

94. Seizures of outbound consignments from Nigeria to countries in Africa continued in 2017; destinations included Mozambique, South Africa and the United Republic of Tanzania. At the only clandestine methamphetamine laboratory dismantled in Nigeria in 2016, ephedrines were not being used as a starting material: it was the first incidence in that country of methamphetamine being illicitly manufactured from benzaldehyde and other chemicals not under international control, using a method now well established in Mexico.[21] There are indications that ephedrine-based illicit methamphetamine manufacture also continues to exist and that such manufacture is closely intertwined with the production of falsified ephedrine medications.[22]

95. In 2016 and the first 10 months of 2017, countries in Africa were also identified as the destination of consignments of ephedrines from India. Once again, destination countries included South Africa and the United Republic of Tanzania, as well as Ethiopia and Zambia.

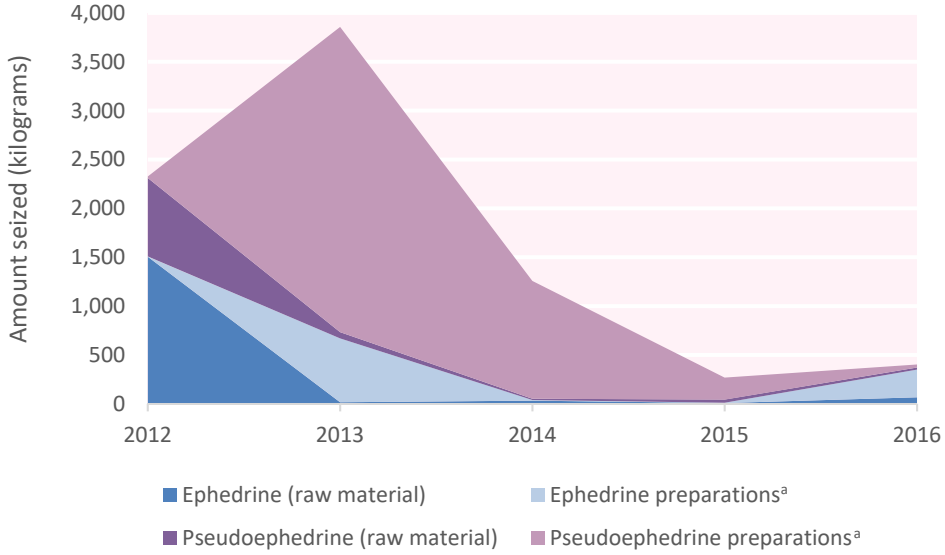
Europe

96. In 2016, 21 countries in Europe reported seizures totalling about 400 kg of ephedrine, pseudoephedrine and their preparations. This represents a significant decline from just a few years ago (see figure IX). With seizures totalling slightly more than 250 kg of ephedrine preparations, Ukraine accounted for the largest proportion of ephedrines seized in Europe in 2016; the entire amount originated in that country.

[21] E/INCB/2016/4, paras. 67 and 101.

[22] Inter-governmental Action Group Against Money Laundering in West Africa, *Typologies Report: Money Laundering Resulting From the Counterfeiting of Pharmaceuticals in West Africa* (Dakar, 2017), p. 24.

Figure IX. Seizures of ephedrine and pseudoephedrine and their preparations reported by Governments of European countries on form D, 2012–2016



[a] Excludes preparations reported as tablets.

97. The decline is particularly apparent in relation to pseudoephedrine preparations; slightly more than 30 kg were reported seized in 2016, less than 1 per cent of the amount reported seized in 2013. Czechia remained the country reporting seizures of such tablets most frequently, including through PICS.

98. The authorities in Czechia also reported the dismantling of 261 illicit methamphetamine laboratories in 2016, almost exactly the number of laboratories dismantled a year earlier. As in the past, most laboratories were small-scale "kitchen" laboratories, although the authorities are concerned about an increase in large-scale methamphetamine production and distribution, with the involvement of organized criminal groups, and with an estimated annual methamphetamine production capacity of several tons. Illicit methamphetamine manufacture in Czechia involves ephedrine or pseudoephedrine extracted from pharmaceutical preparations that are smuggled in from abroad, allegedly from Poland, Slovakia and Turkey; most of the other chemicals used are not scheduled at the international or European Union level and are widely available in specialized chemical supplies stores. Pharmacies in Poland were identified as the source of small amounts of pseudoephedrine preparations seized in 94 incidents in Belarus.

Americas

99. In 2016, ephedrine seized in North America totalled 665 kg, of which 96 per cent was reported by Canada, while the United States accounted for 96 per cent (127 kg) of all pseudoephedrine seized. For the third consecutive year, Mexico did not report any seizures of ephedrines. The United States also reported a continuing decrease in small-scale domestic manufacture of methamphetamine. The absence of significant levels of seizures of ephedrines in North America provides further evidence of the complete shift of illicit methamphetamine manufacture in Mexico from methods involving ephedrines to methods involving P-2-P (see paras. 118 and 119 below).

100. A seizure of 250 kg of ephedrine was reported in Argentina in 2016, an amount that was, according to the authorities, imported in 2011 and never collected by the importer. INCB is not aware of any investigations being conducted into the case or of the outcomes. No seizures of ephedrines were reported in 2016 by any country in Central America and the Caribbean.

(b) Norephedrine and ephedra

Licit trade

101. Between 1 November 2016 and 1 November 2017, 178 transactions involving norephedrine, a substance that can be used in the illicit manufacture of amphetamine, were recorded through the PEN Online system: 12 exporting countries pre-notified 33 importing countries of shipments, amounting to more than 18 tons of raw material and nearly 9 tons of pharmaceutical preparations. The largest exporters by volume were India and Indonesia, and the largest importers were the United States and Myanmar.

Trafficking

102. During the period 2012–2016, seizures of norephedrine were reported on form D by only 12 countries; individual seizures were small and the origins mostly unknown. Of those 12 countries, only 3 reported seizures in more than two years (Australia, Philippines and Ukraine); the Philippines also reported the largest amount in that five-year period (nearly 275 kg in 2012; seized in a clandestine laboratory). Seizures reported on form D for 2016 were negligible. In 2017, only one incident was communicated through PICS; it involved a liquid containing norephedrine.

103. There were no seizures of ephedra reported on form D. However, drug treatment service providers in Georgia have noted an emerging trend in that country, involving the crude extraction and processing of an indigenous species of *Ephedra* plant into a methamphetamine-containing product that is administered by injection. The scale of the trend, of which anecdotal reports started to be received in mid-2015, is as yet unknown.[23]

(c) 1-Phenyl-2-propanone, phenylacetic acid and *alpha*-phenylacetoacetonitrile

104. P-2-P, phenylacetic acid and APAAN are precursors used in the illicit manufacture of amphetamine and methamphetamine; P-2-P is an immediate precursor of the two drugs, while phenylacetic acid and APAAN are precursors of P-2-P. Of the three substances, phenylacetic acid is the most widely traded, while trade in APAAN is almost non-existent. Although seizures of illicitly manufactured phenylacetic acid have so far been rare, seizures of P-2-P often involve illicitly manufactured P-2-P. Non-scheduled substitutes for P-2-P used in the illicit manufacture of amphetamine and methamphetamine are discussed in paragraphs 114–124 below.

Licit trade

105. Legitimate international trade in P-2-P, phenylacetic acid and APAAN differs significantly in volume, extent and the number of countries involved. Between 1 November 2016 and 1 November 2017, there were 20 planned transactions involving P-2-P, from six exporting countries to eight importing countries. As in previous years, the largest exporter was India and the largest importer was the United States. During the same period, there were three transactions involving negligible amounts of APAAN. By contrast, legitimate international trade in phenylacetic acid involved 12 exporting countries that notified 45 importing countries and territories about more than 560 planned shipments of the substance.

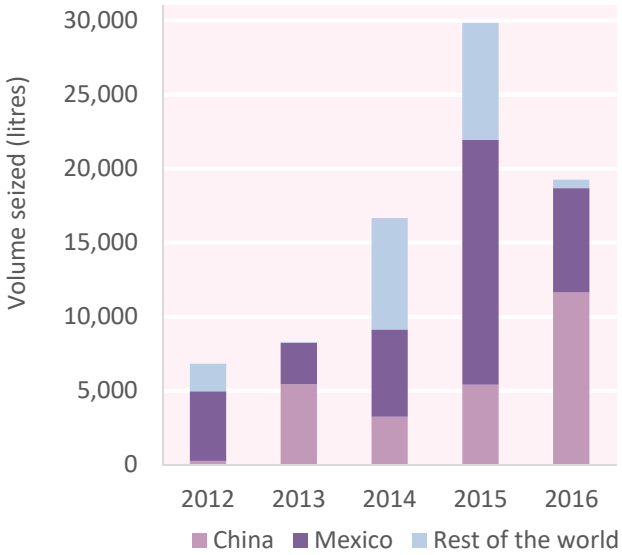
106. India reported having stopped a shipment of 24 tons of phenylacetic acid to the Syrian Arab Republic, following a request of INCB to suspend the shipment and based on the fact that the same Syrian company had already attempted to import P-2-P from India in 2014. INCB welcomes the cooperation of the authorities concerned but remains concerned that traffickers are targeting companies in the Syrian Arab Republic in order to obtain precursors of amphetamine, given that the substance is the main active ingredient in fake "captagon" tablets. There is a possibility that existing manufacturing facilities in the Syrian Arab Republic are misused to illicitly manufacture amphetamine.

107. Spain reported on form D for 2016 having stopped five shipments of phenylacetic acid, amounting to 112 kg, following objections from the authorities of the importing countries.

Trafficking

108. Eleven countries reported seizures of P-2-P on form D for 2016. The largest amounts were seized by authorities in China (more than 11,500 litres, which was more than twice the amount reported seized in 2015) and Mexico (more than 7,000 litres, which was less than half of 2015) (see figure X), followed by Ukraine (430 litres). No other country reported seizures of more than 110 litres.

Figure X. Seizures of P-2-P reported by Governments on form D, 2012–2016



109. While information on the origin of the P-2-P seized in China is not available, including information on whether the substance was illicitly manufactured or diverted from legitimate sources, reported seizures in Mexico were made at illicit laboratories, suggesting that the P-2-P had been illicitly

[23] David Otiashvili, Irma Kirtadze and Dessa Bergen-Cico, "Exploring the new phenomena of home-made extraction and injection of ephedra plant product in Georgia", *Substance Use and Misuse*, vol. 52, No. 6 (May 2017).

manufactured from various pre-precursors (see also paras. 118 and 119 below). The P-2-P seized in Ukraine was reported to have originated in the Russian Federation; other countries did not provide information about the origin of the substance or the modi operandi of the traffickers.

110. Negligible amounts of phenylacetic acid and phenylacetic acid derivatives not in Table I or Table II of the 1988 Convention were reported seized on form D for 2016 (see para. 119 below).

111. Seizures of APAAN were reported by three countries in Europe on form D. Together, the amounts seized totalled less than 600 kg, which was less than half the amount seized in 2015 and the lowest amount since 2014, when APAAN seizures were reported on form D for the first time (the substance was scheduled in Table I of the 1988 Convention in October 2014).

112. As a result of Operation "Missing links", forensic evidence on the use of APAAN in the illicit manufacture of amphetamine for fake "captagon" tablets was provided for the first time. APAAN was identified in a majority (82 per cent) of the samples containing amphetamine that were analysed (about 13 per cent of samples did not contain any amphetamine). The amphetamine in the samples analysed had been manufactured using the so-called "Leuckart method".

113. In 2017, seizures of all three substances continued to be communicated through PICS. Seizures of APAAN and P-2-P often occurred together in illicit warehouses and laboratories in the Netherlands, suggesting that APAAN may have been the precursor from which the P-2-P had been illicitly manufactured. Incidents involving P-2-P or APAAN were also communicated by the United Kingdom of Great Britain and Northern Ireland; however, they typically concerned international consignments, amounting to between 250 kg and 700 kg and originating in China, including Hong Kong. Australia communicated two incidents involving a total of 500 kg of phenylacetic acid; in one of the incidents, the substance had originated in Chile, in the other, it had originated in China.

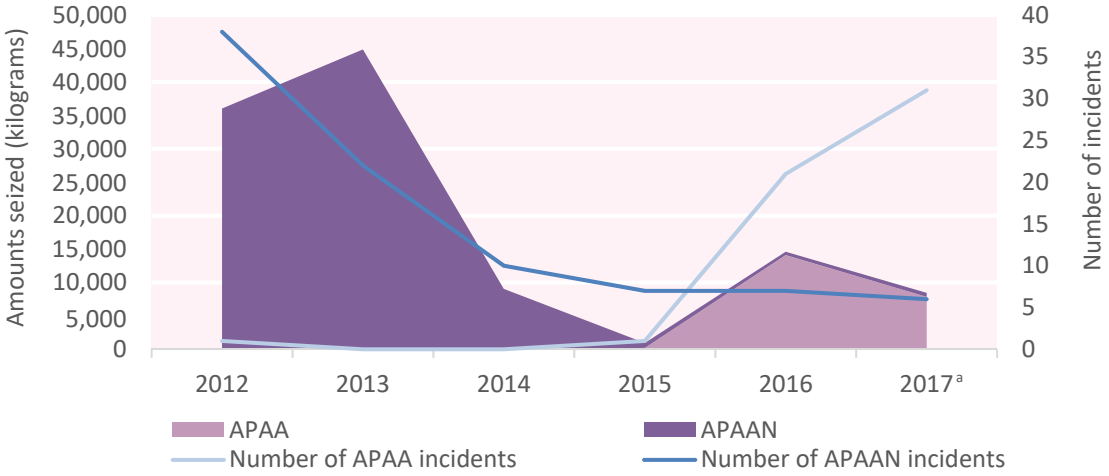
(d) Use of non-scheduled substances and other trends in the illicit manufacture of amphetamine and methamphetamine

Alpha-*phenylacetoacetamide*

114. APAA is a non-scheduled substitute chemical that has replaced APAAN after the latter was included in Table I of the 1988 Convention in October 2014. Seizures of APAA were reported for the first time on form D in 2013, by the Netherlands (75 kg). In 2016, seven European countries reported seizures that totalled almost 15 tons; where such information was provided, China was reported as the alleged origin of the substance. The majority of incidents had previously been communicated through PICS, along with relevant operational details, and a high level of such seizures, in terms of both number and amounts, continued to be made in 2017.

115. Data from PICS also illustrate the emergence of APAA in parallel with the decrease in incidents involving APAAN (see figure XI below), before such information is submitted on form D. The example of APAAN and APAA shows the value of voluntary, early sharing of information, which can contribute to building a case for coordinated international action, such as the placing of APAAN in Table I of the 1988 Convention in 2014, just two years after the first incidents were communicated through PICS.

Figure XI. Incidents involving APAAN and APAA, its non-scheduled substitute, communicated through the Precursors Incident Communication System



[a] First 10 months of 2017.

P-2-P methyl glycidic acid derivatives

116. As a result of Operation "Missing links", evidence was provided for the first time of seizures of non-scheduled methamphetamine and amphetamine "designer" precursors outside Europe. Specifically, in May and October 2016, two seizures, amounting to almost 3.25 tons of P-2-P methyl glycidic acid derivatives (sodium salt and methyl ester), were made by Lebanese authorities; both seizures were effected at the airport. Dutch authorities reported seizures of more than 3 tons of such derivatives on form D for 2016; the largest individual seizures amounted to 2,275 kg and 520 kg. All incidents had previously been communicated, in real time, through PICS. Seizures of P-2-P methyl glycidic acid derivatives were also reported on form D by Belgium.

117. P-2-P methyl glycidic acid derivatives are purpose-made chemicals that can be converted into P-2-P at an approximate ratio of about 2 to 1. **Governments are reminded once again of the possibility of traffickers approaching legitimate industry actors for customized synthesis of non-scheduled chemicals and of the need to alert relevant actors to that possibility.**

Benzaldehyde, nitroethane and 1-phenyl-2-nitropropene

118. Seizures of benzaldehyde, nitroethane and 1-phenyl-2-nitropropene, key chemicals used in the illicit manufacture of P-2-P using the so-called "nitrostyrene method", continued to be reported in 2016. Seven countries reported seizures of benzaldehyde on form D; by far the largest seizures were made in North America: Mexico reported amounts of more than 3,500 litres and the United States confirmed a record seizure of nearly 10 times that volume (33,900 litres) in August 2016. The seizure had previously been communicated through PICS. The benzaldehyde was transshipping the United States from India, destined for Veracruz, Mexico. Owing to no notification being made prior to the shipment arriving in the United States, previous instances of a failure to file notification and the use of the chemical in the manufacture of methamphetamine, the shipment was seized.

119. According to the forensic profiling programme of the United States Drug Enforcement Administration Special Testing and Research Laboratory, the proportion of the methamphetamine seized inside the United States and at the country's border with Mexico that were manufactured using the nitrostyrene method increased from 51 per cent in the first six months of 2016 to 71 per cent in the first six months of 2017. Seizures of esters of phenylacetic acid, which had been the preferred starting materials for P-2-P-based methods for the illicit manufacture of methamphetamine, in particular in Mexico, declined dramatically from more than 70 tons in 2012 to less than 20 kg in 2016.

120. A seizure of 225 litres of benzaldehyde was reported by Nigeria, in connection with an illicit methamphetamine laboratory dismantled in the country in March 2016.[24] Small seizures of benzaldehyde were reported by four European countries. Seizures of nitroethane were reported on form D by the United States (700 litres) and Germany and Spain (about 20 litres in one incident in each country).

121. When benzaldehyde is reacted with nitroethane, the resulting product is 1-phenyl-2-nitropropene, which can be further converted into P-2-P. The substance is an important intermediary in both licit and illicit trade. Belgium reported seizures amounting to 654 kg in 2016, mostly destined for Italy and with China as the alleged origin; the seizures had previously been communicated through PICS, along with relevant operational details. Small seizures of 1-phenyl-2-nitropropene were also reported by Estonia and Finland. Seizures of the substance continued in 2017, with small amounts seized in Lebanon and the Netherlands.

Other chemicals not under international control that were seized in relation to the clandestine manufacture of amphetamine or methamphetamine

122. The chemicals most frequently reported on form D for 2016 were those associated with ephedrines-based methods of illicit methamphetamine manufacture, such as the so-called "Nagai method" and modifications thereof. They included iodine and red phosphorous and their alternate chemicals, such as hydriodic acid and hypophosphorous acid. Countries that reported seizing one or more of those chemicals included Canada, Czechia, Germany, the Netherlands, New Zealand, Slovakia and the United States. China reported seizures of 420 kg of thionyl chloride, a chemical indicative of the so-called "Emde method" of illicit methamphetamine manufacture, in which chloroephedrine or chloropseudoephedrine are formed as chemical intermediaries. As in previous years, for most of the above chemicals, information about the origin was either not provided or not available.

123. Incidents involving non-scheduled chemicals that can be used in the illicit manufacture of APAAN and phenylacetic acid, and subsequently P-2-P, were reported by Greece, Mexico and the United States. Specifically, Greece stopped an import of 5 tons of benzyl cyanide from China, on suspicion of its use in illicit drug or precursor manufacture; investigations are still ongoing. The United States reported seizures of sodium cyanide amounting to almost 1 ton, and Mexico provided information about incidents involving unspecified amounts of benzyl

[24] E/INCB/2016/4, para. 101.

chloride in illicit methamphetamine laboratories. Information about seizures of benzyl cyanide was also communicated in 2017.

124. Dutch authorities reported a seizure of 100 kg of *N*-methoxy-*N*-methyl-2-phenylacetamide, an unusual precursor of P-2-P, which had previously been communicated through PICS. The shipments was addressed to a newly established sole proprietorship. Unlike most other non-scheduled P-2-P precursors, the substance is a liquid, and conversion to P-2-P requires a certain level of skill. The Netherlands was also identified as the destination for a consignment of 50 kg of 2-phenylacetamide, a precursor of phenylacetic acid, that had originated in China and was seized in Belgium.

125. Tartaric acid, a chemical that is used to increase the potency of methamphetamine manufactured using P-2-P-based methods, continued to be seized in Mexico (almost 6 tons). Nigeria reported seizures of 77 kg, which were made in connection with the first industrial-scale P-2-P-based methamphetamine laboratory dismantled in that country, in March 2016. Seizures of the substance were also reported by the Netherlands (63 kg) and Malaysia (2,800 kg), the latter in connection with illicit ketamine manufacture (see para. 218 below).

126. Seizures of caffeine, an adulterant known to be used in connection with the illicit manufacture of methamphetamine, have been regularly reported on form D. Over the years, the largest amounts were reported by countries in East and South-East Asia, where the substance is controlled in a number of countries. Myanmar reported seizures of nearly 20 tons of caffeine in 2016.

2. Substances used in the illicit manufacture of 3,4-methylenedioxymethamphetamine and its analogues

127. Despite the apparent resurgence of MDMA in highly potent "ecstasy" tablets and in crystalline or powder form, with a few exceptions, reported seizures of its key precursors remain negligible. This applies to all four MDMA precursors under international control: the immediate precursor, 3,4-MDP-2-P, and its precursors piperonal, safrole and isosafrole (see annex IV). Seizures of 3,4-MDP-2-P may also have included cases in which the substance had been illicitly manufactured from non-scheduled precursors (see also paras. 137 and 138 below).

(a) 3,4-Methylenedioxyphenyl-2-propanone and piperonal

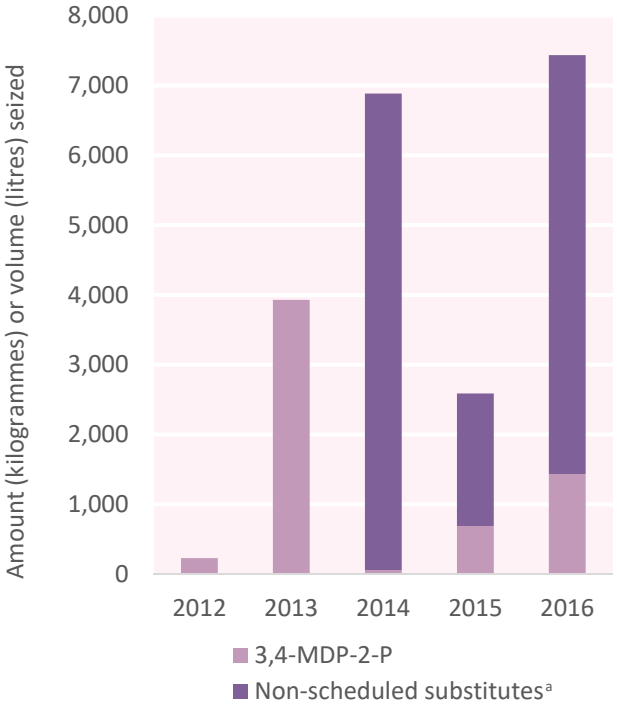
Licit trade

128. Piperonal is the most widely traded of the four MDMA chemicals, while international trade in 3,4-MDP-2-P is nearly non-existent. Between 1 November 2016 and 1 November 2017, 16 exporting countries and territories notified the authorities of 45 importing countries and territories of almost 610 planned exports of piperonal, amounting to a total of more than 2.6 tons. There was only one pre-export notification for 3,4-MDP-2-P, involving a negligible amount.

Trafficking

129. The amounts of 3,4-MDP-2-P reported seized on form D for 2016 remained small compared with the amounts of non-scheduled substitute chemicals reported seized (see figure XII, and paras. 137 and 138 below). Only France (about 890 litres), China (about 375 litres) and the Netherlands (nearly 150 litres) reported volumes above 25 litres. As in the past and with other precursors of amphetamine-type stimulants, seizures in the Netherlands were typically made in warehouses and also involved other chemicals needed for MDMA manufacture, or in clandestine laboratories where there were indications that the substance was manufactured in those laboratories.

Figure XII. Seizures of 3,4-MDP-2-P and non-scheduled 3,4-MDP-2-P substitute chemicals[a] reported on form D, 2012–2016



[a] 3,4-MDP-2-P methyl glycidic acid methyl ester and sodium salt and 3,4-(methylenedioxy)phenylacetonitrile

Note: Reporting seizures of non-scheduled chemicals on form D is strongly encouraged, but not mandatory.

130. The majority of incidents reported on form D had already been communicated through PICS in 2016. In addition, PICS data show that incidents involving 3,4-MDP-2-P continued in

2017, with the majority communicated by the PICS focal point in the Netherlands. However, in 2017, incidents also occurred in Bulgaria, Canada and the United Kingdom. While the amounts in most instances were below 200 litres and incidents occurred in warehouses or laboratories and no information on origin was provided, there were three significant incidents, in Bulgaria, Canada and the Netherlands, involving amounts of between 4,000 and 5,000 litres each. Two of those incidents actually involved the same case, in which the substance allegedly originated in the Lao People's Democratic Republic, transited Viet Nam and Bulgaria, and was destined for the Netherlands. At the time of finalization of the present report, it has not been possible to determine whether the Lao People's Democratic Republic was indeed the source of the chemical. **INCB reminds all countries that investigations into seizures and the sharing of information about modi operandi with INCB are critical elements of international precursor control and help identify points of diversion and prevent future diversions.**

131. With the exception of the United States, where about 290 litres were seized, seizures of piperonal reported on form D for 2016 were of negligible amounts, and no significant seizures of the substance were communicated through PICS in 2016 or 2017. Since 2012, the total amount of piperonal seized and reported on form D has amounted to just above 2,000 kg, including six seizures amounting to 1,400 kg that were reported by Spain in 2013.

(b) Safrole, safrole-rich oils and isosafrole

Licit trade

132. During the reporting period, seven exporting countries sent 18 pre-export notifications for safrole and safrole-rich oils through PEN Online to nine importing countries. Those notifications concerned a total volume of more than 3,800 litres; only a small portion of trade in safrole was in the form of safrole-rich oils. There were no pre-export notifications for isosafrole.

Trafficking

133. Seizures of safrole and safrole-rich oils reported through form D in recent years have usually been of small amounts, rarely exceeding 200 litres per country and often less than 15 litres. Since 2012, only Canada (2,025 litres in 2012), the Netherlands (13,825 litres in 2013) and Namibia (2,100 litres in 2016) have reported seizing safrole and safrole-rich oils in amounts larger than 2,000 litres. The country reporting seizures of safrole most regularly on form D, albeit in small amounts, is Australia, where the substance has been the predominant MDMA precursor detected at the border.

134. In the last five years, only Australia, Namibia, the Netherlands and the United States reported seizures of isosafrole on form D; with the exception of seizures in Namibia in 2014 (2,100 litres, the circumstances of which INCB has been unable to clarify) the amounts were negligible. In 2016, there were no reports of suspicious or stopped shipments involving isosafrole, safrole or safrole-rich oils.

135. Seizures of safrole and safrole-rich oils were also communicated by the Netherlands through PICS in the first 10 months of 2017; however, the total volume seized did not exceed 100 litres.

136. It is difficult to assess whether the low frequency of seizures of safrole and safrole-rich oils, and the small amounts seized, is a reporting issue, or whether the widespread availability of non-scheduled chemicals for the illicit manufacture of MDMA and its analogues (see paras. 137 and 138 below) has meant that such chemicals have largely replaced them. In East and South-East Asia, INCB is aware that seizures allegedly involving safrole or safrole-rich oils, in amounts significantly larger than those reported globally on form D in the last two years, were made in Cambodia and possibly in the Lao People's Democratic Republic.[25] However, neither country subsequently reported any of those seizures on form D, although they were reported to other forums.

(c) Use of non-scheduled substances and other trends in the illicit manufacture of 3,4-methylenedioxymethamphetamine and its analogues

137. Incidents involving pre-precursors for MDMA and its analogues that are not listed in Table I or Table II of the 1988 Convention and were brought to the attention of INCB show significant year-on-year fluctuation, which is likely a reflection of the fact that the reporting of non-scheduled substances is not mandatory. Nevertheless, when incidents are communicated through PICS, a trend can be established in real time, while data on form D for a given year are only submitted to INCB on 30 June of the following year.

138. In the period 2016–2017, eight countries reported such incidents. The seizures occurred mostly in Europe and involved substances that are not usually available off the shelf ("designer" precursors), including derivatives (sodium salt and methyl ester) of 3,4-MDP-2-P methyl glycidic acid, 3,4-(methylenedioxy)phenylacetonitrile and 1-(3,4-methylenedioxyphenyl)-2-nitropropene; all substances are included in the INCB limited international special surveillance list of non-scheduled substances. Operational details of those seizures were usually shared through PICS. Most trafficking incidents occurred at airports and seaports and the substances

[25] E/INCB/2015/4, paras. 99 and 101.

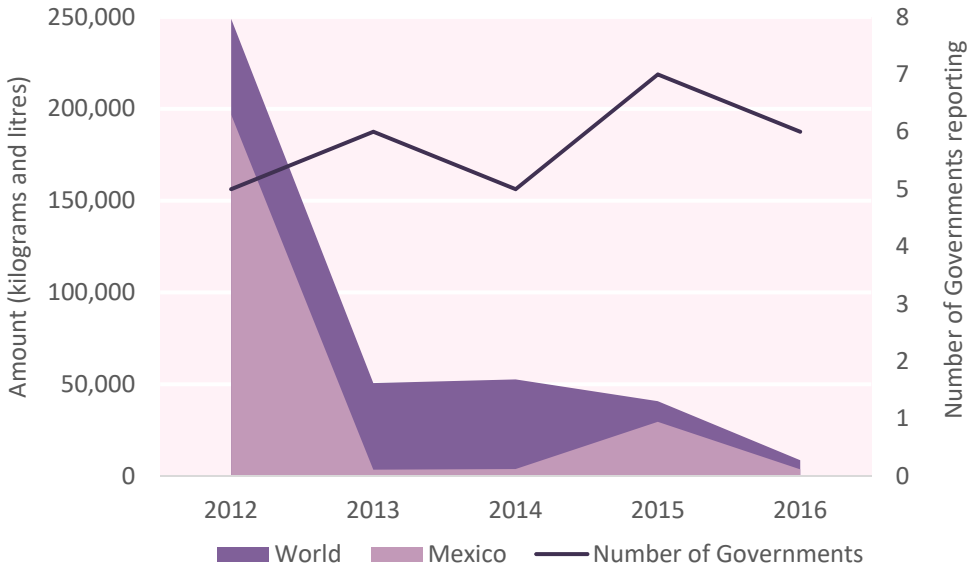
were often mislabelled or misdeclared. Where information was available, the origin was listed as China, including Hong Kong. France seized a shipment of more than 1 ton en route from Spain. Canada reported seizures of helional on form D for 2016, which was the third such incident, following others in 2014 and 2015; however, no further details were provided.

3. Other trends in the illicit manufacture of amphetamine-type stimulants

Methylamine

139. Seizures of methylamine (monomethylamine) continued to be reported. In 2016, six countries reported such seizures, with the Netherlands and Mexico, in that order, together accounting for 99 per cent of all seizures, by weight. Seizures of the substance were made every year during the period 2012–2016 (see figure XIII), thus illustrating its central role in the illicit manufacture of methamphetamine, MDMA and a number of new psychoactive substances, especially synthetic cathinones; it is also required in the illicit manufacture of ephedrine, by fermentation from benzaldehyde and from 2-bromopropiophenone, which is the method predominantly used in illicit ephedrine laboratories in China.

Figure XIII. Seizures of methylamine reported by Governments on form D, 2012–2016



140. Although Mexico accounted for a major proportion of global methylamine seizures in 2016, the amounts seized were only a fraction of what was seized during the period 2010–2012. At the same time, in 2016, Mexican authorities seized record amounts of formaldehyde (more than 14,000 litres) and ammonium chloride (almost 18,000 kg), two chemicals from which methylamine may be illicitly produced.[26] In June 2017, Mexican authorities seized more than 2.7 tons and 7,000 litres of ammonium chloride, partly in a mixture, from a single illicit laboratory.

Hydrogen gas

141. For the second consecutive year, Germany reported on form D thefts of compressed hydrogen gas, which can be used as a reducing agent in the illicit manufacture of a number of synthetic drugs. Thefts in 2016 totalled 18,720 litres, a volume that was contained in almost 385 gas cylinders, stolen in 10 incidents. In all cases, the empty cylinders were later found in the Netherlands and the contents were presumed to have been used in the illicit manufacture of amphetamine. The Netherlands has reported seizures of hydrogen gas since 2002. In 2016, the country reported having seized 4,150 kg of hydrogen gas in nine incidents, mostly in clandestine amphetamine or MDMA laboratories or in associated warehouses; seizures continued in 2017.

Other substances not under international control

142. Masked "designer" precursors such as the methyl glycidic acid derivatives of P-2-P and 3,4-MDP-2-P (see paras. 116 and 117 above), which are not under international control or under national control in most countries but can be easily converted into the corresponding controlled precursor, have been encountered for some time. In 2016, the Netherlands

[26] Ammonium chloride may also be used in the illicit manufacture of heroin.

reported a number of masked derivatives of amphetamine-type stimulants end products, namely 875 kg of *N*-methoxycarbonyl-MDA and 123 kg of *N-tert*-butoxycarbonyl-MDMA (*t*-BOC-MDMA). Although the substances can technically be considered precursors because they can be converted into the corresponding amphetamine-type stimulant end product, they first require the manufacture of the end product, which is subsequently further converted into a non-scheduled derivative to disguise its identity and minimize the risks associated with drug smuggling. INCB is aware that the substance was first identified in Australia in 2015 and that the corresponding methamphetamine derivative (*N-tert*-butoxycarbonyl-methamphetamine, or *t*-BOC-methamphetamine) was also identified in China and, in January 2017, in New Zealand, where it was contained in a consignment from Hong Kong, China. Project Prism and Project Cohesion focal points were alerted to that new development in February 2017.

B. Substances used in the illicit manufacture of cocaine

1. Potassium permanganate

143. Potassium permanganate is an oxidizing agent used in the illicit manufacture of cocaine. In 2015, a minimum of about 225 tons of the substance was required to produce 1,125 tons of cocaine, which was the estimated total global illicit cocaine manufacture in that year.[27] Potassium permanganate is also one of the most widely internationally traded substances in Table I of the 1988 Convention. However, coca-producing countries only account for a limited proportion of that trade. At the same time, a significant proportion of global seizures of potassium permanganate continues to be reported by those countries. Given the high level of oxidation of seized cocaine,[28] diversion from domestic distribution channels and subsequent smuggling into illicit channels, and illicit manufacture of potassium permanganate remain the major sources of the substance for illicit purposes.

Licit trade

144. Between 1 November 2016 and 1 November 2017, the authorities of 32 exporting countries sent almost 1,500 pre-export notifications, relating to a total of almost 25,000 tons of potassium permanganate, to the authorities in 119 importing countries. The proportion of that trade involving the three coca-producing countries in South America — Bolivia (Plurinational State of), Colombia and Peru — remained small, accounting for less than 1 per cent (slightly less than 200 tons) of the amount of potassium permanganate for which notifications were sent through the PEN Online system. The imports by other countries in South America amounted to 1,325 tons of the substance; none of those countries exported or re-exported potassium permanganate in any significant amount.

145. Five countries, both exporting and importing countries, reported on form D for 2016 that they had stopped shipments of potassium permanganate, usually for administrative reasons, in particular the lack of an import authorization. The largest amounts were reported by Pakistan, where two imports amounting to about 10 tons were stopped, and Spain, where nine exports to six different destination countries, amounting to more than 30 tons, were stopped; smaller imports were stopped by Jordan, Madagascar and the United Republic of Tanzania.

Trafficking

146. Seizures of potassium permanganate totalling 585 tons were reported on form D for 2016 by 16 countries and territories. Colombia accounted for more than 99 per cent of all the amount reported seized. With the exception of the seizures in the Plurinational State of Bolivia, which amounted to about 2 tons, and unlike in 2015, when significant seizures of potassium permanganate were also reported by countries outside South America, seizures in all other countries together did not exceed 100 kg in 2016 (see figure XIV).

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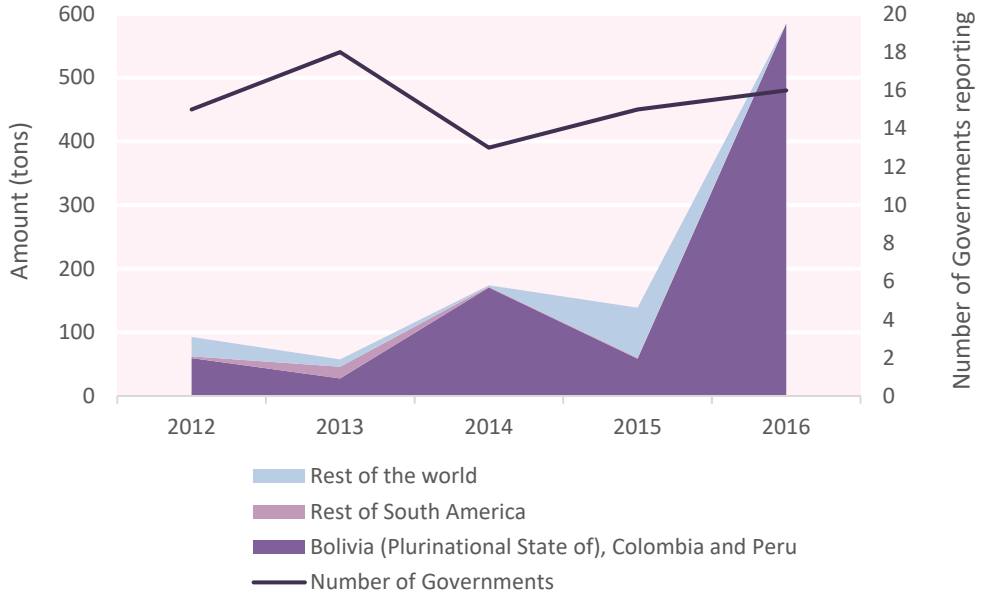
[27] Based on the 2015 estimate by UNODC of total potential cocaine manufacture worldwide (at 100 per cent purity), as published in the *World Drug Report 2017: Market Analysis of Plant-based Drugs — Opiates, Cocaine, Cannabis* (United Nations publication, Sales No. E.17.XI.9), p. 26), and using the approximate low-end potassium permanganate quantities contained in annex IV to the present report.

[28] According to recent results from the Cocaine Signature Program of the United States Drug Enforcement Administration Special Testing and Research Laboratory, 100 per cent of cocaine samples analysed were highly oxidized or reoxidized.

Figure XIV. Seizures of potassium permanganate reported by Governments on form D, 2012–2016



147. There were 318 incidents of potassium permanganate seizures in Colombia; the seized substance originated in the country. However, as Colombia also continued to seize non-scheduled precursors of potassium permanganate in 2016 (see para. 154 below), some of the seized potassium permanganate may have been illicitly manufactured.

148. According to the Colombian authorities,[29] the number of laboratories dismantled in 2016 was the largest in 14 years, and increased by 24 per cent compared with 2015, mainly because of a significant increase in the number of cocaine extraction laboratories that were dismantled. By contrast, 229 crystallization laboratories (where the final conversion into cocaine hydrochloride is conducted) were dismantled, slightly below the number dismantled a year earlier (236); no potassium permanganate laboratories were reported dismantled in 2016. Colombian authorities noted an increased sophistication in illicit cocaine manufacture, an optimization of precursor inputs, and shorter manufacturing cycles. At the same time, they noted the increasing involvement of foreign criminal organizations with the resources to purchase coca leaves, precursors and the necessary equipment.

149. In the Plurinational State of Bolivia, the number of crystallization laboratories that were dismantled declined slightly, from 73 in 2015 to 68 in 2016; 57 laboratories for the recycling of solvents were dismantled, compared with 62 in 2015.[30] As at the finalization of the present report, similar data were not available for Peru.

150. Seizures of potassium permanganate continued to be communicated through PICS in 2017. According to media reports, at the end of April 2017, Honduran armed forces detected a coca plantation, the first in the country, and destroyed about 12,000 coca plants. Adjacent to that field, authorities also detected a basic laboratory facility and unspecified precursor chemicals for processing cocaine from coca leaf to the final product, the first such facility in the country. As that incident, if confirmed, would provide further evidence of illicit cocaine manufacture, processing and reprocessing, and related precursor trafficking, in countries outside the traditional coca-producing regions, INCB has sought clarification from the Honduran authorities; as at the finalization of the present report no reply had been received.

151. As the potassium permanganate seized in South American countries continued to have come from domestic sources, **INCB calls on the authorities in those countries to review their domestic control mechanisms, in particular the requirements to declare the end use of the substance, as well as any thresholds that may be exploited by traffickers. The INCB Precursors Task Force stands ready to support any activities in this area.**

2. Use of non-scheduled substances and other trends in the illicit manufacture of cocaine

152. As in previous years, seizures of significant amounts of a variety of chemicals not under international control were reported on form D for 2016 by the authorities of a number of

[29] UNODC and Government of Colombia, *Colombia: Monitoreo de territorios afectados por cultivos ilícitos 2016* (Bogota, July 2017).

[30] UNODC and Government of the Plurinational State of Bolivia, *Estado Plurinacional de Bolivia: Monitoreo de Cultivos de Coca 2016* (La Paz, 2017).

countries, especially the three coca-producing countries, other countries in South America, and Spain. The chemicals included common acids and bases, oxidizing agents and solvents used for the extraction of cocaine base from coca leaves and for the conversion of cocaine base into cocaine hydrochloride; they also included precursors of and substitutes for potassium permanganate.

153. Several of those chemicals are known to have been used in illicit cocaine manufacture for many years; they are under national control in the countries concerned and, therefore, seizures of them are reported on form D. In 2016, Colombia reported seizures of 24 of the 25 substances that are under national (but not international) control, the Plurinational State of Bolivia reported seizures of 23 substances, and Peru reported seizures of 26 substances. Where such information was provided, in the majority of cases, the chemicals were reported to have come from domestic sources.

Precursors of and substitutes for potassium permanganate

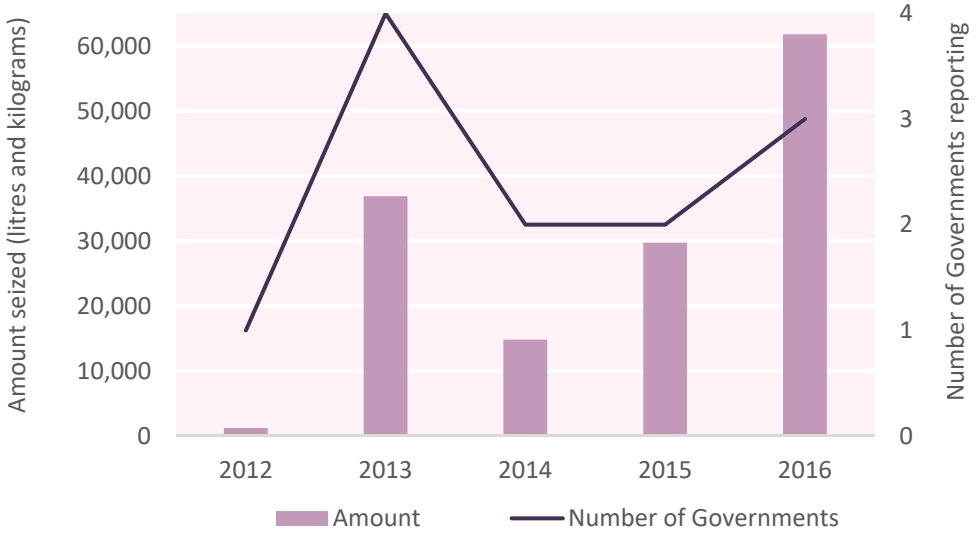
154. Reasons for the lack of reported diversions of potassium permanganate in South America might be the illicit manufacture of that substance or its replacement by non-scheduled substitute chemicals. While Colombian authorities have reported seizures of significant, although fluctuating, amounts of different potassium permanganate precursors in the past, the Plurinational State of Bolivia reported seizures for the first time in 2016. Colombian authorities seized more than 9,500 litres of manganese dioxide solution and 711 kg of potassium manganate. However, they did not report the dismantling of any potassium permanganate laboratories in 2016;[31] over the previous three years, they had reported increasing numbers of such facilities (3 in 2013, 9 in 2014 and 12 in 2015).

155. Authorities in the Plurinational State of Bolivia reported seizures of 260 kg of sodium permanganate, a direct substitute for potassium permanganate, in three illicit cocaine laboratory incidents. They were the first ever reported seizures of that substance on form D. To the knowledge of INCB, sodium permanganate is under control in only one country, the United States, where it has been controlled since December 2006.

156. The Plurinational State of Bolivia also reported seven seizures of nitric acid, amounting to 845 litres, from illicit cocaine laboratories. Nitric acid can be used as an oxidizing agent in the first stages of the cocaine manufacturing process. Seizures of the substance have also been regularly reported by authorities in Peru, in amounts ranging from 1.8 tons in 2013 to 10 tons in 2016.

157. Bolivia (Plurinational State of) and Peru also accounted for the largest amount of seized sodium hypochlorite, another substitute for potassium permanganate in the purification of coca paste. In 2016, the two countries together accounted for more than 95 per cent of the total amounts reported seized, with the remainder reported by Argentina; amounts had increased for the third consecutive year (see figure XV). Seizures of sodium hypochlorite have never been reported by Colombia.

Figure XV. Seizures of sodium hypochlorite reported by Governments on form D, 2012–2016



[31] UNODC and Government of Colombia, *Colombia: Monitoreo de territorios afectados por cultivos ilícitos 2016* (Bogota, July 2017), p. 151.

Other substances not under international control, and trends in the illicit manufacture of cocaine

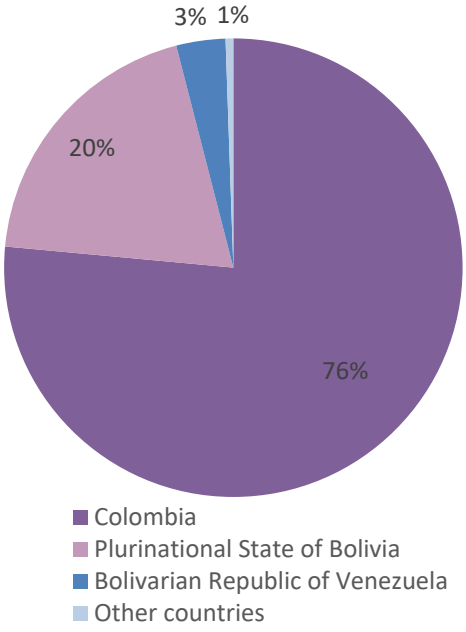
158. In addition to potassium permanganate, several other chemicals used in illicit cocaine processing are reported to be illicitly manufactured or substituted by non-scheduled chemicals. They include hydrochloric acid, sulphuric acid, solvents in Table II of the 1988 Convention (discussed in section E below) and ammonia.

159. Seizures of urea are reported on form D each year. The chemical is used to generate ammonia during the extraction step from coca leaves; it may also be used as fertilizer in coca bush cultivation. Colombia reported seizing massive amounts of urea in 2013 and 2014 but has not reported any seizures since. By contrast, the amounts seized in the Bolivarian Republic of Venezuela, which reported seizing the second-largest amounts over the period 2012–2016, nearly doubled compared with 2015, totalling almost 280 tons in 2016. In Peru and the Plurinational State of Bolivia, 21.5 tons and 200 kg, respectively, were seized.

160. Governments also report on form D seizures of a number of chemicals that are used for improving the efficiency of cocaine processing, for example, by reducing the volume of chemicals needed and/or the processing time. One development in recent years has been the standardization of the oxidation level of cocaine base sourced from different extraction laboratories, prior to further processing.

161. Sodium metabisulfite, a reducing agent, is used to that end. During the period 2012–2016, Colombia reported seizing the largest amounts of sodium metabisulfite (243 tons, or 76 per cent of all sodium metabisulfite seized in that period, largely as the result of an unusually large amount seized in 2015). In terms of the amounts of sodium metabisulfite seized, Colombia was followed by the Plurinational State of Bolivia (62 tons, or 20 per cent) and the Bolivarian Republic of Venezuela (11 tons, or 3 per cent) (see figure XVI). Seizures of notable amounts of sodium metabisulfite outside South America were reported on form D for 2016 and through PICS in 2017 by the authorities of the Netherlands.

Figure XVI. Proportion of sodium metabisulfite seizures reported by Governments on form D, 2012–2016



162. Seizures of calcium chloride, a drying agent for solvents, continued to be reported on form D by the three coca-producing countries, other countries in South America, and the Netherlands and Spain. In 2016, seizures of amounts larger than 1 ton were reported, in descending order, by the authorities of Colombia (nearly 70 tons), Ecuador (24 tons, up from 94 kg in 2015), the Plurinational State of Bolivia (8.1 tons), Peru (nearly 2.4 tons) and the Netherlands (slightly more than 1 ton, up from 50 kg in 2015). Information on the origin of calcium chloride was usually not provided; where it was, it was recorded as being the country in which the seizure took place.

163. A number of cutting agents (adulterants and diluents) are known to be added increasingly frequently to cocaine hydrochloride during the crystallization process itself, in accordance with traffickers' requests. According to information from the Cocaine Signature Program of the United States Drug Enforcement Administration, 87 per cent of uncut cocaine seized in the United States contained phenyltetrahydroimidazothiazole (i.e., levamisole, dexamisole or tetramisole). The Plurinational State of Bolivia reported seizures of 100 kg of the substance in 2016; the country also reported having seized nearly 580 kg of phenacetin.

C. Substances used in the illicit manufacture of heroin

1. Acetic anhydride

164. Acetic anhydride is one of the most widely traded substances in Table I of the 1988 Convention and it is the key

chemical used in the illicit manufacture of heroin. It is also required in the manufacture of P-2-P from phenylacetic acid and its derivatives, and hence in the illicit manufacture of amphetamine and methamphetamine (see annex IV), although this may be a regional phenomenon.

165. In recent years, attempts by traffickers to divert acetic anhydride from international trade were rare, with the exception of attempts during the period 2008–2013 to divert the substance destined for Iraq. Most diversions of acetic anhydride were believed to have occurred at the domestic distribution level, including within the European Union internal market during the period 2008–2011. That situation has changed significantly since the beginning of 2016, when the Board noted a substantial worldwide increase in incidents involving acetic anhydride.

166. Those incidents included a whole range of activities, such as: (a) cross-border trafficking and seizures of acetic anhydride; (b) attempts to divert the substance from domestic and international distribution channels (in particular from the European Union internal market); (c) suspicious requests for supplies of acetic anhydride reported to the national competent authorities by private sector companies in the framework of voluntary cooperation agreements; and (d) suspicious requests for supplies of acetic anhydride posted on trading platforms on the common web ("clear web").

167. INCB estimates that, between January 2016 and October 2017, the amount of acetic anhydride seized or objected to through the PEN Online system because of suspected diversion attempts could satisfy traffickers' needs for the substance for between one and three and a half years of potential global illicit heroin manufacture.[32]

168. Apart from the use and stockpiling of acetic anhydride for the illicit manufacture of heroin (and perhaps, on a smaller scale, of P-2-P), the reasons for the increased demand for the substance remain unknown. They may include the financing of illicit activities by profits derived from precursor trafficking and/or illicit manufacture of drugs, or utilization of the substance in the manufacture of explosives.

169. Overall, the number of incidents involving acetic anhydride during the period 2016–2017 was the highest in more than two decades, indicating that there is currently high demand for the substance.

Licit trade

170. During the reporting period, authorities of 25 exporting countries and territories used the PEN Online system to provide over 1,700 pre-export notifications regarding shipments of acetic anhydride. The shipments were destined for 90 importing countries and territories and involved a total of 422 million litres of acetic anhydride.[33] Of those shipments, about 15 per cent (257 shipments) were objected to by the authorities of the importing countries, mostly for administrative reasons or in some cases because of suspected attempts to divert the substance (see paras. 171–173 below).

171. In April and November 2016, Pakistani authorities objected, through PEN Online, to the delivery of two shipments of acetic anhydride, totalling 26,500 litres, from China, because the importing companies were not authorized to import the substance into the country. In November 2016, Iraqi authorities requested their Chinese counterparts to suspend the export of a consignment of about 240,000 litres (259 tons), destined for an unauthorized importer in Baghdad. In December 2016, Afghan authorities objected to, through PEN Online, a proposed delivery of more than 108,000 litres (117 tons) of acetic anhydride from China. The shipment was destined for an Afghan company that could not be located in the country. Moreover, the Chinese exporter was suspected to be the source of acetic anhydride seized in Pakistan earlier in the year. **INCB wishes to remind all Governments that the import of acetic anhydride into Afghanistan is prohibited**.

172. Between November 2016 and October 2017, the authorities of the United Arab Emirates objected to six shipments of acetic anhydride from China, Poland and the United States, amounting to about 103,000 litres (111 tons). Of those six shipments, three were destined for a company that had previously been investigated in relation to a seizure of a sizeable amount of glacial acetic acid, which was suspected to be used later as a cover load for acetic anhydride trafficking.

173. In the first 10 months of 2017, further unsuccessful attempts, stopped through PEN Online, were made to import large amounts of acetic anhydride into Azerbaijan from Germany (15,000 litres) and into Kyrgyzstan from the Netherlands (10,000 litres). The latter case is believed to be linked to another investigation in the country, involving a suspected attempted diversion of ergotamine (see para. 195 below).

174. Another source of information that appears to indicate demand for acetic anhydride is the Internet, namely online

[32] This assumes that potential global illicit heroin manufacture is maintained at the 2016 level of an estimated 448 tons of heroin, which corresponds to a need of between 450,000 and 1.1 million litres of acetic anhydride, at a ratio of 1 to 2.5 (see annex IV).

[33] This does not include trade among the States members of the European Union.

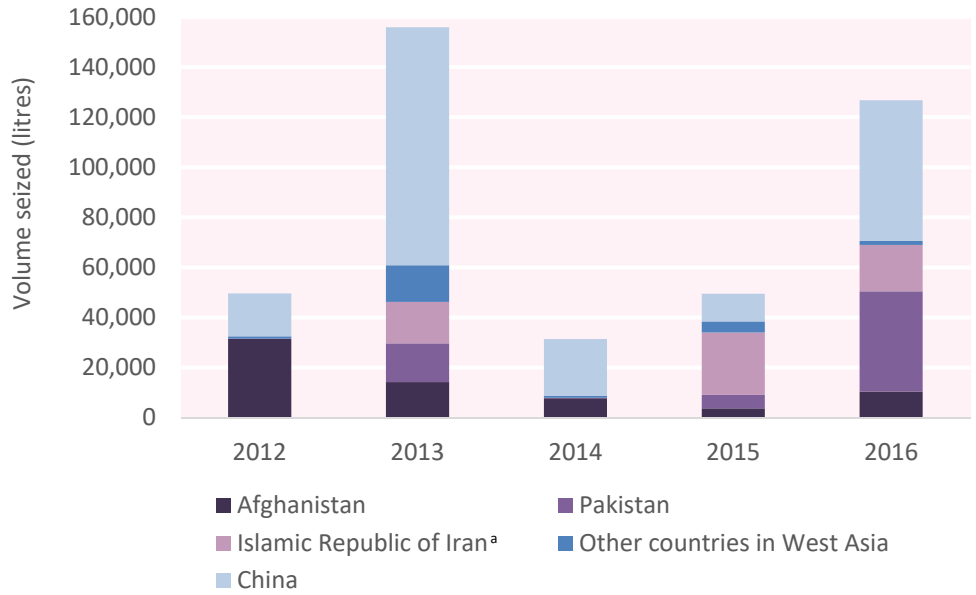
trading platforms (see also chapter IV of the present report). Since 2016, an increased number of suspicious requests for sizeable amounts of acetic anhydride have been posted on some online trading platforms. Such requests are placed by persons or companies claiming to be located either in countries that have indicated no or limited legitimate requirements for acetic anhydride in the past or in countries recently targeted by traffickers. The requests for supplies of the substance have ranged from one-time shipments of several hundreds of litres to monthly supplies of container-sized shipments. Taken together, the quantities of acetic anhydride requested through online trading platforms amounted to between several tons and a few hundreds of tons per year per country. For example, since November 2016, there have been more than 20 requests for acetic anhydride, amounting to at least 180 tons, purportedly needed in Afghanistan. It is not, however, clear how many of those requests have actually been fulfilled by legitimate traders, who might have not been aware that they were targeted by acetic anhydride traffickers.

Trafficking

175. In 2016, 16 countries reported seizures of acetic anhydride, amounting to more than 116,000 litres. That was almost four times the amount seized and reported by 18 Governments on form D for 2015. The largest amount was reported by China (more than 56,000 litres), followed by Pakistan (40,000 litres), Afghanistan (almost 10,500 litres), Mexico and Peru (nearly 3,000 litres each) and India (nearly 2,500 litres). Seizures of more than 1,000 litres were also reported by Turkey (more than 1,500 litres).

176. Although it is the second-largest opium-producing country,[34] with the potential to illicitly manufacture 70 tons of heroin, an amount that would require approximately 122,000 litres of acetic anhydride, Myanmar reported seizures of only 60 litres on form D for 2015 and none in 2016. Acetic anhydride seizures reported by Mexico, of about 3,000 litres, accounted for just 3 per cent of the estimated 87,500 litres required to satisfy the needs for the potential manufacture of about 50 tons of heroin in the country.[35]

Figure XVII. Seizures of acetic anhydride reported by Governments of countries in West Asia and by the Government of China on form D, 2012–2016



[a] Seizures in the Islamic Republic of Iran were not reported on form D but in national reports; for 2012 and 2014, no seizure data for acetic anhydride are available for that country.

177. The year-on-year decline in seizures of acetic anhydride in Afghanistan stopped in 2016, when the seized volume almost tripled compared with 2015, from 3,760 litres to 10,440 litres. Afghan authorities had in the past identified Iran (Islamic Republic of) and Pakistan as entry points for acetic anhydride into Afghan territory: over the 2012–2016 period, those two countries accounted for 90 per cent and 10 per cent, respectively, of all reported seizures of acetic anhydride entering Afghanistan.

[34] Based on the 2015 estimate of 55,500 ha under opium poppy cultivation, as no estimate of the area in Myanmar in 2016 is available (*World Drug Report 2017: Market Analysis of Plant-based Drugs*, p. 13).

[35] Assuming that all opium produced is converted into heroin using a conversion ratio of opium to heroin (of unknown purity) of 10 to 1.

178. In 2017, the amounts of acetic anhydride seized in Afghanistan increased even further. Through PICS, Afghanistan communicated 13 seizures, amounting to 37,650 litres. The two largest seizures involved 16,140 litres and 15,360 litres of acetic anhydride; in both instances the substance was smuggled into the country through the Islamic Republic of Iran in containers purportedly loaded with barrels containing motor oil. Another shipment of acetic anhydride, which was seized in 2017, amounted to almost 3,000 litres; it is possible that it originated in the European Union and transited the Islamic Republic of Iran.

179. The black market price of acetic anhydride in Afghanistan significantly increased in 2017, according to the country's Ministry of Counter Narcotics, and peaked in August 2017 with a range of $145 to $711 per litre, depending on the perceived quality and/or origin of the substance (prices ranged from $146 to $236 in August 2016).[36] Officials from the Counter Narcotics Police of Afghanistan estimated an even higher price, of between $1,000 and $1,250 per litre.

180. Several countries, including Azerbaijan, Bulgaria, Iran (Islamic Republic of), Iraq, Kyrgyzstan, Serbia, Turkey and the United Republic of Tanzania, which are reported as transit points for heroin trafficking, have also been involved in precursor-related investigations. That might indicate that the routes used for trafficking in heroin are also used in the opposite direction for trafficking in acetic anhydride.

181. Iranian authorities seized two shipments of acetic anhydride that were transiting the country, amounting to 18,520 litres (20 tons), in August and in September 2016.[37] The two seizures had also been communicated through PICS, together with relevant operational details, but once again they were not reported on the relevant form D. In 2017, Iranian authorities communicated three additional seizures of acetic anhydride through PICS, amounting to 23,850 litres. The substance purportedly originated in the European Union and in Taiwan Province of China. While the Islamic Republic of Iran was named as a destination country in investigations into several diversion attempts and seizures relating to acetic anhydride in Europe, the Board is not aware of any response by the Iranian authorities to requests for assistance related to such investigations.

182. The amount of acetic anhydride reported seized in Pakistan in 2016 was the largest ever reported by the Pakistani authorities on form D, and nearly eight times higher than in 2015. The backtracking investigations related to a seizure of more than 20,000 litres (21.7 tons) of acetic anhydride in January 2016, which were launched in cooperation with authorities in China and the United Republic of Tanzania, as well as the United Arab Emirates, confirmed that the substance had been diverted in the United Republic of Tanzania.[38] Those investigations subsequently led to the identification and prevention of delivery to criminal organizations of another 130,000 litres (140 tons) of acetic anhydride, and the identification of financial flows related to that diversion. In 2017, Tanzanian authorities communicated an additional seizure of 25 litres of acetic anhydride that had originated in France.

183. India reported, on form D for 2016, a seizure of almost 2,500 litres of acetic anhydride, which was the second-largest amount seized in the past 10 years. The origin of the substance was not known. From media reports, INCB is aware that the seizure was made in connection with a major case of diversion of ephedrines[39] and may therefore have been intended for purposes other than diversion for illicit heroin manufacture. Other media reports mention the alleged illicit manufacture of acetic anhydride in India, in connection with the seizure of 23.5 tons of illicitly manufactured methaqualone in November 2016 (see para. 200]below). INCB has not been able to confirm the information contained in those media reports, especially with regard to their implications for precursor control.

184. With regard to countries in Central Asia that share a border with Afghanistan, the situation regarding acetic anhydride trafficking has not changed since the last reporting period. No seizures of acetic anhydride were reported by Tajikistan, Turkmenistan or Uzbekistan on form D, a situation that has prevailed for the past 15 years. In 2017, Kyrgyzstan, and also Azerbaijan, appear to have been targeted by traffickers for the diversion of acetic anhydride from international trade (see para. 173 above).

185. In Europe, only three countries reported seizures of acetic anhydride on form D for 2016, and they were of small amounts. However, in 2017, the number of suspicious activities involving acetic anhydride increased, with more countries in the region reporting seizures, suspicious queries and orders for the substance. Those countries included Belgium, Bulgaria, Czechia, France, Germany, Latvia, the Netherlands, Poland and Spain.

186. While the Netherlands reported only one seizure of acetic anhydride in 2016 (amounting to 75 litres), there were eight seizures of the substance in the first 10 months of 2017 in the country, amounting to 6,950 litres. That also included a seizure of acetic anhydride together with heroin and material containing traces of morphine, an incident that might indicate the attempted manufacture of heroin in the Netherlands.

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[36] Afghanistan, Ministry of Counter Narcotics, and UNODC, "Afghanistan drug price monitoring monthly report" (October 2017), (contains information collected from farmers and traders on a monthly basis).

[37] Islamic Republic of Iran, Drug Control Headquarters, *Drug Control in 2016*, p. 38.

[38] E/INCB/2016/4, paras. 141 and 142.

[39] Ibid., para. 144.

Authorities in the Netherlands also prevented the delivery of acetic anhydride to a number of companies or individuals within the country or elsewhere, including customers allegedly in Iraq and Suriname, whose bona fide could not be established.

187. Suspicious queries and orders for acetic anhydride have also been identified in Germany. On form D for 2016, German authorities reported being notified by the chemical operators concerned of 18 suspicious attempts to purchase acetic anhydride. The purchase attempts involved 53,000 litres of acetic anhydride, in individual volumes ranging from 100 litres to 10,000 litres. The alleged destination countries for the substance included Azerbaijan, Iraq and Turkey.

188. Suspicious attempts by criminal groups to purchase acetic anhydride and trafficking in the substance continued in Europe in 2017. In the first 10 months of 2017, Bulgaria communicated six seizures of acetic anhydride, of amounts totalling more than 11,600 litres; the substance was allegedly destined for Iran (Islamic Republic of), Iraq and Turkey. Bosnia and Herzegovina, Hungary, Poland and Serbia were the suspected source countries, or last-known transit countries, of the substance. Backtracking investigations into one of the seizures in Bulgaria revealed possible links to a seizure reported in the Netherlands.

189. In addition, from activities conducted under Project Cohesion, specifically Operation "Follow me" (see paras. 55 (b) and 58 above), INCB understands that States members of the European Union have identified and investigated more than 100 suspicious queries or requests for supplies of acetic anhydride in a number of countries in 2016 and 2017. While the delivery of hundreds of tons of acetic anhydride to suspicious customers was prevented, some acetic anhydride might nevertheless have found its way into the hands of criminal organizations.

190. Backtracking investigations related to seizures of acetic anhydride and identified diversion attempts also allowed for the identification of the modi operandi of traffickers: use of new companies or established "front" companies that only recently applied for registration as precursor operators; use of non-existent companies that cannot be physically located at the address provided; involvement of foreign nationals (often from countries identified as targets of acetic anhydride traffickers); the use of glacial acetic acid as a cover load for, or otherwise to disguise the identity of, acetic anhydride; "smurfing", i.e., requests for supplies of small amounts of acetic anhydride placed with several suppliers; and submission of forged documents to justify legitimate needs for the substance.

2. Use of non-scheduled substances and other trends in the illicit manufacture of heroin

191. In 2016, authorities in Afghanistan seized, in 18 incidents, a total of 45.4 tons of ammonium chloride, a non-scheduled chemical commonly used in the country in the extraction of morphine from opium. That amount was the highest ever reported by the Government. The only other country that regularly reports seizing large amounts of ammonium chloride on form D is Mexico. In 2016, Mexican authorities reported seizures of nearly 18 tons, the largest amount ever reported by the country. The substance had been seized from illicit laboratories where heroin and methamphetamine were being manufactured. In the methamphetamine laboratories, the ammonium chloride might have been used for the illicit manufacture of methylamine (see para. 140 above). Myanmar reported seizures of ammonium chloride for the first time on form D for 2016, totalling almost 9.4 tons. Incidents involving the substance in Afghanistan and Mexico continued to be communicated through PICS in 2017.

192. Another chemical not in Table I or Table II of the 1988 Convention is glacial acetic acid. In 2016 and 2017, investigations into seizures and suspicious queries for supplies of acetic anhydride in Europe and West Asia confirmed the long-suspected use of glacial acetic acid as a cover load or to otherwise disguise smuggled acetic anhydride. On form D for 2016, Mexico reported seizing the largest amounts of glacial acetic acid (almost 18,000 litres); however, those seizures were made in connection with illicit methamphetamine manufacture. Likewise, seizures above 100 litres reported on form D for 2016 by the Netherlands (about 1,000 litres) and Nigeria (about 300 litres) were likely linked to illicit synthetic drug manufacture. Seizures in the Netherlands continued to be communicated in 2017 and included a laboratory where it was suspected that both MDMA and heroin were being manufactured. A purported seizure of 20,271 litres of glacial acetic acid in April 2016 was communicated by Afghanistan through PICS. The seizure was not, however, confirmed on the corresponding form D.

D. Substances used in the illicit manufacture of other narcotic drugs and psychotropic substances

1. Ergot alkaloids and lysergic acid

193. Ergot alkaloids (ergometrine and ergotamine, and their salts) and lysergic acid are the three chemicals in Table I of the 1988 Convention that can be used in the illicit manufacture of lysergic acid diethylamide (LSD). Legitimately, they are used in the treatment of migraines and as an oxytocic in obstetrics. International trade in these substances is limited, in terms of both the number of transactions and the amounts involved.

Licit trade

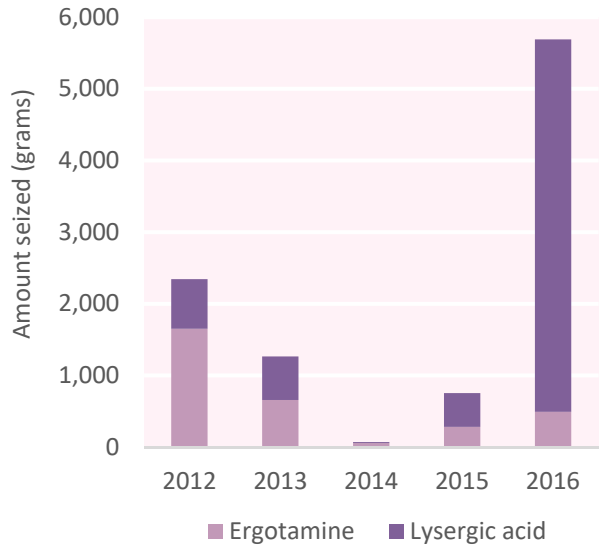
194. Between 1 November 2016 and 1 November 2017, 16 exporting countries sent more than 380 pre-export notifications for ergometrine and ergotamine to 43 importing countries, involving about 23 kg of ergometrine and nearly 960 kg of ergotamine; the number of pre-export notifications was similar to the previous reporting period. There were five pre-export notifications for lysergic acid, totalling 0.2 g.

195. Authorities in the Netherlands stopped the export of 5 kg of ergotamine to Suriname after investigations in Suriname established that the licence of the importing company had been forged, using a licence originally issued to another company. There are also indications that companies in Kyrgyzstan may have been targeted for the diversion of ergot alkaloids in 2017.

Trafficking

196. Seizures of ergotamine and lysergic acid are infrequently reported, by different countries; seizures of ergometrine have never been reported. Seizures were consistently reported on form D during the period 2012–2016 by Australia. In 2016, unlike in previous years, global seizures of LSD precursors were dominated by seizures of lysergic acid (see figure XVIII). Specifically, the United States reported seizing almost 3.9 kg, Australia nearly 805 g and France 500 g. More than half of the total amount of lysergic acid seized in Australia was reported to have originated in Poland, while the Netherlands was reported as the country of origin in the largest number of seizure cases. Canada and Honduras reported seizing lysergic acid but did not specify the amounts. Seizures of ergotamine were reported by Australia (290 g) and Germany (200 g); it was the first time that the substance had been seized in Germany.

Figure XVIII. Seizures of ergotamine and lysergic acid reported by Governments on form D, 2012–2016



2. *N*-Acetylanthranilic acid and anthranilic acid

197. *N*-Acetylanthranilic acid and anthranilic acid can be used for the illicit manufacture of methaqualone, a sedative-hypnotic that is also known under its former brand names "quaalude" and "mandrax".

Licit trade

198. Between 1 November 2016 and 1 November 2017, eight exporting countries sent about 300 pre-export notifications to 35 importing countries for shipments of anthranilic acid. Those shipments together amounted to almost 1,700 tons; the main exporters were China and India, followed by the United States. By contrast, trade in *N*-acetylanthranilic acid continued to be limited to small amounts, typically for analytical and research purposes. The amounts reported through PEN Online in seven transactions totalled just 200 g during the reporting period.

Trafficking

199. No seizures of *N*-acetylanthranilic acid were reported by Governments on form D for 2016; the amounts of anthranilic acid seized were negligible.

200. From media reports, INCB is aware of a seizure of 23.5 tons of methaqualone in India in November 2016. According to the reports, the substance was allegedly illicitly manufactured from anthranilic acid, which had been imported from Indonesia and misdeclared at customs as "malic acid". Despite the significance of the seizure, INCB was unable to confirm details and obtain relevant additional information that might have enabled investigations into the point of diversion and the modus operandi that had been used by traffickers to obtain the anthranilic acid. **INCB reiterates its request to Governments to make every effort to provide details of, and confirm, relevant seizures when so requested by the Board. It is only through the sharing of such information that weaknesses in control systems can be identified in a timely manner and successfully addressed.**

E. Solvents and acids used in the illicit manufacture of various narcotic drugs and psychotropic substances

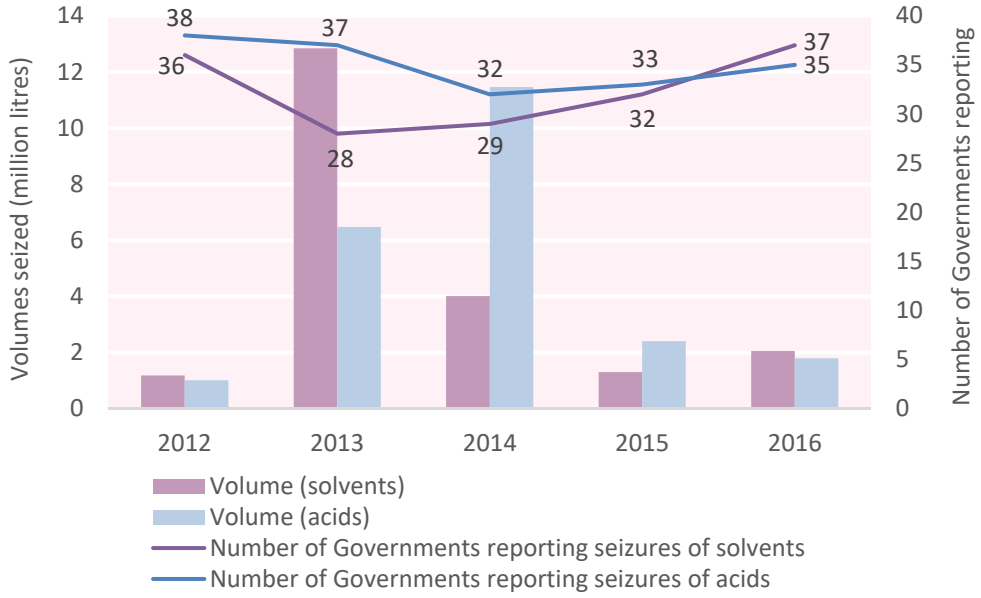
1. Solvents and acids in Table II of the 1988 Convention

201. Acids, bases and solvents are required at various stages of the manufacture of nearly all drugs. Two acids (hydrochloric acid and sulphuric acid) and four solvents (acetone, ethyl ether, methyl ethyl ketone and toluene) are included in Table II of the 1988 Convention. In most cases, they can be easily substituted, as reflected by the number of non-scheduled acids, bases

and solvents on the INCB limited international special surveillance list of non-scheduled substances and the various country-specific and region-specific lists.

202. Seizures of the four solvents in Table II of the 1988 Convention were reported on form D for 2016 by 37 countries and territories (see figure XIX). The solvent most frequently reported was acetone (34 countries and territories), followed by toluene (22), ethyl ether (11) and methyl ethyl ketone (9); by volume, acetone was followed by toluene. The largest total amounts of all four solvents were reported by Colombia (nearly 1.35 million litres), China (222,500 litres), United States (122,000 litres) and Peru (117,000 litres). Where such information was provided, the origin of the seized solvents was often domestic, i.e., the country in which the seizure took place.

Figure XIX. Seizures of solvents (acetone, ethyl ether, methyl ethyl ketone and toluene) and acids (hydrochloric and sulphuric acid), reported by Governments on form D, 2012–2016



203. A total of 35 countries and territories reported seizures of hydrochloric and/or sulphuric acid on form D for 2016 (see figure XIX). As for solvents, the countries where the largest amounts were seized were, in decreasing order, Colombia, China, Peru and the United States, followed by the Plurinational State of Bolivia, the Netherlands, Ecuador and Myanmar; seizures in other countries did not exceed 30,000 litres each. Hydrochloric acid accounted for about 55 per cent of all the acids listed in Table II that were reported seized in 2016.

2. Solvents not included in Table II of the 1988 Convention

204. Seizures of solvents not included in Table II of the 1988 Convention are regularly reported on form D. In 2016, seizures of non-scheduled solvents, namely acetate solvents, which can be used as substitutes for solvents listed in Table II, in particular in the final crystallization step when cocaine base is converted into cocaine hydrochloride, were reported by seven countries. As in the past, the largest amounts and greatest diversity of acetate solvents were reported by Colombia, which accounted for more than 85 per cent (more than 950,000 litres) of the amount of all acetate solvents reported seized (solvents included the following, listed in descending order of the amounts seized: ethyl acetate, n-propyl acetate, n-butyl acetate and isopropyl acetate); about 12 per cent of the total amount seized was reported by the Plurinational State of Bolivia, in the form of ethyl acetate. Acetate solvents in amounts larger than 4,000 litres were also reported by Argentina and the Netherlands. The total amount of acetate solvents seized in 2016 was almost 250 per cent more than those reported seized in 2015.[40] That increase was mainly the result of major increases in Colombia.

205. Methyl isobutyl ketone is another solvent that can be used in the final cocaine hydrochloride crystallization step. Seizures of the substance in 2016 were reported by Colombia (10,732 litres), Peru (2,006 litres) and Argentina (200 litres). Where information was available, all substitute solvents were obtained from domestic sources.

[40] E/INCB/2016/4, para. 162.

206. Seizures of solvents not in Table II of the 1988 Convention are typically reported by countries in which those solvents are under national control. According to information available to INCB, that applies to methyl isobutyl ketone (controlled in 17 countries), ethyl acetate (controlled in 13 countries), n-butyl acetate and isopropyl acetate (both controlled in 6 countries), and n-propyl acetate (controlled in 4 countries).

207. The results of forensic profiling of samples of cocaine seized in the United States, carried out by the United States Drug Enforcement Administration Special Testing and Research Laboratory in 2016, indicate that the solvents most often used to dissolve the cocaine base prior to its crystallization as the hydrochloride salt are solvents not in either Table I or Table II of the 1988 Convention, namely: n-propyl acetate (found in 53 per cent of the samples analysed); ethyl acetate (29 per cent); and a mixture of the two solvents (8 per cent). By contrast, the hydrochloric acid required for crystallization is most typically used as such; where it is dissolved, the solvent of choice is methyl ethyl ketone, a solvent listed in Table II. Of the samples analysed, 14 per cent were found to have been manufactured from recycled solvents.

208. As in previous years, a significant volume of other common solvents or solvent mixtures was reported on form D for 2016, mostly by countries in South America. The solvents included various hydrocarbon mixtures, such as thinners, kerosene, diesel and various types of gasoline, which are predominantly employed[41] in the extraction of cocaine from coca leaves, and chlorinated solvents. Outside South America, seizures of such solvents in volumes larger than 1,000 litres were reported by China, Myanmar, the Netherlands and Spain.

209. Incidents involving acids and solvents included in Table II of the 1988 Convention, as well as substitute chemicals not under international control, continued to be communicated through PICS in 2017.

F. Substances not in Table I or Table II of the 1988 Convention that are used in the illicit manufacture of other narcotic drugs and psychotropic substances or substances of abuse not under international control

1. Precursors of fentanyl, fentanyl analogues and other synthetic opioids

210. Over the past year, there has been growing concern about the proliferation of illicitly manufactured fentanyl and highly potent fentanyl analogues in North America and in parts of Europe and other regions, not the least for fear of a high death toll related to the abuse of such substances. However, despite those concerns and despite the focus on illicitly manufactured fentanyls and their precursors in connection with the international scheduling (which was effective 18 October 2017) of NPP and ANPP in Table I of the 1988 Convention, only Estonia and the United States reported seizures of the two chemicals on form D for 2016.

211. Specifically, Estonia reported two seizures of NPP totalling more than 10 kg. In both instances, the substance had been ordered from China and shipped with a courier service; the larger consignment was destined for an Estonian company that had previously been involved in drug-related criminal activities. The United States reported seizures of ANPP totalling 52 kg in 2016. The seizures had previously been communicated through PICS, together with relevant operational details. Other seizures of the substances, communicated through PICS and reported in connection with the scheduling of them, were not included in the form D reports. Illicit manufacture of fentanyls and other synthetic drugs within the Russian Federation was reported to be on the rise. The United States reported the dismantling of eight illicit fentanyl laboratories.

212. Estonia and Latvia also reported seizures of other precursors of synthetic opioids, reflecting a long-standing problem with abuse and overdose involving such drugs, including, more recently, non-scheduled fentanyl analogues. Specifically, Latvia reported a seizure of almost 4 litres of 1-benzyl-4-piperidone; the chemical is indicative of the originally patented manufacturing method of fentanyl, the so-called "Janssen method", which does not require the recently scheduled NPP or ANPP. Estonia reported seizing 4-phenylpiperidine, a chemical that the authorities suspected was being used in the synthesis of other opioids such as pethidine or ketobemidone. **INCB commends the provision of that information and would like to reiterate once again that international countermeasures against chemicals used in the illicit manufacture of drugs, including scheduling in the tables of the 1988 Convention, is only possible if sufficient evidence of their illicit use is available. Governments are therefore encouraged to share information about relevant seizures and other incidents involving emerging, non-scheduled chemicals, as well as new trends in precursor trafficking, as soon as practically possible, through PICS or, at the very least, during the annual form D reporting process.**

2. Precursors of *gamma*-hydroxybutyric acid

213. During the reporting period, 14 countries, mostly within Europe, reported incidents involving GBL on form D for 2016. While seizures in individual countries ranged from 1 to more

[41] Certain hydrocarbon mixtures are also abused as such, by inhalation.

than 1,200 litres, Germany reported a total of 29 attempts to purchase GBL during 2016 in amounts that ranged from 20 to 50,000 litres; the substance was allegedly intended for different countries in Europe, either for direct consumption or for resale in small quantities over the Internet disguised as cleaning products. The purchase requests were rejected by the operators concerned, in cooperation with the competent authorities.

214. Countries outside Europe that reported seizures of GBL included Australia, Brazil, Chile and the United States. Those countries often reported that China, including Hong Kong, was the origin of the consignments. No Government reported any seizure of 1,4-butanediol, a precursor of GBL and a pre-precursor of GHB, on form D for 2016.

215. Incidents involving GBL and 1,4-butanediol continued to be communicated through PICS and the Project Ion Incident Communication System (IONICS) in 2017; the largest GBL seizure in that year, involving 16 tons of the substance, was communicated through IONICS. As in the past, the consignments were often mislabelled and shipped by postal or courier service, occasionally through seaports. The 16-ton seizure was made by Polish customs officers at the land border with Lithuania; the shipment had transited Germany and its suspected origin was China. All other individual seizures were of amounts of less than 100 kg or 100 litres.

216. The inconsistent reporting of GBL is a result of the fact that it can be used as a precursor in the illicit manufacture of GHB but is also used as a drug on its own, since it is metabolized into GHB in the body after ingestion. Countries include seizures of GHB in their form D reports depending on how the substance is classified in national legislation.

3. Precursors of ketamine

217. In its 2017 report on drug control,[42] China reported 93 cases of illicit ketamine manufacture in 2016, compared with 118 cases in 2015 and 90 in 2014. Disaggregated seizure data on the two major ketamine precursors, "hydroxylimine" and *o*-chlorophenyl cyclopentyl ketone, were not provided, although illicit ketamine manufacture continues to be of concern to Chinese authorities: of the 438 clandestine laboratories destroyed during 2016, 21 per cent were clandestine ketamine laboratories, an amount second only to that of illicit methamphetamine laboratories.

218. Malaysia reported on form D seizing a number of chemicals from an industrial-scale illicit ketamine laboratory that was dismantled in August 2016. The chemicals seized in the laboratory, which was capable of producing 5–10 kg of ketamine per week, included 2,500 litres of bromine and 2,800 kg of tartaric acid; both chemicals were sourced from India and trafficked to Malaysia by air. Although not seized on site, information provided by the Malaysian authorities suggests that the main precursor was *o*-chlorophenyl cyclopentyl ketone.

219. The Royal Canadian Mounted Police dismantled a sophisticated clandestine ketamine laboratory in November 2016. Several kilograms of ketamine were seized, along with a large volume of unspecified chemicals that had been purchased domestically from a company whose operators had previously been charged with selling chemicals knowing that they would be used to illicitly produce synthetic drugs. On form D for 2016, Canada reported seizures of "hydroxylimine" in unspecified amounts.

4. Precursors of new psychoactive substances, including substances recently scheduled under the Single Convention on Narcotic Drugs of 1961 or the Convention on Psychotropic Substances of 1971

220. Belgium, France and the Netherlands reported seizures of 2-bromo-4'-methylpropiophenone, a mephedrone precursor, on form D for 2016. Amounts ranged between 11 kg and 50 kg. A number of the seizures had previously been communicated through PICS. Incidents involving 2-bromo-4'-methylpropiophenone continued during 2017, and included one in a warehouse in the Netherlands in March 2017, during which 1,200 litres of the substance were seized.

221. Precursors of other new psychoactive substances reported on form D for 2016 also included 4-chloropropiophenone, a precursor of 4-chloromethcathinone. Slightly more than 4 kg of 4-chloropropiophenone were seized at the airport in Paris; the seizure was effected using a clause in European Union precursor regulations that prohibits the introduction of consignments of non-scheduled substances into the customs territory of the Union where there is sufficient evidence that those substances are intended for illicit drug manufacture (the so-called "catch-all" clause).

222. Other seizures of precursors of new psychoactive substances reported on form D for 2016 included (2-fluorophenyl)acetone, of which 200 kg were seized in two incidents in Luxembourg. (2-Fluorophenyl) acetone is a precursor of 2-fluoroamphetamine or 2-fluoromethamphetamine. The substances had originated in China and were destined for Suriname. The Netherlands reported having seized 2.5 kg of 2,5-dimethoxy-*beta*-nitrostyrene, a chemical that can be used in the illicit manufacture of 2,5-dimethoxyphenethylamine.

[42] China, National Narcotics Control Commission, *Annual Report on Drug Control in China 2017*.

223. INCB is also aware of seizures, in the Russian Federation in 2016, of 2-bromovalerophenone and pyrrolidine in connection with the dismantling of a clandestine *alpha*-pyrrolidinovalerophenone (*alpha*-PVP) laboratory. Authorities in Slovakia, in cooperation with their Polish counterparts, dismantled an industrial-scale laboratory for the manufacture of 3-chloromethcathinone (3-CMC) and *N*-ethyl(nor)pentedrone. In addition, 5 kg of a potential 3-CMC precursor were also reported seized while transiting Belgium on the way from China to Czechia.

IV. Internet-facilitated trade in precursors[43]

224. In the last few years, online trading, including online chemical trading platforms that offer their clients directories and databases of chemicals and chemical manufacturers from all over the world, has become an important tool for buyers of chemicals looking for a way to access remote markets in an efficient manner.

225. Such Internet-facilitated trade can take various forms. There are platforms that only provide buyer and supplier information, for a fee or free of charge, and are not involved in the business transaction. Other platforms may act as trading platforms and are directly engaged in the online sales of chemicals to their customers. Manufacturers of chemicals and trading companies advertise their capacity to supply chemicals on their own websites and buyers (end users) use the Internet to communicate their intent to purchase chemicals.

226. Because of the widespread legitimate use of chemicals in the private sector, online trading platforms similar to the websites of legitimate companies selling chemicals, including precursors listed in Table I and Table II of the 1988 Convention, can easily be found on the common web (also called the "surface web" or "clear web"). This contrasts with the anonymous online marketplaces on the hidden web (darknet) where controlled drugs are sold.

227. A number of online trading platforms are only virtual marketplaces where buyers meet sellers, and therefore the actual transactions do not take place through them; others may act as brokers. The owners or operators of such online trading platforms might not be aware of the applicable control measures that may exist in the jurisdiction under which they operate. Internet-facilitated trade may not even be subject to control measures similar to those that are otherwise applicable to the physical movement of internationally controlled precursors during manufacture, import, export, distribution or end use.

228. Therefore, online trading companies and platforms are vulnerable to exploitation by criminal organizations and traffickers seeking to buy or offering to sell controlled precursors (and the equipment needed for illicit drug manufacture). In practice, those trafficking in controlled precursors often do not place orders in their own names; instead, they use front companies, intermediaries, false names or other ways to disguise their identity when buying or selling over the Internet.

229. Article 12, paragraph 8, of the 1988 Convention requires the parties to take the measures they deem appropriate to monitor the manufacture and distribution of substances in Table I and Table II that are carried out within their territory, such as by controlling all persons and enterprises engaged in the manufacture and distribution of such substances and controlling under licence the establishment and premises in which such manufacture or distribution may take place.

230. However, information regarding legislation and practices that Governments apply with regard to the control of Internet-facilitated trade in precursor chemicals is not available on a systematic basis.

231. Currently, the only such information available was gathered by INCB in the context of Operation "Eagle eye" in 2013. The Operation was focused on domestic and international trade in acetic anhydride. Some countries that participated in the operation confirmed that trading in acetic anhydride over the Internet (including posting of offers to sell or buy the substance) required registration or authorization of the company by their respective Governments. However, no further details were provided.

232. In addition, the Board is aware of specific regulations and/or guidelines applied in some countries, such as China and the United States, that relate to the use of the Internet to arrange domestic or international sales of controlled precursors. For example, in China, regulations require all entities that sell precursors over the Internet to be registered with the competent national authorities.[44] In the United States, website providers who assist in arranging transactions of listed chemicals among

[43] INCB has previously called attention to the misuse of the Internet by online pharmacies that illegally sell prescription medicines to members of the general public without the required prescriptions. As part of this, INCB actively promotes awareness of the need for suitable controls regarding the sale of pharmaceutical preparations over the Internet.

[44] E/INCB/2011/4, para. 19.

buyers, sellers or transporters from foreign countries may also be considered as brokers or traders, and be subject to control.[45]

233. Governments recognized as early as 2000 that the continued advertising and sale of precursor chemicals (and controlled pharmaceuticals) for illicit purposes in most countries over the Internet was an international activity that needed to be countered.[46]

234. In its resolution 54/8, entitled "Strengthening international cooperation and regulatory and institutional frameworks for the control of precursor chemicals used in the illicit manufacture of synthetic drugs", the Commission on Narcotic Drugs invited Member States to take appropriate measures to strengthen international cooperation and the exchange of information regarding the identification of new routes and modi operandi of criminal organizations dedicated to the diversion or smuggling of precursor chemicals, including with respect to the use of the Internet for illicit purposes, and to continue to notify INCB of such information.

235. In its resolution 60/5, the Commission encouraged Member States, INCB, UNODC and relevant international organizations to collect data, analyse evidence and share information with respect to criminal activities relating to precursors conducted using the Internet. It also encouraged them to continue to strengthen legal, law enforcement and criminal justice responses, based on national legislation, as well as international cooperation, to curb such illicit activities.

236. From a law enforcement point of view, suspicious requests for precursors posted on the Internet present a unique opportunity for national competent authorities to monitor potentially illicit activities. The information gathered can be further developed into valuable actionable intelligence that competent authorities can use for further investigation and to prevent criminal activities.

237. For example, in the framework of Operation "Follow me", which was aimed at facilitating and enhancing the exchange of operational information on suspected diversion attempts and trafficking in acetic anhydride, suspicious requests made over the Internet for supplies of the substance were identified and shared among the countries concerned for further analysis and investigations (see para. 174 above).

238. Voluntary cooperation between national authorities and relevant industrial sectors, based on the principle of shared responsibility, is a practical measure that could further assist in the verification of transactions and in preventing the diversion of precursors from licit channels. There are some examples of voluntary self-regulation implemented by some Internet-based trading platforms. Such regulations include posting policies, under which trading in products that are illegal, or may easily be used for illegal purposes, including controlled substances and prescription and banned drugs, is not permitted.

239. Governments are therefore invited to cooperate with relevant industries, and with each other, to prevent the misuse of the Internet for the diversion of chemicals into illicit channels. The concept of voluntary public-private partnerships[47] could possibly be adapted to companies providing Internet-related services in order to collect, analyse and share relevant information about suspicious activities conducted over the Internet. Finally, further study should be made regarding the extent to which control measures, such as those requested in article 12, paragraph 8, of the 1988 Convention, are applicable to entities that act as brokers in the supply of controlled precursors over the Internet.

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[45] United States, Department of Justice, Drug Enforcement Administration, "Use of the Internet to arrange international sales of listed chemicals", in *Federal Register*, vol. 69, No. 31 (17 February 2004), pp. 7348 and 7349.

[46] See Commission on Narcotic Drugs resolution 43/8.

[47] E/INCB/2015/4, paras. 166–178.

Glossary

In the present report, the following terms and definitions have been used:

diversion:	Transfer of substances from licit to illicit channels
industrial-scale laboratory:	Laboratory manufacturing synthetic drugs in which oversized equipment and/or glassware that is either custom-made or purchased from industrial processing sources and/or that uses serial reactions is used and in which significant amounts of drugs are produced in very short periods of time, the amount being limited only by the need for access to precursors and other essential chemicals in adequate quantities and for the logistics and workers to handle large amounts of drugs and chemicals
pharmaceutical preparation:	Preparation for therapeutic (human or veterinary) use in its finished dosage form that contains precursors present in such a way that they can be used or recovered by readily applicable means; may be presented in their retail packaging or in bulk
seizure:	Prohibiting the transfer, conversion, disposition or movement of property or assuming custody or control of property on the basis of an order issued by a court or a competent authority; may be temporary or permanent (i.e., confiscation); different national legal systems may use different terms
stopped shipment:	Shipment permanently withheld because reasonable grounds exist to believe that it may constitute an attempted diversion, as a result of administrative problems or because of other grounds for concern or suspicion
suspended shipment:	Shipment temporarily withheld because of administrative inconsistencies or other grounds for concern or suspicion, for which clarification of the veracity of the order and resolution of technical issues are required before the shipment may be released
suspicious order (or suspicious transaction):	Order (or transaction) of questionable, dishonest or unusual character or condition, for which there is reason to believe that a chemical that is being ordered, imported or exported or is transiting a country or territory is destined for the illicit manufacture of narcotic drugs or psychotropic substances

Annexes*

*The annexes are not included in the printed version of the present report but they are available on the website of the International Narcotics Control Board (www.incb.org).

Annex I

Parties and non-parties to the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, by region, as at 1 November 2017

Note: The date on which the instrument of ratification or accession was deposited is indicated in parentheses.

Region	*Party to the 1988 Convention*		*Non-party to the 1988 Convention*
Africa	Algeria (9 May 1995)	Eritrea (30 January 2002)	Equatorial Guinea
	Angola (26 October 2005)	Ethiopia (11 October 1994)	Somalia
	Benin (23 May 1997)	Gabon (10 July 2006)	South Sudan
	Botswana (13 August 1996)	Gambia (23 April 1996)	
	Burkina Faso (2 June 1992)	Ghana (10 April 1990)	
	Burundi (18 February 1993)	Guinea (27 December 1990)	
	Cabo Verde (8 May 1995)	Guinea-Bissau (27 October 1995)	
	Cameroon (28 October 1991)	Kenya (19 October 1992)	
	Central African Republic (15 October 2001)	Lesotho (28 March 1995)	
	Chad (9 June 1995)	Liberia (16 September 2005)	
	Comoros (1 March 2000)	Libya (22 July 1996)	
	Congo (3 March 2004)	Madagascar (12 March 1991)	
	Côte d'Ivoire (25 November 1991)	Malawi (12 October 1995)	
	Democratic Republic of the Congo (28 October 2005)	Mali (31 October 1995)	
	Djibouti (22 February 2001)	Mauritania (1 July 1993)	
	Egypt (15 March 1991)	Mauritius (6 March 2001)	

Region	*Party to the 1988 Convention*	*Non-party to the 1988 Convention*
	Morocco (28 October 1992)	South Africa (14 December 1998)
	Mozambique (8 June 1998)	Sudan (19 November 1993)
	Namibia (6 March 2009)	Swaziland (8 October 1995)
	Niger (10 November 1992)	Togo (1 August 1990)
	Nigeria (1 November 1989)	Tunisia (20 September 1990)
	Rwanda (13 May 2002)	Uganda (20 August 1990)
	Sao Tome and Principe (20 June 1996)	United Republic of Tanzania (17 April 1996)
	Senegal (27 November 1989)	Zambia (28 May 1993)
	Seychelles (27 February 1992)	Zimbabwe (30 July 1993)
	Sierra Leone (6 June 1994)	
Regional total **54**	**51**	**3**
Americas	Antigua and Barbuda (5 April 1993)	Chile (13 March 1990)
	Argentina (10 June 1993)	Colombia (10 June 1994)
	Bahamas (30 January 1989)	Costa Rica (8 February 1991)
	Barbados (15 October 1992)	Cuba (12 June 1996)
	Belize (24 July 1996)	Dominica (30 June 1993)
	Bolivia (Plurinational State of) (20 August 1990)	Dominican Republic (21 September 1993)
	Brazil (17 July 1991)	Ecuador (23 March 1990)
	Canada (5 July 1990)	El Salvador (21 May 1993)

Region	*Party to the 1988 Convention*		*Non-party to the 1988 Convention*
	Grenada (10 December 1990)	Peru (16 January 1992)	
	Guatemala (28 February 1991)	Saint Kitts and Nevis (19 April 1995)	
	Guyana (19 March 1993)	Saint Lucia (21 August 1995)	
	Haiti (18 September 1995)	Saint Vincent and the Grenadines (17 May 1994)	
	Honduras (11 December 1991)	Suriname (28 October 1992)	
	Jamaica (29 December 1995)	Trinidad and Tobago (17 February 1995)	
	Mexico (11 April 1990)	United States of America (20 February 1990)	
	Nicaragua (4 May 1990)	Uruguay (10 March 1995)	
	Panama (13 January 1994)	Venezuela (Bolivarian Republic of) (16 July 1991)	
	Paraguay (23 August 1990)		
Regional total			
35	**35**		**0**
Asia	Afghanistan (14 February 1992)	Cambodia (2 April 2005)	State of Palestine
	Armenia (13 September 1993)	China (25 October 1989)	
	Azerbaijan (22 September 1993)	Democratic People's Republic of Korea (19 March 2007)	
	Bahrain (7 February 1990)	Georgia (8 January 1998)	
	Bangladesh (11 October 1990)	India (27 March 1990)	
	Bhutan (27 August 1990)	Indonesia (23 February 1999)	
	Brunei Darussalam (12 November 1993)	Iran (Islamic Republic of) (7 December 1992)	

Region	*Party to the 1988 Convention*	*Non-party to the 1988 Convention*
	Iraq (22 July 1998)	Philippines (7 June 1996)
	Israel (20 March 2002)	Qatar (4 May 1990)
	Japan (12 June 1992)	Republic of Korea (28 December 1998)
	Jordan (16 April 1990)	Saudi Arabia (9 January 1992)
	Kazakhstan (29 April 1997)	Singapore (23 October 1997)
	Kuwait (3 November 2000)	Sri Lanka (6 June 1991)
	Kyrgyzstan (7 October 1994)	Syrian Arab Republic (3 September 1991)
	Lao People's Democratic Republic (1 October 2004)	Tajikistan (6 May 1996)
	Lebanon (11 March 1996)	Thailand (3 May 2002)
	Malaysia (11 May 1993)	Timor-Leste (3 June 2014)
	Maldives (7 September 2000)	Turkey (2 April 1996)
	Mongolia (25 June 2003)	Turkmenistan (21 February 1996)
	Myanmar (11 June 1991)	United Arab Emirates (12 April 1990)
	Nepal (24 July 1991)	Uzbekistan (24 August 1995)
	Oman (15 March 1991)	Viet Nam (4 November 1997)
	Pakistan (25 October 1991)	Yemen (25 March 1996)
Regional total **47**	**46**	**1**
Europe		
	Albania (27 July 2001)	Austria[a] (11 July 1997)
	Andorra (23 July 1999)	Belarus (15 October 1990)

Region	*Party to the 1988 Convention*	*Non-party to the 1988 Convention*
	Belgium[a] (25 October 1995)	Luxembourg[a] (29 April 1992)
	Bosnia and Herzegovina (1 September 1993)	Malta[a] (28 February 1996)
	Bulgaria[a] (24 September 1992)	Monaco (23 April 1991)
	Croatia[a] (26 July 1993)	Montenegro (3 June 2006)
	Cyprus[a] (25 May 1990)	Netherlands[a] (8 September 1993)
	Czechia[a,b] (30 December 1993)	Norway (14 November 1994)
	Denmark[a] (19 December 1991)	Poland[a] (26 May 1994)
	Estonia[a] (12 July 2000)	Portugal[a] (3 December 1991)
	Finland[a] (15 February 1994)	Republic of Moldova (15 February 1995)
	France[a] (31 December 1990)	Romania[a] (21 January 1993)
	Germany[a] (30 November 1993)	Russian Federation (17 December 1990)
	Greece[a] (28 January 1992)	San Marino (10 October 2000)
	Holy See (25 January 2012)	Serbia (3 January 1991)
	Hungary[a] (15 November 1996)	Slovakia[a] (28 May 1993)
	Iceland (2 September 1997)	Slovenia[a] (6 July 1992)
	Ireland[a] (3 September 1996)	Spain[a] (13 August 1990)
	Italy[a] (31 December 1990)	Sweden[a] (22 July 1991)
	Latvia[a] (25 February 1994)	Switzerland (14 September 2005)
	Liechtenstein (9 March 2007)	The former Yugoslav Republic of Macedonia (13 October 1993)
	Lithuania[a] (8 June 1998)	Ukraine (28 August 1991)

Region	*Party to the 1988 Convention*		*Non-party to the 1988 Convention*
	United Kingdom of Great Britain and Northern Ireland[a] (28 June 1991)	European Union[c] (31 December 1990)	
Regional total **46**	**46**		**0**
Oceania	Australia (16 November 1992)	New Zealand (16 December 1998)	Kiribati
	Cook Islands (22 February 2005)	Niue (16 July 2012)	Palau
	Fiji (25 March 1993)	Samoa (19 August 2005)	Papua New Guinea
	Marshall Islands (5 November 2010)	Tonga (29 April 1996)	Soloman Islands
	Micronesia (Federated States of) (6 July 2004)	Vanuatu (26 January 2006)	Tuvalu
	Nauru (12 July 2012)		
Regional total **16**	**11**		**5**
World total **198**	**189**		**9**

[a] State member of the European Union.

[b] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.

[c] Extent of competence: article 12.

Annex II

Annual legitimate requirements for ephedrine, pseudoephedrine, 3,4-methylenedioxyphenyl-2-propanone and 1-phenyl-2-propanone; substances frequently used in the manufacture of amphetamine-type stimulants

1. In its resolution 49/3, entitled "Strengthening systems for the control of precursor chemicals used in the manufacture of synthetic drugs", the Commission on Narcotic Drugs:

(a) Requested Member States to provide to the International Narcotics Control Board annual estimates of their legitimate requirements for 3,4-methylenedioxyphenyl-2-propanone (3,4-MDP-2-P), pseudoephedrine, ephedrine and 1-phenyl-2-propanone (P-2-P) and, to the extent possible, estimated requirements for imports of preparations containing those substances that could be easily used or recovered by readily applicable means;

(b) Requested the Board to provide those estimates to Member States in such a manner as to ensure that such information was used only for drug control purposes;

(c) Invited Member States to report to the Board on the feasibility and usefulness of preparing, reporting and using estimates of legitimate requirements for the precursor chemicals and preparations referred to above in preventing diversion.

2. Pursuant to that resolution, the Board formally invited Governments to prepare estimates of their legitimate requirements for those substances. Those estimates, as reported by Governments, were published for the first time in March 2007.

3. The table below reflects the latest data reported by Governments on those four precursor chemicals (and their preparations, as relevant). It is expected that those data will provide the competent authorities of exporting countries with at least an indication of the legitimate requirements of importing countries, thus preventing diversion attempts. Governments are invited to review their requirements as published, amend them as necessary and inform the Board of any required change. The data are current as at 1 November 2017; for updates, see the Board's website.

Annual legitimate requirements as reported by Governments for imports of ephedrine, pseudoephedrine, 3,4-methylenedioxyphenyl-2-propanone, 1-phenyl-2-propanone and their preparations, as at 1 November 2017

Country or territory	Ephedrine (kilograms)	Ephedrine preparations (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations (kilograms)	3,4-MDP-2-P[a] (litres)	P-2-P[b] (litres)
Afghanistan	0	50	0	3 000	0	0
Albania	45	0	5	0	0	0
Algeria	20		17 000		0	1
Argentina	59	0	25 731	74	0	0
Armenia	0	0	0	0	0	0
Ascension Island	0	0	0	0	0	0
Australia	5	8	4 800	1 680	0	1
Austria	97	39	1	1	1	1
Azerbaijan	20		10		0	0
Bahrain	1	6	1	850	0	0
Bangladesh	200		0		0	0
Barbados	200		200	58	0[c]	
Belarus	0	25	20	20	0	0
Belgium	600	100	9 000	8 000	0	5
Belize			P	P	0[c]	
Benin	2	1	8	55	0[c]	
Bhutan	0	0	0	0	0	0
Bolivia (Plurinational State of)	44	0	4 022	359	0	0
Bosnia and Herzegovina	1	2	1 810	1 532	0	0
Botswana	300				0[c]	
Brazil	1 330[d]	0	20 000[d]	0	0	0
Brunei Darussalam	0	2	0	124	0	0
Bulgaria	400	296	0	0	0	0
Burundi		5		15	0[c]	
Cabo Verde	0	1	0	0	0	0
Cambodia	200	50	300	900	0[c]	
Cameroon	25			1	0[c]	
Canada	7 000	10	25 000	10 000	1	1
Chile	55	0	4 200	550	0	0
China	24 000		86 000		0[c]	
China, Hong Kong SAR	2 500	0	10 149	0	0	0

Country or territory	Ephedrine (kilograms)	Ephedrine preparations (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations (kilograms)	3,4-MDP-2-P[a] (litres)	P-2-P[b] (litres)
China, Macao SAR	1	10	1	159	0	0
Christmas Island	0	0	0	1	0	0
Cocos (Keeling) Islands	0	0	0	0	0	0
Colombia	0[e]	0[f]	3 000[e]	P	0	0
Cook Islands	0	0	0	1	0	0
Costa Rica	0	0	871	365	0	0
Côte d'Ivoire	30	1	0	400	0	0
Croatia	35	1	5	1	1	1
Cuba	200			6	0[c]	
Curaçao	0		0		0	0
Cyprus	10	10	600	300	0	0
Czechia[g]	515	5	560	380	0	1
Democratic People's Republic of Korea	1 000	1 200			2	
Democratic Republic of the Congo	300	10	720	900	0[c]	
Denmark					0	0
Dominican Republic	75	15	450	500	0	0
Ecuador	10	6	6 000	3 500	0	0
Egypt	4 500	0	55 000	2 500	0	0
El Salvador	P (6)[h]	P (10)[h]	P	P	0	0
Eritrea	0	0	0	0	0	0
Estonia	5	5	1	500	0	0
Ethiopia	1 000			100	0[c]	
Falkland Islands (Malvinas)	0	1	0	1	0[c]	0
Faroe Islands	0	0	0	0	0	0
Fiji		1			0[c]	
Finland	4	55	1	650	0[c]	1
France	2 500	10	30 000	500	0	0
Gambia	0	0	0	0	0	0
Georgia	1	1	1	1	0	0

Country or territory	Ephedrine (kilograms)	Ephedrine preparations (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations (kilograms)	3,4-MDP-2-P[a] (litres)	P-2-P[b] (litres)
Germany	400		5 000		1	8
Ghana	4 500	300	3 000	200	0	0
Greece	100	0	200	0	0	0
Greenland	0	0	0	0	0	0
Guatemala	0		P	P	0	0
Guinea	36				0[c]	
Guinea-Bissau	0	0	0	0	0	0
Guyana	120	50	120	30	0	0
Haiti	200	1	350	11	0	0
Honduras	P	P (1 050)[f]	P	P	0	0
Hungary	900	0	1	0	1	1 800
Iceland	0	0	0	0	0	0
India	457 014	112 729	27 521	193 801	0	0
Indonesia	13 000	0	52 000	6 200	0	0
Iran (Islamic Republic of)	2	1	17 000	1	1	1
Iraq	3 000	100	14 000	10 000	0	P[i]
Ireland	0	1	0	44	0	0
Israel	30	3	4 800	400	0[c]	
Italy	100	100	31 000	10 000	0	0
Jamaica	70	150	550	300	0	0
Japan	1 000		12 000		0[c]	
Jordan	200		30 000		0[c]	P
Kazakhstan	0	1	0	1	1	1
Kenya	1 300	6	1 300	1 000	0	0
Kyrgyzstan	0	0	0	100	0	0
Lao People's Democratic Republic	0	0	1 000	130	0	0
Latvia	14	6	50	200	0	0
Lebanon	60	3	550	900	0	0
Lithuania	1	1	1	700	1	1
Luxembourg	1	0	0	0	0	0

Country or territory	Ephedrine (kilograms)	Ephedrine preparations (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations (kilograms)	3,4-MDP-2-P[a] (litres)	P-2-P[b] (litres)
Madagascar	0	153	0	174	0	0
Malawi	1 000				0[c]	
Malaysia	40	50	3 410	4 000	0	0
Maldives	0	1	0	0	0	0
Mali	P	P	P	P	P	P
Malta	0	220	0	220	0	0
Mauritius	0	0	0	0	0	0
Mexico	P (100)[h]	P[h]	P	P	0	1
Monaco	0	0	0	0	0	0
Mongolia	3				0[c]	
Montenegro	0	1	0	120	0	0
Montserrat	0	0	0	1	0	0
Morocco	41	14	3 105	0	0	0
Mozambique	3				0[c]	
Myanmar	3	11	0	0	0	0
Namibia	0	0	0	0	0	0
Nepal		1	5 000		0[c]	
Netherlands	603	50	78	0	0	1
New Zealand	50	0	1 000		0	3
Nicaragua	P[j]	P[j]	P	P	0	0
Nigeria	9 650	500	5 823	15 000	0	0
Norfolk Island	0	0	0	0	0	0
Norway	26	0	1	1	0	0
Oman	1	3	228	619	0[c]	
Pakistan	12 000		48 000	500	0[c]	
Panama	0	5	200	500	0	
Papua New Guinea	1		200		0	0
Paraguay	0	0	2 500	0	0	0
Peru	45	0	2 524	1 078	0	0
Philippines	46	0	149	0	0	0
Poland	300	100	7 700	3 000	2	4

Country or territory	Ephedrine (kilograms)	Ephedrine preparations (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations (kilograms)	3,4-MDP-2-P[a] (litres)	P-2-P[b] (litres)
Portugal	15	0	916	0	0	0
Qatar	0	0	0	80	0	0
Republic of Korea	27 050		25 544		1	1
Republic of Moldova	0	8	0	600	0	0
Romania	251		2 370		0	0
Russian Federation	1 500				0[c]	
Rwanda		10		10	2	2
Saint Helena	0	1	0	1	0	0
Saint Lucia	0	6	0	15	0	0
Saint Vincent and the Grenadines	0		0		0	0
Sao Tome and Principe	0	0	0	0	0	0
Saudi Arabia	1	0	12 000	0	0	0
Senegal	123	1	0	510	0	0
Serbia	1	0	850	90	0	1
Seychelles		1		1	0[c]	
Singapore	11 000	4	42 000	2 540	1	1
Slovakia	3	6	1	1	0	0
Slovenia	5		250		0	0
Solomon Islands	0	1	0	1	0	0
South Africa	1 071	3	10 718	1 550	0	53
Spain	315		6 012		0	1
Sri Lanka		0		0	0	0
Sudan	0	50	1 500	3 000	0	
Sweden	184	99	1	1	1	11
Switzerland	2 600		72 000		50	5
Syrian Arab Republic	1 000		50 000		0[c]	
Tajikistan	38				0[c]	
Thailand	53	0	1	0	0	1
Trinidad and Tobago					0[c]	0
Tristan da Cunha	0	0	0	0	0	0

Country or territory	Ephedrine (kilograms)	Ephedrine preparations (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations (kilograms)	3,4-MDP-2-P[a] (litres)	P-2-P[b] (litres)
Tunisia	1	15	3 000	1	0	30
Turkey	200	0	40 000	7 000	0	0
Turkmenistan	0	0	0	0	0	0
Uganda	150	35	3 000	200	0	0
Ukraine	0	52	1	0	0	0
United Arab Emirates	0	0	1 533	3 894	0	0
United Kingdom of Great Britain and Northern Ireland	64 448	1 011	25 460	1 683	8	1
United Republic of Tanzania	100	1 500	2 000	300	0[c]	
United States of America	4 050		200 040		0[c]	44 768
Uruguay	15	0	0	0	0	0
Uzbekistan	0	0	0		0	0
Venezuela (Bolivarian Republic of)	60	500	2 425	500	0	0
Yemen	75	75	3 000	2 000	0[c]	
Zambia	50	25	50	100	0[c]	
Zimbabwe	150	1	400	50	0	0

Notes: The names of territories, departments and special administrative regions are in italics.

A blank field signifies that no requirement was indicated or that data were not submitted for the substance in question.

A zero (0) signifies that the country or territory currently has no licit requirement for the substance.

The letter "P" signifies that importation of the substance is prohibited.

Reported quantities of less than 1 kg have been rounded up and are reflected as 1 kg.

[a] 3,4-Methylenedioxyphenyl-2-propanone.

[b] 1-Phenyl-2-propanone.

[c] The Board is currently unaware of any legitimate need for the importation of this substance into the country.

[d] Including the licit requirements for pharmaceutical preparations containing the substance.

[e] The required amount of ephedrine is to be used for the manufacture of injectable ephedrine sulphate solution. The required amount of pseudoephedrine is to be used exclusively for the manufacture of medicines for export.

[f] In the form of injectable ephedrine sulphate solution.

[g] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.

[h] Imports of the substance and preparations containing the substance are prohibited, with the exception of the imports of injectable ephedrine preparations and ephedrine as a prime raw material for the manufacture of such ephedrine preparations. Pre-export notification is required for each individual import.

[i] Includes products containing P-2-P.

[j] Imports of the substance and preparations containing the substance are prohibited, with the exception of the imports of injectable ephedrine preparations and ephedrine as a prime raw material for the manufacture of such ephedrine preparations. Such export requires an import permit.

Annex III

Substances in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988

Table I	*Table II*
Acetic anhydride	Acetone
N-Acetylanthranilic acid	Anthranilic acid
4-Anilino-*N*-phenethylpiperidine (ANPP)[a]	Ethyl ether
Ephedrine	Hydrochloric acid[b]
Ergometrine	Methyl ethyl ketone
Ergotamine	Piperidine
Isosafrole	Sulphuric acid[b]
Lysergic acid	Toluene
3,4-Methylenedioxyphenyl-2-propanone	
Norephedrine	
N-Phenethyl-4-piperidone (NPP)[a]	
Phenylacetic acid	
alpha-Phenylacetoacetonitrile (APAAN)	
1-Phenyl-2-propanone	
Piperonal	
Potassium permanganate	
Pseudoephedrine	
Safrole	
The salts of the substances listed in this Table, whenever the existence of such salts is possible.	The salts of the substances listed in this Table, whenever the existence of such salts is possible.

[a] Included in Table I, effective 18 October 2017.

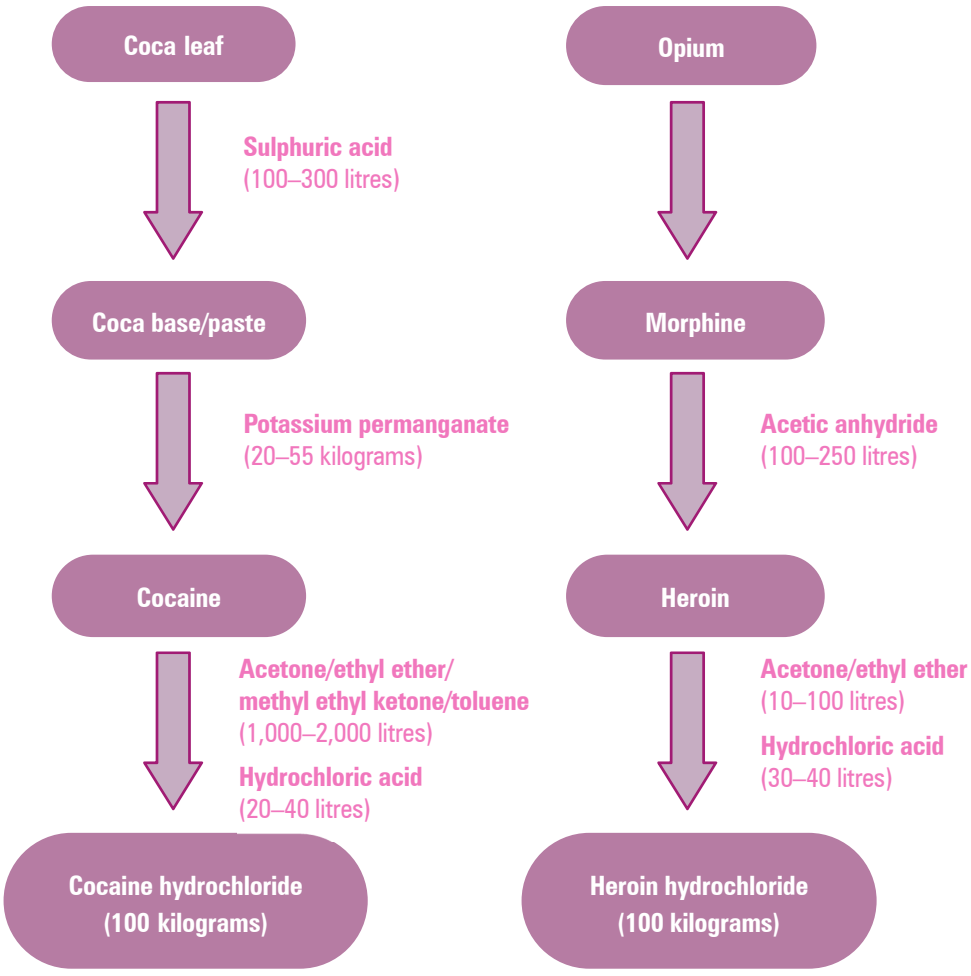
[b] The salts of hydrochloric acid and sulphuric acid are specifically excluded from Table II.

Annex IV

Use of scheduled substances in the illicit manufacture of narcotic drugs and psychotropic substances

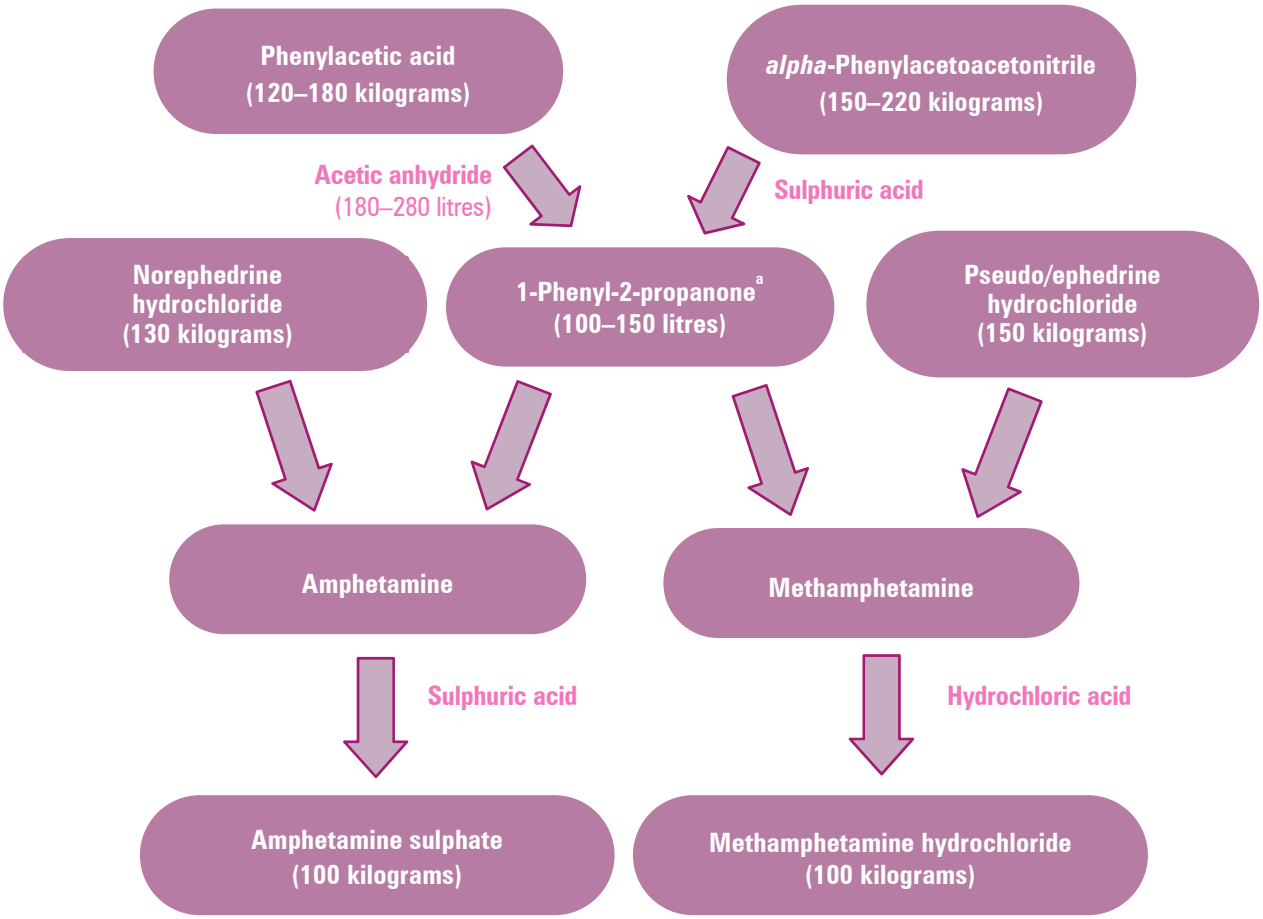
Figures I–V below depict the use of scheduled substances in the illicit manufacture of narcotic drugs and psychotropic substances. The approximate quantities provided are based on common manufacturing methods. Other manufacturing methods using scheduled substances — or even non-scheduled substances instead of or in addition to scheduled substances — may also be encountered, depending on the geographical location.

Figure I. Illicit manufacture of cocaine and heroin: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 100 kilograms of cocaine or heroin hydrochloride



Note: The extraction of cocaine from coca leaf and the purification of coca paste and the crude base products of cocaine and heroin require solvents, acids and bases. A wide range of such chemicals are used at all stages of drug manufacture.

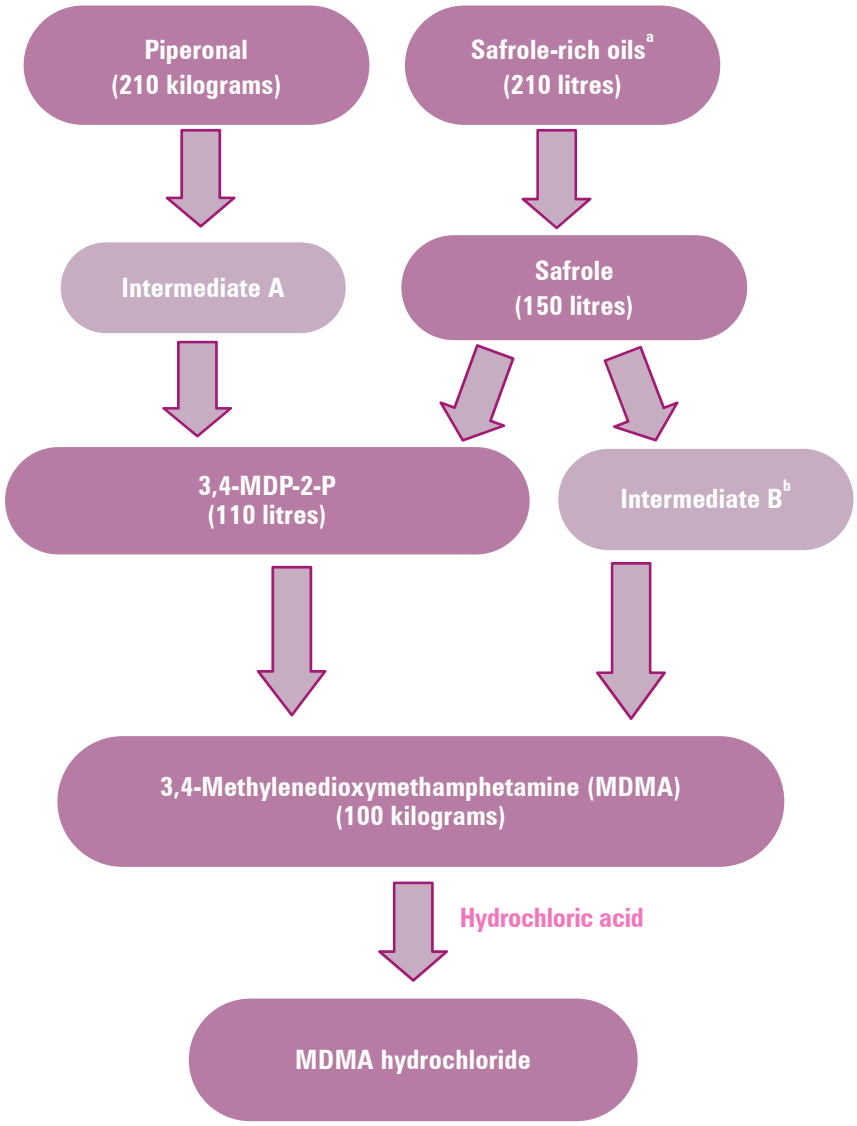
Figure II. Illicit manufacture of amphetamine and methamphetamine: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 100 kilograms of amphetamine sulphate and methamphetamine hydrochloride



Note: Methcathinone, a less commonly encountered amphetamine-type stimulant, can be manufactured from pseudo/ephedrine hydrochloride, requiring the same approximate quantities as methamphetamine to yield 100 kilograms of hydrochloride salt.

[a] Methods based on 1-phenyl-2-propanone result in racemic *d*,*l*-meth/amphetamine, while methods based on ephedrine, pseudoephedrine or norephedrine result in *d*-meth/amphetamine.

Figure III. Illicit manufacture of 3,4-methylenedioxymethamphetamine (MDMA) and related drugs: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 100 kilograms of MDMA



Note: Isosafrole, another precursor of MDMA under international control, is not included in this scheme, as it is not commonly encountered as a starting material; it is an intermediate in a modification of methods for manufacturing MDMA from safrole, requiring approximately 300 litres of safrole to manufacture 100 kilograms of MDMA.

[a] Assuming the safrole-rich oils have a safrole content of 75 per cent or higher.

[b] The manufacture of 100 kilograms of MDMA via intermediate B would require 200 litres of safrole.

Figure IV. Illicit manufacture of methaqualone and phencyclidine: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 100 kilograms of methaqualone and phencyclidine

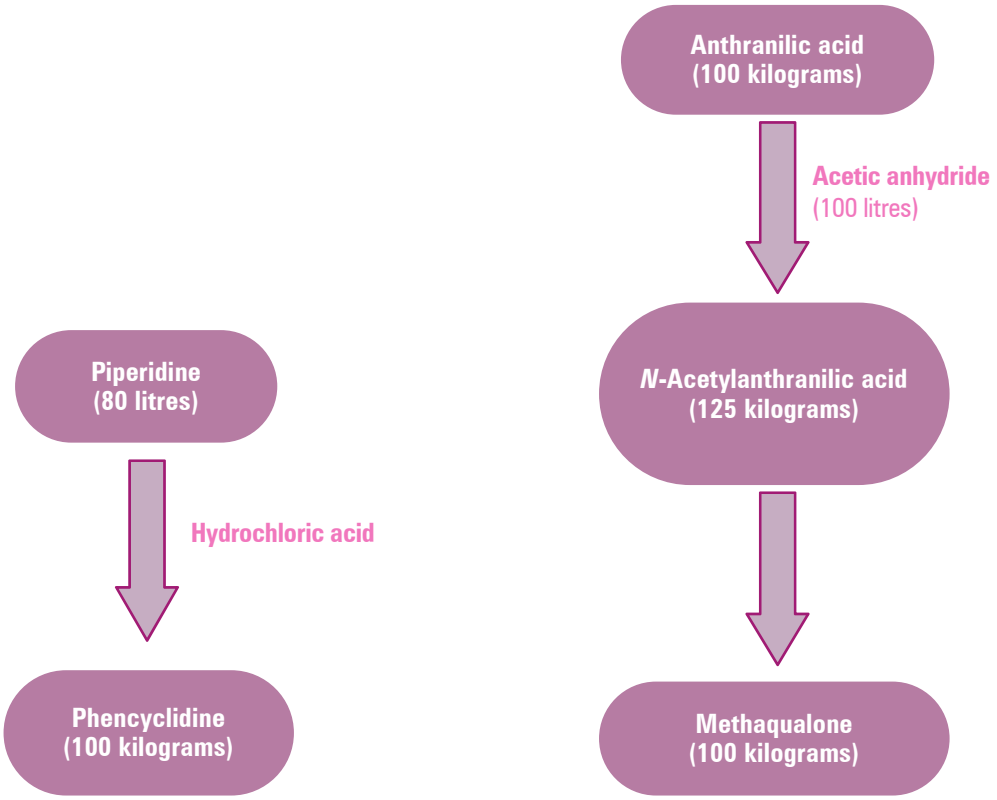
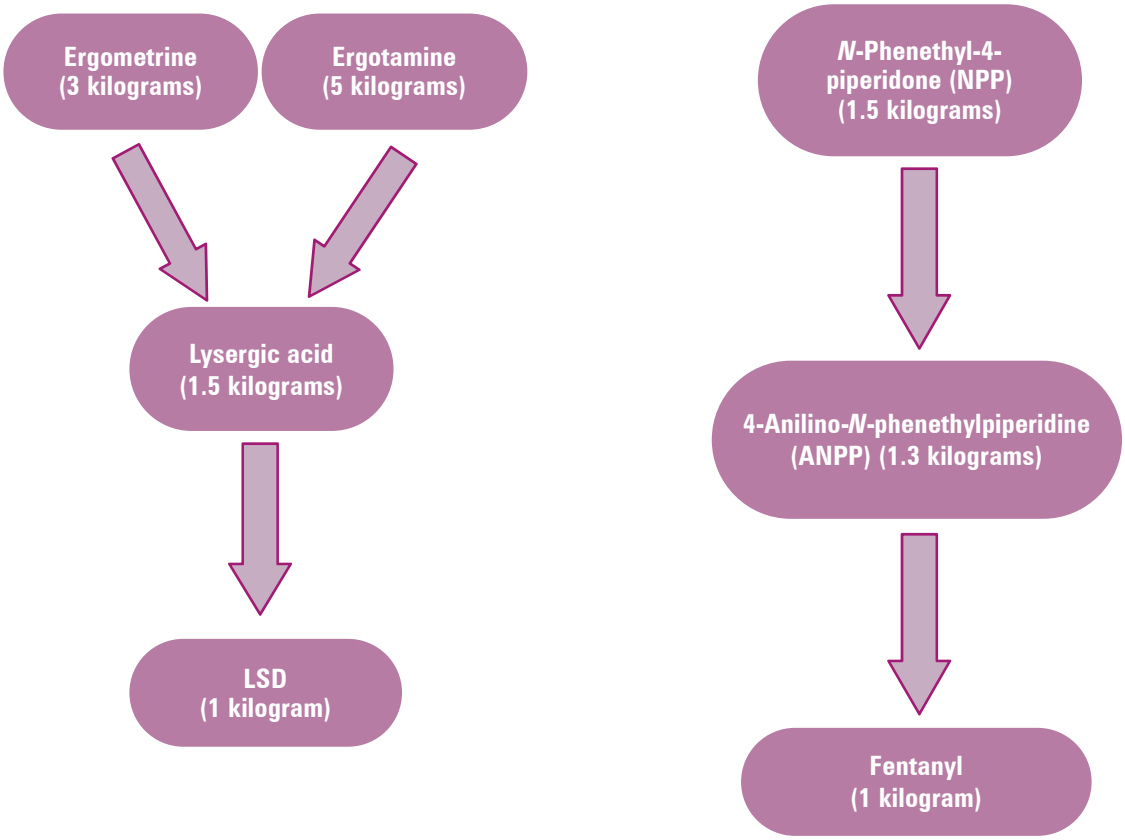


Figure V. Illicit manufacture of lysergic acid diethylamide (LSD) and fentanyl: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 1 kilogram of LSD or fentanyl



Annex V

Treaty provisions for the control of substances frequently used in the illicit manufacture of narcotic drugs and psychotropic substances

1. Article 2, paragraph 8, of the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol provides that parties shall use their best endeavours to apply to substances that do not fall under the Convention, but that may be used in the illicit manufacture of drugs, such measures of supervision as may be practicable.

2. Article 2, paragraph 9, of the Convention on Psychotropic Substances of 1971 provides that Parties shall use their best endeavours to apply to substances that do not fall under the Convention, but that may be used in the illicit manufacture of psychotropic substances, such measures of supervision as may be practicable.

3. Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 contains provisions for the following:

(a) General obligation for parties to take measures to prevent diversion of the substances in Table I and Table II of the Convention and to cooperate with each other to that end (para. 1);

(b) Mechanism for amending the scope of control (paras. 2–7);

(c) Requirement to take appropriate measures to monitor manufacture and distribution, to which end parties may control persons and enterprises, control establishments and premises under licence, require permits for manufacture or distribution of substances in Table I and Table II and prevent accumulation of such substances (para. 8);

(d) Obligation to monitor international trade in order to identify suspicious transactions, to provide for seizures, to notify the authorities of the parties concerned in case of suspicious transactions, to require proper labelling and documentation and to ensure maintenance of such documents for at least two years (para. 9);

(e) Mechanism for advance notice of exports of substances in Table I, upon request (para. 10);

(f) Confidentiality of information (para. 11);

(g) Reporting by parties to the International Narcotics Control Board (para. 12);

(h) Report of the Board to the Commission on Narcotic Drugs (para. 13);

(i) Non-applicability of the provisions of article 12 to certain preparations (para. 14).

Annex VI

Regional groupings

Reference is made throughout the present report to various geographical regions, which are defined as follows:

Africa: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Togo, Tunisia, Uganda, United Republic of Tanzania, Zambia and Zimbabwe;

Central America and the Caribbean: Antigua and Barbuda, Bahamas, Barbados, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago;

North America: Canada, Mexico and United States of America;

South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela (Bolivarian Republic of);

East and South-East Asia: Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste and Viet Nam;

South Asia: Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka;

West Asia: Afghanistan, Armenia, Azerbaijan, Bahrain, Georgia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Oman, Pakistan, Qatar, Saudi Arabia, State of Palestine, Syrian Arab Republic, Tajikistan, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan and Yemen;

Europe:

> **Eastern Europe**: Belarus, Republic of Moldova, Russian Federation and Ukraine;
>
> **South-Eastern Europe**: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Romania, Serbia and the former Yugoslav Republic of Macedonia;
>
> **Western and Central Europe**: Andorra, Austria, Belgium, Cyprus, Czechia,[a] Denmark, Estonia, Finland, France, Germany, Greece, Holy See, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom of Great Britain and Northern Ireland;

Oceania: Australia, Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

[a] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.

Annex VII

Submission of information by Governments pursuant to article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (form D) for the period 2012–2016

Notes: The names of non-metropolitan territories and special administrative regions are in italics.

A blank signifies that form D was not received.

"X" signifies that a completed form D (or equivalent report) was submitted (including forms in which all fields contained "nil", "0", "none", etc.).

Entries for parties to the 1988 Convention (and for the years that they have been parties) are shaded.

Country or territory	2012	2013	2014	2015	2016
Afghanistan	X	X	X	X	X
Albania	X	X	X	X	X
Algeria	X	X	X	X	X
Andorra	X	X	X	X	X
Angola					X
Anguilla [a]		X			
Antigua and Barbuda					
Argentina	X	X	X	X	X
Armenia	X	X	X	X	X
Aruba [a]					
Ascension Island	X				
Australia	X	X	X	X	X
Austria[b]	X	X	X	X	X
Azerbaijan	X	X	X	X	X
Bahamas					
Bahrain			X	X	X
Bangladesh	X	X	X	X	
Barbados		X			
Belarus	X	X	X	X	X
Belgium[b]	X	X	X	X	X
Belize		X			
Benin	X	X	X	X	
Bermuda [a]					
Bhutan	X		X	X	X
Bolivia (Plurinational State of)	X	X	X	X	X
Bosnia and Herzegovina	X	X	X	X	X
Botswana					
Brazil	X	X	X	X	X
British Virgin Islands [a]					
Brunei Darussalam	X	X	X	X	X
Bulgaria	X	X	X	X	X
Burkina Faso					
Burundi				X	
Cabo Verde[g]			X	X	X
Cambodia	X	X	X		
Cameroon	X	X	X		

Country or territory	2012	2013	2014	2015	2016
Canada	X	X	X	X	X
Cayman Islands [a]	X	X	X		
Central African Republic					
Chad		X		X	
Chile	X	X	X	X	X
China	X	X	X	X	X
China, Hong Kong SAR	X	X			X
China, Macao SAR	X	X	X	X	
Christmas Island [a,c]		X	X	X	
Cocos (Keeling) Islands [a,c]		X	X	X	
Colombia	X	X	X	X	X
Comoros					
Congo					
Cook Islands					
Costa Rica	X	X	X	X	X
Côte d'Ivoire	X	X	X		X
Croatia[b]	X	X	X	X	X
Cuba					
Curaçao	X	X	X	X	X
Cyprus[b]	X	X	X	X	X
Czechia[b,d]	X	X	X	X	X
Democratic People's Republic of Korea	X	X		X	X
Democratic Republic of the Congo	X	X	X	X	X
Denmark[b]	X	X	X	X	X
Djibouti					
Dominica					X
Dominican Republic		X	X	X	
Ecuador	X	X	X	X	X
Egypt	X	X	X	X	X
El Salvador	X	X	X	X	X
Equatorial Guinea					
Eritrea	X				
Estonia[b]	X	X	X	X	X
Ethiopia	X	X		X	
Falkland Islands (Malvinas)	X	X	X	X	X
Fiji					X
Finland[b]	X	X	X	X	X
France[b]	X	X	X	X	X
French Polynesia [a]				X	
Gabon					
Gambia		X			X
Georgia	X	X	X	X	X
Germany[b]	X	X	X	X	X
Ghana	X	X	X	X	X
Gibraltar					
Greece[b]	X	X	X	X	X
Grenada					
Guatemala	X	X	X	X	X
Guinea					

Country or territory	2012	2013	2014	2015	2016
Guinea-Bissau	X				
Guyana			X	X	X
Haiti		X	X	X	
Holy See[e]					
Honduras	X	X		X	X
Hungary[b]	X	X	X	X	X
Iceland	X	X	X	X	X
India	X	X	X	X	X
Indonesia	X	X	X	X	X
Iran (Islamic Republic of)		X	X	X	
Iraq					X
Ireland[b]	X	X	X	X	X
Israel	X	X	X	X	X
Italy[b]	X	X	X	X	X
Jamaica		X	X	X	X
Japan	X	X	X	X	X
Jordan	X	X	X	X	X
Kazakhstan	X	X		X	X
Kenya				X	X
Kiribati					
Kuwait	X	X		X	
Kyrgyzstan	X	X	X	X	
Lao People's Democratic Republic	X	X	X	X	X
Latvia[b]	X	X	X	X	X
Lebanon	X	X	X		
Lesotho					
Liberia					
Libya					
Liechtenstein[f]					
Lithuania[b]	X	X	X	X	X
Luxembourg[b]	X	X	X	X	X
Madagascar		X	X	X	X
Malawi					
Malaysia	X	X	X	X	X
Maldives	X	X			X
Mali		X		X	
Malta[b]	X	X	X	X	X
Marshall Islands					
Mauritania					
Mauritius	X				
Mexico	X	X	X	X	X
Micronesia (Federated States of)		X			
Monaco					X
Mongolia	X			X	X
Montenegro	X	X	X	X	X
Montserrat [a]	X	X	X	X	X
Morocco	X	X	X	X	X
Mozambique			X		X
Myanmar	X	X	X	X	X

Country or territory	2012	2013	2014	2015	2016
Namibia			X		X
Nauru					
Nepal		X	X		
Netherlands[b]	X	X	X	X	X
New Caledonia [a]	X	X	X	X	X
New Zealand	X	X		X	X
Nicaragua	X	X	X	X	X
Niger					
Nigeria	X	X		X	X
Niue					
Norfolk Island [c]		X	X	X	
Norway	X	X	X	X	
Oman			X	X	X
Pakistan	X	X	X	X	X
Palau		X			
Panama	X	X	X	X	X
Papua New Guinea					
Paraguay		X			X
Peru	X	X	X	X	X
Philippines	X	X	X	X	X
Poland[b]	X	X	X	X	X
Portugal[b]	X	X	X	X	X
Qatar		X			
Republic of Korea	X	X	X	X	X
Republic of Moldova	X	X	X	X	X
Romania[b]	X	X	X	X	X
Russian Federation	X	X	X	X	X
Rwanda				X	
Saint Helena					
Saint Kitts and Nevis					
Saint Lucia	X	X	X	X	X
Saint Vincent and the Grenadines	X	X	X	X	X
Samoa	X				
San Marino[e]					
Sao Tome and Principe					
Saudi Arabia	X	X	X	X	X
Senegal		X	X	X	X
Serbia	X	X			X
Seychelles	X				X
Sierra Leone					
Singapore	X	X	X	X	X
Sint Maarten					
Slovakia[b]	X	X	X	X	X
Slovenia[b]	X	X	X	X	X
Solomon Islands					
Somalia					
South Africa		X		X	X
South Sudan					
Spain[b]	X	X	X	X	X

Country or territory	2012	2013	2014	2015	2016
Sri Lanka	X	X	X	X	X
Sudan			X	X	X
Suriname					
Swaziland					
Sweden[b]	X	X	X	X	X
Switzerland	X	X	X	X	X
Syrian Arab Republic	X	X	X	X	X
Tajikistan	X	X		X	X
Thailand	X	X	X	X	X
The former Yugoslav Republic of Macedonia					
Timor-Leste					
Togo	X				
Tonga					
Trinidad and Tobago	X	X	X	X	X
Tristan da Cunha					
Tunisia	X	X	X	X	X
Turkey	X	X	X	X	X
Turkmenistan	X	X	X	X	X
Turks and Caicos Islands [a]					
Tuvalu	X				
Uganda	X	X	X	X	
Ukraine	X	X		X	X
United Arab Emirates	X	X	X	X	X
United Kingdom of Great Britain and Northern Ireland[b]	X	X	X	X	X
United Republic of Tanzania	X	X	X	X	X
United States of America	X	X	X	X	X
Uruguay	X	X	X	X	X
Uzbekistan	X	X	X	X	X
Vanuatu					
Venezuela (Bolivarian Republic of)	X	X	X	X	X
Viet Nam	X	X	X	X	
Wallis and Futuna Islands [a]					
Yemen	X				
Zambia			X		
Zimbabwe		X	X	X	X
Total number of Governments that submitted form D	**130**	**141**	**127**	**136**	**130**
Total number of Governments requested to provide Information	**213**	**213**	**213**	**213**	**213**

[a] Territorial application of the 1988 Convention has been confirmed by the authorities concerned.
[b] State member of the European Union.
[c] Information was provided by Australia.
[d] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.
[e] The Holy See and San Marino did not furnish form D separately as their data are included in the report of Italy.
[f] Liechtenstein did not furnish form D separately as its data are included in the report of Switzerland.
[g] Since 25 October 2013, "Cabo Verde" has replaced "Cape Verde" as the short name used in the United Nations.

Annex VIII

Seizures of substances in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, as reported to the International Narcotics Control Board, 2012–2016

1. Tables A and B below show information on seizures of the substances included in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, furnished to the International Narcotics Control Board by Governments in accordance with article 12, paragraph 12, of the Convention.

2. The tables include data on domestic seizures and on seizures effected at points of entry or exit. They do not include reported seizures of substances where it is known that the substances were not intended for the illicit manufacture of drugs (for example, seizures effected on administrative grounds or seizures of ephedrine/pseudoephedrine preparations to be used as stimulants). Stopped shipments are also not included. The information may include data submitted by Governments through means other than form D; in such cases, the sources are duly noted.

Units of measure and conversion factors

3. Units of measure are indicated for every substance. As fractions of full units are not listed in the tables, figures are rounded as necessary.

4. For a variety of reasons, individual quantities of some substances seized are reported to the Board using different units; for instance, one country may report seizures of acetic anhydride in litres, another in kilograms.

5. To enable a proper comparison of collected information, it is important that all data be collated in a standard format. To simplify the necessary standardization process, figures are given in grams or kilograms where the substance is a solid and in litres where the substance (or its most common form) is a liquid.

6. Seizures of solids reported to the Board in litres have not been converted into kilograms and are not included in the tables, as the actual quantity of substance in solution is not known.

7. For seizures of liquids, quantities reported in kilograms have been converted into litres using the following factors:

Substance	*Conversion factor (kilograms to litres)*[a]
Acetic anhydride	0.926
Acetone	1.269
Ethyl ether	1.408
Hydrochloric acid (39.1% solution)	0.833
Isosafrole	0.892

[a] Derived from density (Susan Budavari, ed., *The Merck Index*, 11th ed. (Rahway, New Jersey, United States of America, 1989)).

3,4-Methylenedioxyphenyl-2-propanone	0.833
Methyl ethyl ketone	1.242
1-Phenyl-2-propanone	0.985
Piperidine	1.160
Safrole	0.912
Sulphuric acid (concentrated solution)	0.543
Toluene	1.155

8. As an example, to convert 1,000 kilograms of methyl ethyl ketone into litres, multiply by 1.242, i.e. 1,000 × 1.242 = 1,242 litres.

9. For the conversion of gallons to litres, it has been assumed that in Colombia the United States of America gallon is used, with 3.785 litres to the gallon, and in Myanmar the imperial gallon is used, with 4.546 litres to the gallon.

10. If reported quantities have been converted, the converted figures are listed in the tables in italics.

11. The names of territories appear in italics.

12. A hyphen (-) signifies that the report did not include data on seizures of the particular substance in the reporting year.

13. A degree symbol (°) signifies less than the smallest unit of measurement shown for that substance (for example, less than 1 kilogram).

14. Discrepancies may exist between the regional total seizure figures and the world total figures because the actual quantities seized were rounded to whole numbers.

Table A. Seizures of substances in Table I of the 1988 Convention as reported to the International Narcotics Control Board, 2012–2016

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Africa																			
Chad	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Côte d'Ivoire	2012	-	-	-	[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2015	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mali	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	2014	-	-	21	-	-	-	2 100	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 100
Nigeria	2012	-	-	461	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	785	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Republic of Tanzania	2014	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zambia	2014	-	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-
Zimbabwe	2013	-	-	-	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Regional total	**2012**	**0**	**0**	**461**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2013	**0**	**0**	**0**	**114**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2014	**0**	**0**	**95**	**0**	**0**	**0**	**2 100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2015	**0**	**0**	**816**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	**0**	**0**	**444**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2 100**

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Americas																			
Central America and the Caribbean																			
Belize	2013	660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Honduras	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22 565	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nicaragua	2012	-	-	-	-	-	-	-	-	13	-	52	-	-	-	-	-	-	-
Panama	2013	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-
Regional total	**2012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**52**	**0**	**0**	**0**	**0**	**22 565**	**0**	**0**
	2013	**660**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**
	2014	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2015	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
North America																			
Canada	2012	-	-	686	-	-	20	-	°	-	°	-	-	526	-	5	309	-	2 025
	2013	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
	2014	°	-	65	-	-	-	-	14	-	-	-	-	-	-	°	°	-	2
	2015	°	-	°	[a]	-	°	-	°	°	-	-	-	°	-	-	-	[a]	°
	2016	-	-	639	[a]	-	-	-	-	-	-	-	-	-	-	-	5	[a]	-
Mexico	2012	35 040	-	-	-	-	1 630	-	-	-	-	1 188	-	4 699	3	35	62	-	-
	2013	7 597	-	-	-	-	-	-	-	-	-	3 324	-	2 796	-	-	7 197	-	-
	2014	13 368	-	-	-	-	-	-	-	-	-	1 315	-	5 892	-	-	-	-	-
	2015	3 356	-	-	-	-	-	-	-	-	-	550	-	16 537	-	-	-	-	-
	2016	2 900	-	-	-	-	-	-	-	-	-	59	-	7 033	-	-	-	-	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
United States	2012	859	-	270	-	-	-	-	3	-	-	314	-	-	-	152	241	-	1
	2013	-	-	16	-	-	-	-	-	-	-	-	-	-	-	-	1 029	-	10
	2014	°	-	°	°	-	-	-	-	-	-	-	-	°	-	-	19	1	-
	2015	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	210	-	-
	2016	°	-	27	-	-	-	1	3 880	°	°	°	-	1	288	°	127	-	3
Regional total	**2012**	**35 900**	**0**	**956**	**0**	**0**	**1 650**	**0**	**3**	**0**	**0**	**1 502**	**0**	**5 225**	**3**	**192**	**612**	**0**	**2 026**
	2013	**7 601**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3 324**	**0**	**2 796**	**0**	**0**	**8 228**	**0**	**10**
	2014	**13 368**	**0**	**65**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**1 315**	**0**	**5 893**	**0**	**1**	**19**	**1**	**2**
	2015	**3 356**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**550**	**0**	**16 537**	**0**	**0**	**210**	**0**	**0**
	2016	**2 900**	**0**	**665**	**0**	**0**	**0**	**1**	**3 880**	**0**	**0**	**59**	**0**	**7 034**	**288**	**1**	**132**	**0**	**3**
South America																			
Argentina	2012	-	-	9	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
	2013	-	-	-	1[a]	-	-	-	-	-	-	-	-	-	-	2	-	-	-
	2014	33	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	1 044	-	47	-	-	-	-	-	-	-	-	-	-	-	56	-	-	-
	2016	-	-	250	-	-	-	-	-	-	-	-	-	-	-	°	-	-	-
Bolivia (Plurinational State of)	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	964	-	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 058	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 492	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	862	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 001	-	-	-
Brazil	2012	1 878	-	-	-	-	-	-	-	-	-	-	-	-	-	278	-	-	-
	2013	249	-	-	-	-	-	-	-	-	-	-	-	-	-	14 621	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
	2016	-	-	°	-	-	-	-	-	1	-	-	-	-	-	8	-	-	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Chile	2015	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colombia	2012	11	-	-	-	-	-	-	-	-	-	-	-	-	-	55 677	-	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21 873	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	166 291	-	-	-
	2015	8	-	-	-	-	-	-	-	-	-	-	-	-	-	57 639	-	-	-
	2016	12	-	-	-	-	-	-	-	-	-	-	-	-	-	582 540	-	-	-
Ecuador	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
Paraguay	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 705	-	-	-
Peru	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 093	-	-	-
	2013	°	-	-	-	-	-	-	-	-	-	-	-	-	-	2 787	-	-	-
	2014	15	-	-	-	-	-	-	-	-	-	-	-	-	-	2 735	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	-	-	-
	2016	2 889	-	-	-	-	-	-	-	-	-	-	-	-	-	248	-	-	-
Venezuela (Bolivarian Republic of)	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 447	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 120	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 554	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	-
Regional total	**2012**	**1 890**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**62 462**	**0**	**0**	**0**
	2013	**250**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**46 046**	**0**	**0**	**0**
	2014	**48**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**171 649**	**0**	**0**	**0**
	2015	**1 052**	**0**	**47**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**60 166**	**0**	**0**	**0**
	2016	**2 901**	**0**	**250**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**585 003**	**0**	**0**	**0**

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Asia																			
East and South-East Asia																			
China[c]	2012	17 131	-	3 210	2 428	-	-	-	-	-	-	30	-	259	-	29 927	-	902	-
	2013	94 948	-	11 103	5 718	-	449	-	-	18	-	6 552	-	5 434	-	3 521	908	-	-
	2014	22 635	-	31 576	3 222	-	-	-	-	33	°	49 651	-	3 241	-	2 120	-	-	-
	2015	11 070	°	23 480	221	-	-	-	-	°	6	3	-	5 407	-	31 550	13	-	-
	2016	56 177	-	1 409	3 367	-	-	-	-	376	-	-	-	11 639	-	45	-	-	°
Hong Kong SAR of China	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	[a]	-
	2013	-	-	41	-	-	-	-	-	-	-	-	-	-	-	-	34	27[a]	-
	2016	-	-	43	[a]	-	-	-	-	-	-	-	-	-	-	°	-	-	-
Macao SAR of China	2012	-	-	-	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2012	-	-	4	[a]	-	-	-	-	-	4	-	-	-	-	-	-	-	-
	2013	-	-	°	°	-	-	-	-	-	-	-	-	-	-	-	-	-	257
	2014	-	-	°	[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	[a]	-
Japan	2013	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-
	2016	-	-	-	-	-	-	-	-	-	-	°	-	-	-	-	°	-	-
Lao People's Democratic Republic	2013	-	-	-	3[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malaysia	2012	-	-	-	91	-	-	-	-	-	-	-	-	-	-	-	5	-	-
	2013	-	-	66	90	-	-	-	-	-	-	-	-	-	-	-	-	63	-
	2014	-	-	-	33	-	-	-	-	-	-	-	-	-	-	1	287	112	-
	2015	-	-	75	-	-	-	-	-	-	-	-	-	-	-	-	56	-	-
	2016	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Myanmar	2013	-	-	-	133	-	-	-	-	-	-	95	-	-	-	-	-	3 581	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	4 800	-	-	-	-	-
	2015	60	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	16	-	534	-	-	-	-	-	-	-	-	-	-	-	-	181	-	-
Philippines	2012	-	-	378	-	-	-	-	-	212	273	-	-	-	°	-	3	-	-
	2013	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	609	-	-
	2014	-	-	510	-	-	-	-	-	-	°	-	-	-	°	-	-	-	-
	2015	-	-	50	-	-	-	-	-	-	°	-	-	-	-	-	2	-	-
	2016	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	2012	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	[a]	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[a]	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-
	2016	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	3 829	-
Viet Nam	2013	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	47	-
	2014	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-
Regional total	**2012**	**17 131**	**0**	**3 608**	**2 686**	**0**	**0**	**0**	**0**	**212**	**276**	**30**	**0**	**259**	**1**	**29 927**	**40**	**902**	**0**
	2013	**94 948**	**0**	**11 211**	**5 950**	**0**	**449**	**0**	**0**	**18**	**0**	**6 647**	**0**	**5 434**	**0**	**3 521**	**1 551**	**3 718**	**257**
	2014	**22 635**	**0**	**32 095**	**3 255**	**0**	**0**	**0**	**0**	**33**	**0**	**49 651**	**0**	**8 041**	**0**	**2 121**	**309**	**118**	**0**
	2015	**11 130**	**0**	**23 604**	**221**	**0**	**0**	**0**	**0**	**0**	**6**	**3**	**0**	**5 407**	**0**	**31 550**	**77**	**3**	**0**
	2016	**56 193**	**0**	**2 056**	**3 367**	**0**	**0**	**0**	**0**	**376**	**0**	**0**	**0**	**11 639**	**0**	**45**	**181**	**3 829**	**0**

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
South Asia																			
India	2012	336	-	559	-	-	-	-	-	-	8	-	-	-	-	-	5 691	236	-
	2013	242	-	707	-	-	-	-	-	-	-	-	-	-	-	-	5 098	[a]	-
	2014	100	-	654	-	-	-	-	-	-	-	-	-	78	-	-	-	676	-
	2015	4	-	97	[a]	-	-	-	472	43	-	-	-	-	-	-	730	[a]	-
	2016	2 464	-	-	21 179	-	-	-	13	-	-	-	-	-	-	-	-	155	-
Regional total	**2012**	**336**	**0**	**559**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**5 691**	**236**	**0**
	2013	**242**	**0**	**707**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5 098**	**0**	**0**
	2014	**100**	**0**	**654**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**78**	**0**	**0**	**0**	**676**	**0**
	2015	**4**	**0**	**97**	**0**	**0**	**0**	**0**	**472**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**730**	**0**	**0**
	2016	**2 464**	**0**	**0**	**21 179**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**155**	**0**
West Asia																			
Afghanistan	2012	31 451	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	14 212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	7 751	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	3 761	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	10 439	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-
Armenia	2012	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	2016	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-
Iran (Islamic Republic of)[d]	2013	16 501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	18 520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13 401	-	-	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Kyrgyzstan	2012	792	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lebanon	2012	-	-	6	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	-	[a]	-	-	-	-	-	-	-	-	-	-	-	-	[a]	-
	2015	-	-	-	-	-	-	-	-	-	-	16 082	-	-	-	-	-	-	-
Pakistan	2012	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	15 480	-	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	185	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	5 319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	40 000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 600	-	-	-
Syrian Arab Republic	2012	-	-	-	-	-	-	-	-	-	-	-	-	498	-	-	-	-	-
Turkey	2012	177	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	14 672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	854	-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	4 402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	1 588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uzbekistan	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32 684	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
Regional total	**2012**	**32 501**	**0**	**6**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**498**	**0**	**0**	**0**	**0**	**0**
	2013	**60 866**	**0**	**54**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1 760**	**0**	**0**	**0**
	2014	**8 790**	**0**	**68**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**0**	**0**	**0**
	2015	**13 481**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16 082**	**0**	**0**	**0**	**46 085**	**0**	**0**	**0**
	2016	**70 547**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**16**	**0**	**0**

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Europe																			
States not members of the European Union																			
Belarus	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-
	2016	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	○	-
Republic of Moldova	2013	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a	-
	2015	-	-	○	-	-	-	-	-	-	-	-	-	-	-	○	○	a	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a	-
Norway	2012	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
	2014	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-
	2015	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	○	-
Russian Federation	2012	5	-	○	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
	2013	8	-	2	-	-	-	-	83	-	-	-	-	30	-	-	-	-	-
	2014	17	-	-	○	-	-	-	-	-	-	-	-	○	-	-	-	○	-
	2015	47	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-
	2016	6	-	3	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-
Serbia	2012	-	-	○	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-
Switzerland	2014	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Ukraine	2012	52	-	-	○	-	○	-	-	-	○	-	-	○	-	101	○	-	-
	2013	1 664	-	-	51	-	-	-	-	-	○	-	-	-	-	225	-	2 991	-
	2015	57	-	-	○	-	-	-	-	-	○	25	-	-	○	10	○	47	○
	2016	97	-	-	253	-	-	-	-	○	-	-	-	430	-	14	○	2	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
States members of the European Union																			
Austria	2013	2	-	-	-	-	-	-	-	104	-	-	-	-	-	1	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-	-
	2015	2 037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	2012	-	-	-	-	-	-	-	-	-	-	-	-	503	-	-	-	-	-
	2013	-	-	°	-	-	-	-	-	2 781	-	-	-	15	-	-	-	-	-
	2014	-	-	2	-	-	-	-	-	5	-	-	122	25	-	-	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	637	435	-	-	-	-	1
	2016	-	-	3	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-
Bulgaria	2012	42	-	°	[a]	-	-	-	-	-	-	-	-	2	-	-	-	[a]	-
	2013	-	-	-	-	-	-	-	-	-	-	97	-	-	-	-	-	108	-
	2014	-	-	-	-	-	-	-	-	-	-	-	1 980	-	-	-	-	841	-
	2015	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	32	66	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-
Croatia	2013	-	-	-	°	-	-	-	-	-	-	-	-	°	-	-	-	-	-
	2014	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	°	-
Czechia[e]	2012	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	2	16	-
	2013	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	64	25	-
	2014	-	-	14	2	-	-	-	-	-	-	-	-	-	-	-	12	351	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77	-
	2016	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	20	26	-
Estonia	2013	°	-	-	-	-	-	-	-	-	-	-	-	°	-	-	-	-	-
	2014	°	-	-	°	-	-	-	-	-	-	100	5	-	-	-	-	-	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-	-	-	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Finland	2012	-	-	-	[a]	-	-	-	-	-	-	-	-	°	-	-	-	°	-
	2013	-	-	-	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	-	2	-	-	-	-	-	-	-	-	°	°	-	-	°	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	1	°	°	-	°	-
France	2012	-	-	1	-	-	-	-	-	-	-	-	-	-	-	°	1	-	-
	2013	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-
	2014	-	-	15	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	2015	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-
	2016	-	-	11	°	-	-	-	500	888	-	-	-	-	-	-	-	-	-
Germany	2012	-	-	°	-	-	-	-	-	-	-	-	-	38	-	°	-	-	-
	2013	-	-	°	[a]	-	-	-	-	-	-	-	-	°	-	1	-	[a]	-
	2014	-	-	°	°	-	-	-	-	-	-	-	5 105	2	-	°	-	-	-
	2015	1	-	4	-	-	-	-	-	-	-	-	38	2	°	°	°	[a]	-
	2016	-	-	15	-	-	200	-	-	-	-	-	200	-	-	-	-	-	-
Greece	2012	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	2012	33	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
	2014	-	-	°	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	-	°	-	-	-	-	-	-	-	-	14	-	-	-	-	-
	2016	-	-	-	[a]	-	-	-	-	-	-	-	-	-	-	°	-	-	-
Ireland	2012	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-
	2015	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Latvia	2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-
Lithuania	2012	-	-	-	-	-	-	-	-	-	-	-	-	17	332	-	-	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	13
	2014	-	-	-	-	-	-	-	-	-	-	-	-	690	-	-	-	-	-
	2015	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-	-	-	-
Luxembourg	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	-	-
Netherlands	2012	-	-	-	-	-	-	10	-	-	-	-	-	123	-	-	500	-	-
	2013	-	-	-	-	-	-	10	-	112	-	-	-	-	-	80	-	-	13 825
	2014	-	-	-	-	-	-	-	-	-	-	-	3 090	428	5	-	-	2	-
	2015	-	-	-	-	-	-	-	-	507	-	258	710	525	45	26	-	-	2
	2016	75	-	-	-	-	-	-	-	148	-	-	393	22	1	-	-	-	61
Poland	2012	1 755	-	-	-	-	-	-	-	-	-	116	-	149	-	-	-	-	-
	2013	°	°	10	-	-	-	-	-	-	-	-	-	1	-	5	°	-	-
	2014	4	-	°	-	-	-	-	-	-	-	-	611	1 472	-	-	°	-	-
	2015	-	-	1	-	-	-	-	-	-	-	-	31	6 920	-	-	-	35	-
	2016	-	-	-	26	-	-	-	-	-	-	-	-	107	-	-	-	-	2
Portugal	2013	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-
	2015	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	[a]	-
Romania	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-	-	-
	2014	-	-	-	-	-	-	-	-	-	-	-	150	-	-	-	-	-	-
Slovakia	2012	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	°	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	°	[a]	-
	2014	-	-	°	-	-	-	-	-	-	-	-	-	-	-	°	-	11	-
	2015	-	-	°	-	-	-	-	-	-	-	-	-	-	-	1 000	°	-	-
	2016	-	-	°	-	-	-	-	-	-	-	-	-	-	-	-	-	°	-

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
Spain	2012	11	-	1 500	°	-	-	-	-	-	-	-	-	-	-	19	-	-	-
	2013	9 497	-	-	-	-	°	-	-	-	-	-	-	-	1 400	5 926	-	-	-
	2014	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	1	-	2	-	-	-	-	-	-	-	2	122	-	-	-	-	-	-
	2016	-	-	-	3	-	-	-	-	-	-	-	-	-	-	8	-	-	-
Slovenia	2012	-	-	°	-	-	-	-	-	°	-	-	-	-	-	-	-	-	-
	2013	-	-	°	-	-	-	-	-	912	-	-	-	-	-	°	-	-	-
Sweden	2012	-	-	°	1[a]	-	-	-	-	-	-	-	-	-	°	-	-	-	-
	2013	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2014	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2015	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016	-	-	-	[a]	-	-	-	-	-	-	-	-	7	-	-	-	°	-
United Kingdom of Great Britain and Northern Ireland	2012	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[a]	-
	2016	-	-	29	[a]	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Regional total	**2012**	**1 899**	**1**	**1 504**	**2**	**0**	**0**	**10**	**0**	**3**	**0**	**116**	**0**	**836**	**332**	**121**	**804**	**16**	**0**
	2013	**11 171**	**1**	**15**	**653**	**0**	**1**	**10**	**83**	**3 910**	**0**	**97**	**0**	**61**	**1 405**	**6 240**	**64**	**3 125**	**13 840**
	2014	**131**	**0**	**31**	**7**	**0**	**0**	**0**	**0**	**5**	**0**	**100**	**11 062**	**2 640**	**5**	**1**	**13**	**1 206**	**0**
	2015	**2 144**	**0**	**7**	**3**	**0**	**0**	**0**	**0**	**507**	**0**	**286**	**1 537**	**7 896**	**45**	**1 036**	**32**	**225**	**3**
	2016	**178**	**0**	**67**	**283**	**0**	**200**	**0**	**500**	**1 056**	**0**	**0**	**597**	**579**	**1**	**22**	**21**	**31**	**65**
Oceania																			
Australia	2012	2	-	520	-	-	-	°	691	°	2	°	-	-	°	-	770	2	1
	2013	-	-	1 253	-	-	207	-	523	-	1	°	-	1	°	-	629	-	11
	2014	-	-	457	-	-	57	°	-	20	°	°	-	°	°	-	11	-	184
	2015	-	-	457	-	-	281	-	-	139	12	1	-	-	°	-	72	-	73
	2016	°	-	1 118	-	-	290	-	804	°	-	-	-	-	-	-	1 046	-	°

Country or territory	Year	Acetic anhydride (litres)	*N*-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations[a] (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid (kilograms)	*alpha*-Phenylacetoacetonitrile (APAAN)[b] (kilograms)	1-Phenyl-2-propanone (litres)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations[a] (kilograms)	Safrole (litres)
New Zealand	2012	°	-	-	5	-	-	-	-	-	-	-	-	-	-	°	-	426[a]	1
	2013	°	-	-	[b]	-	-	-	-	-	-	-	-	-	-	-	-	691[a]	-
	2015	3	-	952	-	-	-	-	-	-	-	-	-	-	-	°	61	-	-
	2016	°	-	1 228	-	-	-	-	-	-	-	-	-	-	-	°	-	9	-
Regional total	**2012**	**2**	**0**	**520**	**5**	**0**	**0**	**0**	**691**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**770**	**429**	**2**
	2013	**0**	**0**	**1 253**	**3**	**0**	**207**	**0**	**523**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**629**	**691**	**11**
	2014	**0**	**0**	**457**	**0**	**0**	**57**	**0**	**0**	**20**	**0**	**0**	**0**	**1**	**0**	**0**	**11**	**0**	**184**
	2015	**3**	**0**	**1 409**	**0**	**0**	**281**	**0**	**0**	**139**	**12**	**1**	**0**	**0**	**1**	**0**	**133**	**0**	**73**
	2016	**1**	**0**	**2 347**	**0**	**0**	**290**	**0**	**804**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1 046**	**9**	**0**
World total	**2012**	**89 657**	**1**	**7 624**	**2 714**		**1 650**	**10**	**694**	**228**	**286**	**1 700**		**6 818**	**336**	**92 702**	**30 481**	**1 583**	**2 028**
	2013	**175 739**	**1**	**13 256**	**6 721**	**0**	**657**	**10**	**606**	**3 927**	**23**	**10 068**		**8 292**	**1 405**	**57 567**	**15 571**	**7 534**	**14 117**
	2014	**45 071**		**33 491**	**3 261**	**0**	**57**	**2 100**	**14**	**58**	**0**	**51 066**	**11 062**	**16 653**	**5**	**173 824**	**351**	**2 002**	**185**
	2015	**31 169**	**0**	**25 982**	**224**		**281**		**472**	**689**	**18**	**16 922**	**1 537**	**29 840**	**46**	**138 837**	**1 182**	**228**	**77**
	2016	**135 184**		**5 829**	**24 829**		**490**	**1**	**5 197**	**1 434**	**0**	**59**	**597**	**19 252**	**289**	**585 072**	**1 392**	**4 024**	**2 169**

[a] Seizures of ephedrine and pseudoephedrine reported to the Board in consumption units (such as tablets and doses) have not been converted into kilograms, as the actual quantity of ephedrine and pseudoephedrine is not known. The countries and territories listed in the table below have reported seizures of preparations containing ephedrine and/or pseudoephedrine quantified in terms of consumption units.

Country or territory	*Year*	*Ephedrine preparations (units)*	*Pseudoephedrine preparations (units)*
Argentina	2013	34	-
Bulgaria	2012	50 000	3 660
Canada	2015	30 433	907
	2016	9 757 657	45
Hong Kong SAR of China	2012	-	100 017
	2013	-	656 271
	2016	11 050	-
Côte d'Ivoire	2012	80 820	-

Country or territory	*Year*	*Ephedrine preparations (units)*	*Pseudoephedrine preparations (units)*
Finland	2012	6 359	-
Germany	2013	4 034	78
	2015	-	1779
Hungary	2016	21	-
India	2013	-	31 419 376
	2015	560	3 342 792
Indonesia	2012	53	-
	2014	17	-
	2015	-	60
Lao People's Democratic Republic	2013	21 800	-
Lebanon	2014	47	7 662
New Zealand	2012	-	3 630
	2013	6 956	5 073
Portugal	2016	-	2
Republic of Moldova	2014	-	60
	2015	-	60
	2016	-	60
Slovakia	2013	-	16 128
Sweden	2012	60 976	-
	2016	6 363	-
Switzerland	2014	185	-
Thailand	2012	-	2 011 100
	2013	-	302 630
United Kingdom	2013	-	1 000
	2016	2 350	-

[b] Included in Table I of the 1988 Convention, effective 6 October 2014.

[c] For statistical purposes, the data for China do not include those for Hong Kong Special Administrative Region (Hong Kong SAR) or Macao Special Administrative Region (Macao SAR).

[d] Based on data on seizures of precursors reported by the Drug Control Headquarters of the Islamic Republic of Iran in the *Drug Control Report* of the corresponding year.

[e] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.

Table B. Seizures of substances in Table II of the 1988 Convention as reported to the International Narcotics Control Board, 2012–2016

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Africa									
Namibia	2016	-	-	-	-	-	-	-	47 355
Nigeria	2015	-	-	-	-	-	-	-	°
	2016	979	-	-	3	-	-	-	785
Regional total	**2012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2013	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2014	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2015	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	**979**	**0**	**0**	**3**	**0**	**0**	**0**	**48 140**
Americas									
Central America and the Caribbean									
Honduras	2016	22	-	-	8	-	-	1	-
Regional total	**2012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2013	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2014	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2015	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	**22**	**0**	**0**	**8**	**0**	**0**	**1**	**0**
North America									
Canada	2012	2 786	-	°	855	4	18	24	1 718
	2013	569	-	-	48	-	-	2	981
	2014	940	-	-	219	-	-	153	645
	2015	°	°	-	°	°	-	°	-
	2016	215	-	-	317	-	-	41	216
Mexico	2012	10 669	-	14	29 310	64	-	3 171	26 243
	2013	6 901	-	28 001	14 207	94	-	439	12 333
	2014	2 402	-	°	8 446	281	-	1 406	4 324
	2015	8 117	-	-	188 256	184	-	4 508	26 643
	2016	21 035	-	-	26 573	89	-	2 502	48 172
United States	2012	10 594	-	60	206	3	189	125	12
	2013	2 457	-	18	1 681	11	57	1 930	102
	2014	4 477	-	277	1 326	11	57	1	72
	2015	3 810	-	168	1 325	18	-	1 244	41
	2016	121 580	-	833	105 991	3	°	-	-

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Regional total	**2012**	**24 049**	**0**	**74**	**30 372**	**71**	**207**	**3 320**	**27 972**
	2013	**9 926**	**0**	**28 019**	**15 936**	**104**	**57**	**2 371**	**13 415**
	2014	**7 819**	**0**	**278**	**9 991**	**292**	**57**	**1 560**	**5 041**
	2015	**11 927**	**0**	**168**	**189 581**	**202**	**0**	**5 752**	**26 684**
	2016	**142 830**	**0**	**833**	**132 881**	**92**	**0**	**2 543**	**48 418**
South America									
Argentina	2012	311	-	131	52	53	-	26	-
	2013	2 768	-	104	165	3	-	202	-
	2014	67	-	77	24 677	-	-	50	-
	2015	8 001	-	72	54 250	12	-	4 145	71 478
	2016	20 599	-	10	11 989	4 680	-	1 431	400
Bolivia (Plurinational State of)	2012	59 711	-	7 120	5 873	680	-	72 034	6 349
	2013	99 315	-	-	24 839	57	-	67 929	140
	2014	18 830	-	1 112	5 700	-	-	56 283	126
	2015	45 869	-	12 309	5 722	-	-	51 837	160
	2016	32 937	-	14 570	25 832	245	-	47 795	-
Brazil	2012	1 606	-	466	91 697	3 308	-	28 271	3 742
	2013	2 491	-	58	5 948	-	-	698	-
	2014	154	-	-	15 319	-	-	399	-
	2015	1 081	-	313	374 679	-	-	317 998	-
	2016	421	-	1	1 210	-	-	2 529	3 011
Chile	2012	-	-	-	-	-	-	5	-
	2013	2	-	-	144	-	-	63 610	-
	2014	25	-	4	226	-	-	233	-
	2015	°	-	-	142	14	-	196	°
	2016	2	-	-	95	-	-	73	-
Colombia	2012	739 247	-	25 295	76 290	1 419	-	163 242	33 792
	2013	482 063	-	2 286	144 686	3 406	-	1 060 578	765
	2014	456 643	-	2 117	75 058	6 155	-	276 004	191 390
	2015	613 920	-	11 697	211 090	172	-	282 853	56 221
	2016	946 102	-	927	208 676	22 807	-	504 970	379 495

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Ecuador	2012	-	-	-	-	-	-	771	-
	2013	-	-	-	104	1 420	-	1 625	-
	2014	-	-	-	154	-	-	708	-
	2015	-	-	-	11	-	-	2 642	-
	2016	-	-	-	40 927	-	-	4 831	-
Paraguay	2013	-	-	-	2 019	-	-	6 960	-
Peru	2012	70 024	-	-	87 695	-	-	29 777	100
	2013	86 313	-	128	73 200	157	-	87 675	-
	2014	83 006	-	4	58 907	1 225	-	87 305	3 128
	2015	55 229	-	-	9 904	-	-	16 576	-
	2016	114 318	-	-	49 203	976	-	68 354	1 795
Uruguay	2016	2	-	-	-	-	-	-	-
Venezuela (Bolivarian Republic of)	2012	39 331	-	-	28 605	-	-	87 470	427
	2014	27 598	-	-	1 061	99	-	831	301
	2015	203 824	-	-	19 318	-	-	10 411	10 666
	2016	2 018	-	-	2 948	75	-	18 726	1 982
Regional total	**2012**	**910 230**	**0**	**33 012**	**290 212**	**5 460**	**0**	**381 596**	**44 411**
	2013	**672 952**	**0**	**2 577**	**251 104**	**5 043**	**0**	**1 289 277**	**905**
	2014	**586 323**	**0**	**3 313**	**181 101**	**7 479**	**0**	**421 813**	**194 946**
	2015	**927 924**	**0**	**24 391**	**675 116**	**198**	**0**	**686 659**	**138 525**
	2016	**1 116 399**	**0**	**15 509**	**340 881**	**28 783**	**0**	**648 708**	**386 683**
Asia									
East and South-East Asia									
China[a]	2012	31 953	-	15 770	166 825	1 217	-	18 479	13 900
	2013	351 870	490 302	12 204	1 627 816	1 906	2	1 297 043	221 026
	2014	139 171	816	7 918	1 659 718	640	-	679 966	290 917
	2015	9 768	9 575	909	565 575	727	-	177 115	91 804
	2016	32 658	2	1 412	483 284	-	-	75 212	188 454
Hong Kong SAR of China	2016	3	-	-	-	-	-	-	-
Indonesia	2012	2	-	-	6	-	-	5	-
	2013	°	-	-	-	-	-	-	-
	2014	°	-	-	2 376	-	-	1 015	506
	2015	20	-	-	29	-	-	63	19

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Malaysia	2012	460	-	-	300	-	-	100	150
	2013	85	-	9	219	-	-	-	25
	2014	139	-	13	779	-	-	-	153
	2015	194	-	3	283	-	-	-	513
	2016	-	-	3	74	-	-	-	875
Myanmar	2013	-	-	600	145	-	-	924	-
	2014	193 922	-	-	1 687 325	-	-	6 716 899	2 452 409
	2016	1 238	-	250	3 495	-	-	28 476	-
Philippines	2012	6 436	-	5	1 646	25	-	3 080	17 941
	2013	-	-	-	-	-	-	10	-
	2014	°	-	-	°	-	-	-	640
	2015	217	-	-	283	-	-	5	1 293
	2016	221	-	-	200	-	-	2	55
Singapore	2014	20	-	-	-	-	-	-	-
	2016	°	-	-	-	2	-	-	-
Thailand	2012	300	-	-	-	-	-	-	450
	2013	-	-	-	450	-	-	-	-
Regional total	**2012**	**39 151**	**0**	**15 775**	**168 776**	**1 242**	**0**	**21 664**	**32 441**
	2013	**351 956**	**490 302**	**12 813**	**1 628 630**	**1 906**	**2**	**1 297 977**	**221 051**
	2014	**333 253**	**816**	**7 931**	**3 350 198**	**640**	**0**	**7 397 880**	**2 744 624**
	2015	**10 199**	**9 575**	**911**	**566 170**	**727**	**0**	**177 183**	**93 629**
	2016	**34 121**	**2**	**1 665**	**487 053**	**2**	**0**	**103 690**	**189 384**
South Asia									
India	2014	-	-	-	-	110 364	-	-	-
	2015	-	-	-	-	32	-	-	-
Regional total	**2012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2013	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2014	**0**	**0**	**0**	**0**	**110 364**	**0**	**0**	**0**
	2015	**0**	**0**	**0**	**0**	**32**	**0**	**0**	**0**
	2016	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
West Asia									
Afghanistan	2012	-	-	-	-	-	-	3 764	-
	2013	174	-	-	4 705	-	-	-	-
	2014	-	-	-	5 317	-	-	19 075	25
	2015	-	-	-	-	-	-	15 900	363
	2016	502	-	-	269	-	-	48	450
Armenia	2012	-	-	-	°	-	-	-	-
	2013	-	-	°	°	-	-	-	-
	2014	-	-	°	°	-	-	-	-
	2015	°	-	-	°	-	-	°	°
	2016	°	-	-	°	-	-	-	-
Kazakhstan	2012	°	-	-	1 600	-	-	913	-
	2016	-	-	-	1	-	-	6	-
Kyrgyzstan	2012	-	-	-	98	-	-	3 703	-
	2013	-	-	-	-	-	-	4 386	-
	2014	-	-	-	535	-	-	12 756	-
	2015	-	-	-	404	-	-	8 144	-
Lebanon	2012	13	-	2 358	-	-	-	-	-
	2014	32	-	43	10	-	-	-	-
	2016	-	-	240	1	-	-	-	-
Pakistan	2012	-	-	-	-	-	-	326	-
	2013	-	-	-	925	-	-	326	-
	2014	-	-	-	9 996	-	-	27 367	-
	2015	-	-	-	30	-	-	-	-
	2016	-	-	-	-	-	-	2 835	-
Qatar	2013	565	-	-	407 363	-	°	443 814	597
Tajikistan	2012	-	-	-	-	14	-	°	-
	2016	-	-	-	-	-	-	20 064	-
Uzbekistan	2014	-	-	-	-	-	-	1 610	-
	2015	10 500	-	-	-	-	-	7 800	-
	2016	2	-	-	-	-	-	-	-

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Regional total	**2012**	**14**	**0**	**2 358**	**1 698**	**14**	**0**	**8 707**	**0**
	2013	**739**	**0**	**0**	**412 993**	**0**	**0**	**448 526**	**597**
	2014	**32**	**0**	**43**	**15 859**	**0**	**0**	**60 809**	**25**
	2015	**10 500**	**0**	**0**	**435**	**0**	**0**	**31 844**	**363**
	2016	**504**	**0**	**240**	**271**	**0**	**0**	**22 953**	**450**
Europe									
States not members of the European Union									
Belarus	2013	-	-	-	-	-	-	10 751	-
	2014	94	-	-	-	-	-	-	-
	2015	2 931	-	-	16 329	-	-	-	1 104
	2016	-	-	-	-	-	-	2 180	-
Republic of Moldova	2015	-	-	-	2	-	-	°	-
Norway	2013	°	-	-	°	-	-	-	-
	2015	-	-	-	-	-	-	-	°
Russian Federation	2012	-	-	-	26	-	-	91 433	-
	2013	-	-	-	5	-	-	15	-
	2014	-	-	-	1	-	-	7	-
	2015	-	-	-	1	-	-	14	-
Serbia	2012	-	-	-	-	-	-	-	20
Ukraine	2012	10 324	-	9 216	2 211	720	-	3 302	20 089
	2013	1 163	-	-	3 053	-	-	631	602
	2015	4 275	-	-	182	-	-	35	24 180
	2016	113	-	-	142	-	-	10	12 097
States Members of the European Union									
Austria	2012	-	-	-	-	18	-	-	1
	2013	3	-	°	9	-	-	-	6
	2014	°	-	-	18	-	-	121	73
	2015	7	-	-	9	-	-	5	4
	2016	1	-	-	1	-	-	°	4
Belgium	2012	52	-	-	735	-	-	30	-
Bulgaria	2012	5	-	2	2	-	-	10	-
	2013	-	-	-	9	-	-	2	12

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Cyprus	2014	-	-	-	°	-	-	-	-
Czechia[b]	2014	1 380	-	-	822	-	-	-	1 571
	2016	-	-	-	5	-	-	222	9
Estonia	2012	-	-	5	-	-	-	27	-
	2013	-	-	-	1	-	-	°	-
	2015	-	-	-	°	-	-	°	-
	2016	°	-	-	°	-	-	1	-
Finland	2012	-	-	-	-	-	-	3	-
France	2012	-	-	1	-	3 019	-	1	1
Germany	2012	94	-	97	717	-	-	71	1 164
	2013	12	-	°	15	°	-	48	20
	2014	10	-	-	6	-	-	27	17
	2015	18	-	-	6	-	-	32	2
	2016	20	-	-	11	-	-	4	-
Hungary	2012	35	-	7	11	-	-	-	-
	2013	75	-	2	-	-	-	°	-
	2014	12	-	-	°	-	-	°	-
	2015	26	-	-	-	-	-	-	23
	2016	2	-	-	-	-	-	-	-
Latvia	2012	81	-	°	24	-	-	12	-
Lithuania	2015	-	-	2	-	-	-	-	-
Netherlands	2012	1 245	-	-	4 567	-	-	2 020	-
	2013	-	-	-	19 988	-	-	8 165	1
	2014	8 510	-	-	13 825	-	-	6 555	-
	2015	20 887	-	812	20 266	409	-	28 265	465
	2016	28 074	-	145	40 935	-	-	8 748	1 098
Poland	2012	285	-	-	3 575	-	-	148	15
	2013	-	-	-	40	-	-	1 436	-
	2014	130	-	-	8	-	-	11	196
	2015	-	-	-	121	-	-	57	7
	2016	8	-	-	104	-	-	440	23

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Portugal	2012	°	-	-	-	-	-	-	-
	2013	3	-	-	2	-	-	1	-
	2015	64	-	5	9	-	-	-	-
	2016	-	-	-	°	-	-	-	-
Romania	2012	3	-	-	-	-	-	-	-
	2016	4	-	-	-	-	-	-	-
Slovakia	2012	1	-	-	2	-	-	-	20
	2013	-	-	-	8	-	-	-	6
	2014	°	-	1	10	-	-	3	18
	2015	-	-	-	1	-	-	-	43
	2016	-	-	-	4	-	-	-	83
Spain	2012	425	-	287	990	123	50	30	33
	2013	1 190	-	297	490	2 197	-	1 086 979	11 511 987
	2014	85	-	20	159	1	-	1	2
	2015	941	-	78	4 412	1 061	-	444	1
	2016	1 610	-	133	1 077	101	-	569	-
Sweden	2016	10	-	-	-	-	-	-	-
United Kingdom	2012	-	-	21	-	385	-	-	-
	2013	-	-	-	-	-	-	20	-
	2016	-	°	-	-	-	-	-	-
Regional total	**2012**	**12 549**	**0**	**9 635**	**12 859**	**4 266**	**50**	**97 087**	**21 343**
	2013	**2 447**	**0**	**299**	**23 621**	**2 197**	**0**	**1 108 049**	**11 512 633**
	2014	**10 221**	**0**	**21**	**14 851**	**1**	**0**	**6 724**	**1 878**
	2015	**29 148**	**0**	**897**	**41 338**	**1 470**	**0**	**28 851**	**25 829**
	2016	**29 842**	**0**	**278**	**42 280**	**101**	**0**	**12 174**	**13 314**
Oceania									
Australia	2012	130	-	-	112	16	-	62	83
	2015	-	2	-	-	-	-	-	-
	2016	-	1	-	-	-	°	-	-
New Zealand	2012	93	-	-	137	-	-	10	682
	2013	108	-	-	263	13	-	74	835
	2015	45	-	-	313	-	-	46	140
	2016	71	-	-	167	-	-	6	77

Country or territory	Year	Acetone (litres)	Anthranilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
Regional total	**2012**	**223**	**0**	**0**	**249**	**16**	**0**	**72**	**765**
	2013	**108**	**0**	**0**	**263**	**13**	**0**	**74**	**835**
	2014	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2015	**45**	**2**	**0**	**313**	**0**	**0**	**46**	**140**
	2016	**71**	**1**	**0**	**167**	**0**	**0**	**6**	**77**
World total	**2012**	**986 216**		**60 854**	**504 165**	**11 069**	**257**	**512 447**	**126 932**
	2013	**1 038 128**	**490 302**	**43 708**	**2 332 546**	**9 264**	**59**	**4 146 274**	**11 749 436**
	2014	**937 648**	**816**	**11 585**	**3 572 000**	**118 776**	**57**	**7 888 787**	**2 946 513**
	2015	**989 743**	**9 577**	**26 368**	**1 472 951**	**2 628**	**0**	**930 335**	**285 170**
	2016	**1 324 766**	**3**	**18 525**	**1 003 543**	**28 978**	**0**	**790 075**	**686 467**

[a] For statistical purposes, the data for China do not include those for Hong Kong Special Administrative Region (Hong Kong SAR) or Macao Special Administrative Region (Macao SAR).

[b] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.

Annex IX

Submission of information by Governments on licit trade in, uses of and requirements for substances in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 for the years 2012–2016

Governments of the countries and territories indicated have provided information on licit trade in, uses of and requirements for substances in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 on form D for the years 2012–2016. That information was requested in accordance with Economic and Social Council resolution 1995/20. Details may be made available on a case-by-case basis, subject to confidentiality of data.

Notes: The names of non-metropolitan territories and special administrative regions are in italics.
A blank signifies that no information was provided.
"X" signifies that a completed form D (or equivalent report) was submitted (including forms in which all fields contained "nil", "0", "none", etc.).

Country or territory	2012		2013		2014		2015		2016	
	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments
Afghanistan	X	X	X	X	X	X	X	X	X	X
Albania	X	X	X	X	X	X	X	X	X	X
Algeria	X	X	X	X	X	X	X	X	X	X
Andorra	X	X	X	X				X		
Angola									X	
Anguilla										
Antigua and Barbuda										
Argentina	X	X	X	X	X	X	X	X	X	X
Armenia	X	X	X	X	X	X	X	X	X	X
Aruba										
Ascension Island										
Australia	X	X	X	X	X	X	X	X	X	X
Austria[a]	X	X	X	X	X	X	X	X	X	X
Azerbaijan	X	X	X	X	X	X	X	X	X	X
Bahamas										
Bahrain					X	X	X	X	X	X
Bangladesh	X	X	X	X	X	X	X	X		
Barbados			X	X						
Belarus	X	X	X	X	X	X	X	X	X	X
Belgium[a]	X	X	X	X	X	X	X	X	X	X
Belize			X	X						
Benin	X	X	X	X	X	X	X	X		
Bermuda										
Bhutan	X	X			X	X	X	X	X	X
Bolivia (Plurinational State of)	X	X	X	X	X	X	X	X	X	X
Bosnia and Herzegovina	X	X	X	X	X	X	X	X	X	X
Botswana										

Country or territory	2012		2013		2014		2015		2016	
	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments
Brazil	X	X	X	X	X	X	X	X	X	X
British Virgin Islands										
Brunei Darussalam	X	X	X	X	X	X	X	X	X	X
Bulgaria[a]	X	X	X	X	X	X	X	X	X	X
Burkina Faso										
Burundi							X	X		
Cabo Verde[b]					X	X	X	X	X	X
Cambodia	X		X	X		X				
Cameroon	X	X			X	X				
Canada	X	X	X	X	X	X	X	X	X	X
Cayman Islands										
Central African Republic										
Chad										
Chile	X	X	X	X	X	X	X	X	X	X
China	X	X	X	X	X	X	X		X	X
China, Hong Kong SAR	X	X	X	X					X	X
China, Macao SAR	X	X	X	X	X	X	X	X		
Christmas Island			X				X	X		
Cocos (Keeling) Islands							X	X		
Colombia	X	X	X	X	X	X	X	X	X	X
Comoros										
Congo										
Cook Islands										
Costa Rica	X	X	X	X	X	X	X	X	X	X
Côte d'Ivoire	X	X	X	X	X	X			X	X
Croatia[a]	X	X	X	X	X	X	X	X	X	X
Cuba								X		
Curaçao	X	X	X	X	X	X	X	X	X	X
Cyprus[a]	X	X	X	X	X	X	X	X	X	X
Czechia[a,c]	X	X	X	X	X	X	X	X	X	X
Democratic People's Republic of Korea		X		X				X		X
Democratic Republic of the Congo	X	X	X		X		X		X	X
Denmark[a]	X	X	X		X	X	X	X	X	
Djibouti										
Dominica										
Dominican Republic			X	X	X	X	X	X		
Ecuador	X	X	X	X	X	X	X	X	X	X
Egypt	X	X	X	X	X	X	X	X	X	X
El Salvador	X	X	X	X	X	X	X	X	X	X
Equatorial Guinea										
Eritrea	X	X								
Estonia[a]	X	X		X	X	X	X	X	X	X
Ethiopia	X	X	X	X			X	X		
Falkland Islands (Malvinas)	X	X	X	X	X	X	X	X	X	X

Country or territory	2012		2013		2014		2015		2016	
	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments
Fiji									X	X
Finland[a]	X	X	X	X	X	X	X	X	X	X
France[a]	X	X	X	X	X	X	X	X	X	X
French Polynesia							X	X		
Gabon										
Gambia			X	X					X	
Georgia	X	X	X	X	X	X	X	X	X	X
Germany[a]	X	X	X	X	X	X	X	X	X	X
Ghana	X	X	X	X	X	X	X	X	X	X
Gibraltar										
Greece[a]	X	X	X	X	X	X	X	X		X
Grenada										
Guatemala	X	X	X	X	X	X	X	X	X	X
Guinea										
Guinea-Bissau										
Guyana	X	X			X	X		X		X
Haiti			X	X	X	X	X	X		
Holy See[d]										
Honduras	X	X	X	X			X	X	X	X
Hungary[a]	X	X	X	X	X	X	X	X	X	X
Iceland	X	X	X	X	X	X	X	X	X	X
India	X	X	X	X	X	X	X	X	X	X
Indonesia	X	X	X	X	X	X	X	X	X	X
Iran (Islamic Republic of)			X	X	X	X	X	X		
Iraq									X	X
Ireland[a]	X	X	X	X	X	X	X	X	X	X
Israel	X	X	X	X	X	X	X	X	X	X
Italy[a]	X	X	X	X	X	X	X	X	X	X
Jamaica			X	X	X	X	X	X	X	X
Japan	X	X	X	X	X	X	X	X	X	X
Jordan	X	X	X	X	X	X	X	X	X	X
Kazakhstan			X	X			X	X	X	X
Kenya							X	X	X	X
Kiribati										
Kuwait	X	X	X	X			X			
Kyrgyzstan	X	X	X	X	X	X	X	X		
Lao People's Democratic Republic	X	X	X	X	X		X		X	
Latvia[a]	X	X	X	X	X	X	X	X	X	X
Lebanon	X	X	X	X	X	X	X	X	X	X
Lesotho						X				

Country or territory	2012		2013		2014		2015		2016	
	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments
Liberia										
Libya										
Liechtenstein[e]										
Lithuania[a]		X	X	X	X	X	X	X	X	X
Luxembourg[a]										
Madagascar			X	X	X	X	X	X	X	X
Malawi						X				
Malaysia	X	X	X	X	X	X	X	X	X	X
Maldives	X	X	X	X					X	X
Mali			X	X						
Malta[a]		X	X	X	X	X	X	X	X	X
Marshall Islands										
Mauritania										
Mauritius	X	X								
Mexico	X	X	X	X	X	X	X	X	X	X
Micronesia (Federated States of)			X	X						
Monaco									X	X
Mongolia	X	X	X				X	X	X	
Montenegro	X	X	X	X	X	X	X	X	X	X
Montserrat	X	X	X	X	X	X	X	X	X	X
Morocco	X	X	X	X	X	X	X	X	X	X
Mozambique					X				X	X
Myanmar	X	X	X	X	X	X	X	X	X	X
Namibia										
Nauru										
Nepal			X	X	X	X				
Netherlands[a]	X	X	X	X	X	X	X	X	X	X
New Caledonia										
New Zealand	X	X	X	X			X	X	X	
Nicaragua	X	X	X	X	X	X	X	X	X	X
Niger										
Nigeria	X	X	X	X			X	X	X	X
Niue										
Norfolk Island							X	X		
Norway	X	X	X	X	X	X	X	X		
Oman					X	X	X	X	X	X
Pakistan	X	X	X	X	X	X	X	X	X	X
Palau										
Panama	X	X	X	X	X	X	X	X	X	X
Papua New Guinea										

Country or territory	2012		2013		2014		2015		2016	
	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments
Paraguay									X	X
Peru	X	X	X	X	X	X	X	X	X	X
Philippines	X	X	X	X	X	X	X	X	X	X
Poland[a]	X	X	X	X	X	X	X	X	X	X
Portugal[a]	X		X	X	X	X	X	X	X	X
Qatar			X	X						
Republic of Korea	X	X	X	X	X	X	X	X	X	X
Republic of Moldova	X	X	X	X	X	X	X	X	X	X
Romania[a]	X	X	X	X	X	X	X	X	X	X
Russian Federation	X	X	X	X	X	X	X	X	X	X
Rwanda							X	X		
Saint Helena										
Saint Kitts and Nevis										
Saint Lucia	X	X	X	X	X	X	X	X	X	X
Saint Vincent and the Grenadines	X	X	X	X	X	X	X	X	X	X
Samoa	X	X								
San Marino[d]										
Sao Tome and Principe										
Saudi Arabia	X		X	X	X	X	X	X	X	X
Senegal			X	X	X	X	X	X		X
Serbia	X	X	X	X					X	X
Seychelles	X	X							X	X
Sierra Leone										
Singapore	X	X	X	X	X	X	X	X	X	X
Sint Maarten										
Slovakia[a]	X	X	X	X	X	X	X	X	X	X
Slovenia[a]	X	X	X	X	X	X	X	X	X	X
Solomon Islands										
Somalia										
South Africa			X	X			X	X	X	X
South Sudan										
Spain[a]	X	X	X	X	X	X	X	X	X	X
Sri Lanka	X	X	X	X	X		X		X	X
Sudan					X	X	X		X	X
Suriname										
Swaziland										
Sweden[a]	X	X	X	X	X	X	X	X	X	X
Switzerland[e]	X	X	X	X	X	X	X	X	X	X
Syrian Arab Republic	X	X	X	X	X		X		X	
Tajikistan	X	X	X	X			X	X	X	X

Country or territory	2012		2013		2014		2015		2016	
	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments	Trade	Uses and/or require-ments
Thailand	X	X	X	X	X	X	X	X	X	X
The former Yugoslav Republic of Macedonia										
Timor-Leste										
Togo	X	X								
Tonga										
Trinidad and Tobago	X	X	X	X	X	X	X	X	X	X
Tristan da Cunha										
Tunisia	X	X	X	X	X	X	X	X	X	X
Turkey	X	X	X	X	X	X	X	X	X	X
Turkmenistan	X	X	X	X	X	X	X	X	X	X
Turks and Caicos Islands										
Tuvalu										
Uganda	X	X	X	X	X	X	X			
Ukraine	X	X	X	X			X	X	X	X
United Arab Emirates	X	X	X	X	X	X			X	X
United Kingdom of Great Britain and Northern Ireland[a]	X	X		X	X	X	X	X	X	X
United Republic of Tanzania	X	X	X	X	X	X	X	X	X	X
United States of America	X	X	X	X	X	X	X	X	X	X
Uruguay	X	X	X	X	X	X	X	X	X	X
Uzbekistan	X	X	X	X	X	X	X	X	X	X
Vanuatu										
Venezuela (Bolivarian Republic of)	X	X	X	X	X	X	X	X	X	X
Viet Nam	X	X	X	X	X	X	X	X		
Wallis and Futuna Islands										
Yemen	X	X								
Zambia					X	X				
Zimbabwe			X	X	X	X	X	X	X	X
Total number of Governments that submitted form D	**121**	**121**	**129**	**128**	**118**	**116**	**128**	**124**	**121**	**118**
Total number of Governments requested to provide information	**213**	**213**	**213**	**213**	**213**	**213**	**213**	**213**	**213**	**213**

[a] State member of the European Union.
[b] Since 25 October 2013, "Cabo Verde" has replaced "Cape Verde" as the short name used in the United Nations.
[c] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.
[d] The Government of Italy includes on form D licit trade data for the Holy See and San Marino.
[e] The Government of Switzerland includes on form D licit trade data for Liechtenstein.

Annex X

Governments that have requested pre-export notifications pursuant to article 12, paragraph 10 (a), of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988

1. Governments of all exporting countries and territories are reminded that it is an obligation to provide pre-export notifications to Governments that have requested them pursuant to article 12, paragraph 10 (a), of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, which provides that:

> "upon request to the Secretary-General by the interested Party, each Party from whose territory a substance in Table I is to be exported shall ensure that, prior to such export, the following information is supplied by its competent authorities to the competent authorities of the importing country:
>
> "(i) Name and address of the exporter and importer and, when available, the consignee;
>
> "(ii) Name of the substance in Table I;
>
> "(iii) Quantity of the substance to be exported;
>
> "(iv) Expected point of entry and expected date of dispatch;
>
> "(v) Any other information which is mutually agreed upon by the Parties."

2. Governments that have requested pre-export notifications are listed in the table below in alphabetical order, followed by the substance (or substances) for which pre-export notifications were requested, and the date of notification of the request transmitted by the Secretary-General to Governments.

3. The information is current as at 1 November 2017.

Notifying Government	*Substances for which pre-export notifications have been requested*	*Date of communication to Governments by the Secretary-General*
Afghanistan[a]	All substances included in Tables I and II	13 July 2010
Algeria[a]	All substances included in Tables I and II	10 October 2013
Antigua and Barbuda[a]	All substances included in Tables I and II	5 May 2000
Argentina	All substances included in Table I	19 November 1999
Armenia[a]	All substances included in Tables I and II[b, c]	4 July 2013
Australia[a]	All substances included in Tables I and II	12 February 2010
Austria	All substances included in Table I	19 May 2000[d]
Azerbaijan[a]	All substances included in Tables I and II	21 January 2011
Bangladesh[a]	All substances included in Tables I and II	12 May 2015
Barbados[a]	All substances included in Tables I and II[b, c]	24 October 2013
Belarus[e]	Acetic anhydride, ephedrine, potassium permanganate and pseudoephedrine	12 October 2000
Belgium	All substances included in Table I	19 May 2000
Benin[a]	All substances included in Tables I and II	4 February 2000

Notifying Government	*Substances for which pre-export notifications have been requested*	*Date of communication to Governments by the Secretary-General*
Bolivia (Plurinational State of)[a]	Acetic anhydride, acetone, ethyl ether, hydrochloric acid, potassium permanganate and sulphuric acid	12 November 2001
Brazil[a]	All substances included in Tables I and II	15 October 1999 and 15 December 1999
Bulgaria	All substances included in Table I	19 May 2000[d]
Canada[a]	All substances included in Tables I and II	31 October 2005
Cayman Islands [a]	All substances included in Tables I and II	7 September 1998
Chile[a]	All substances included in Tables I and II	19 October 2012
China	Acetic anhydrid	20 October 2000
China, Hong Kong SAR [a]	All substances included in Tables I and II	28 December 2012
China, Macao SAR [a]	All substances included in Tables I and II	28 December 2012
Colombia[a]	All substances included in Tables I and II	14 October 1998
Costa Rica[a]	All substances included in Tables I and II	27 September 1999
Côte d'Ivoire[a]	All substances included in Tables I and II	26 June 2013
Croatia	All substances included in Table I	19 May 2000[d]
Cyprus	All substances included in Table I	19 May 2000[d]
Czechia[f]	All substances included in Table I	19 May 2000[d]
Denmark	All substances included in Table I	19 May 2000[d]
Dominican Republic[a]	All substances included in Tables I and II	11 September 2002
Ecuador[a]	All substances included in Tables I and II	1 August 1996
Egypt[a]	All substances included in Table I and acetone	3 December 2004
El Salvador[a]	All substances included in Tables I and II	29 July 2010
Estonia	All substances included in Table I	19 May 2000
Ethiopia[a]	All substances included in Tables I and II	17 December 1999
Finland	All substances included in Table I	19 May 2000[d]
France	All substances included in Table I	19 May 2000[d]
Georgia[a]	All substances included in Tables I and II	7 September 2016
Germany	All substances included in Table I	19 May 2000[d]
Ghana[a]	All substances included in Tables I and II	26 February 2010
Greece	All substances included in Table I	19 May 2000[d]
Haiti[a]	All substances included in Tables I and II	20 June 2002
Hungary	All substances included in Table I	19 May 2000[d]
India[a]	All substances included in Tables I and II	23 March 2000
Indonesia[a]	Acetic anhydride, *N*-acetylanthranilic acid, anthranilic acid, ephedrine, ergometrine, ergotamine, isosafrole, 3,4-methylenedioxyphenyl-2-propanone, phenylacetic acid, 1-phenyl-2-propanone, piperonal, pseudoephedrine and safrole.	18 February 2000
Iraq[a]	All substances included in Tables I and II[b, c]	31 July 2013
Ireland	All substances included in Table I	19 May 2000[d]
Italy	All substances included in Table I	19 May 2000[d]
Jamaica	All substances included in Table I[b, c]	4 July 2013
Japan	All substances included in Table I	17 December 1999
Jordan[a]	All substances included in Tables I and II	15 December 1999

Notifying Government	*Substances for which pre-export notifications have been requested*	*Date of communication to Governments by the Secretary-General*
Kazakhstan[a]	All substances included in Tables I and II	15 August 2003
Kenya[a]	All substances included in Tables I and II[b, c]	10 October 2013
Kyrgyzstan[a]	All substances included in Tables I and II[b, c]	21 October 2013
Latvia	All substances included in Table I	19 May 2000[d]
Lebanon[a]	All substances included in Tables I and II	14 June 2002
Libya[a]	All substances included in Tables I and II[b, c]	21 August 2013
Lithuania	All substances included in Table I	19 May 2000[d]
Luxembourg	All substances included in Table I	19 May 2000[d]
Madagascar[a]	All substances included in Tables I and II	31 March 2003
Malaysia[a]	All substances included in Table I,[b] anthranilic acid, ethyl ether, piperidine	21 August 1998
Maldives[a]	All substances included in Tables I and II	6 April 2005
Malta	All substances included in Table I	19 May 2000[d]
Mexico[a]	All substances included in Tables I and II	6 April 2005
Micronesia (Federated States of)[a]	All substances included in Tables I and II[b, c]	11 February 2014
Myanmar[a]	All substances included in Tables I and II[c]	4 November 2016
Netherlands	All substances included in Table I	19 May 2000[d]
New Zealand[a]	All substances included in Tables I and II[b, c]	3 April 2014
Nicaragua[a]	All substances included in Tables I and II	8 January 2014
Nigeria[a]	All substances included in Tables I and II	28 February 2000
Norway[a]	All substances included in Table I,[c] anthranilic acid, ethyl ether, piperidine	17 December 2013
Oman[a]	All substances included in Tables I and II	16 April 2007
Pakistan[a]	All substances included in Tables I and II	12 November 2001 and 6 March 2013
Panama	Ephedrine, ergometrine, ergotamine, norephedrine, pseudoephedrine	14 August 2013
Paraguay[a]	All substances included in Tables I and II	3 February 2000
Peru[a]	Acetic anhydride, acetone, ephedrine, ergometrine, ergotamine, ethyl ether, hydrochloric acid, lysergic acid, methyl ethyl ketone, norephedrine, potassium permanganate, pseudoephedrine, sulphuric acid and toluene	27 September 1999
Philippines[a]	All substances included in Tables I and II	16 April 1999
Poland	All substances included in Table I	19 May 2000[d]
Portugal	All substances included in Table I	19 May 2000[d]
Qatar[a]	All substances included in Tables I and II[b, c]	16 July 2013
Republic of Korea[a]	All substances included in Table I and acetone	3 June 2008
Republic of Moldova[a]	All substances included in Tables I and II[b, c]	29 December 1998 and 8 November 2013
Romania	All substances included in Table I	19 May 2000[d]
Russian Federation[a]	Acetic anhydride, ephedrine, ergometrine, ergotamine, 3,4-methylenedioxyphenyl-2-propanone, norephedrine, phenylacetic acid, 1-phenyl-2-propanone, potassium permanganate, pseudoephedrine and all substances included in Table II	21 February 2000
Saint Vincent and the Grenadines[a]	All substances included in Tables I and II[b, c]	16 July 2013
Saudi Arabia[a]	All substances included in Tables I and II	18 October 1998

Notifying Government	*Substances for which pre-export notifications have been requested*	*Date of communication to Governments by the Secretary-General*
Sierra Leone[a]	All substances included in Tables I and II[b, c]	5 July 2013
Singapore	All substances included in Table I	5 May 2000
Slovakia	All substances included in Table I	19 May 2000[d]
Slovenia	All substances included in Table I	19 May 2000[d]
South Africa[a]	All substances included in Table I and anthranilic acid	11 August 1999
Spain	All substances included in Table I	19 May 2000[d]
Sri Lanka	All substances included in Table I	19 November 1999
Sudan[a]	All substances included in Tables I and II	6 May 2015
Sweden	All substances included in Table I	19 May 2000[d]
Switzerland	All substances included in Table I	25 March 2013
Syrian Arab Republic[a]	All substances included in Tables I and II	24 October 2013
Tajikistan[a]	All substances included in Tables I and II	7 February 2000
Thailand[a]	All substances included in Table I (except potassium permanganate), and anthranilic acid[b]	18 October 2010
Togo[a]	All substances included in Tables I and II	6 August 2013
Tonga[a]	All substances included in Tables I and II[b, c]	4 July 2013
Trinidad and Tobago[a]	All substances included in Tables I and II[b, c]	15 August 2013
Turkey[a]	All substances included in Tables I and II	2 November 1995
Uganda[a]	All substances included in Tables I and II	6 May 2014
United Arab Emirates[a]	All substances included in Tables I[b] and II	26 September 1995
United Kingdom of Great Britain and Northern Ireland	All substances included in Table I	19 May 2000[d]
United Republic of Tanzania[a]	All substances included in Tables I and II	10 December 2002
United States of America	Acetic anhydride, ephedrine and pseudoephedrine	2 June 1995 and 19 January 2001
Uruguay[a]	All substances included in Tables I and II	30 December 2015
Venezuela (Bolivarian Republic of)[a]	All substances included in Tables I and II	27 March 2000
Yemen[a]	All substances included in Tables I and II	6 May 2014
Zimbabwe[a]	All substances included in Tables I and II[b, c]	4 July 2013
European Union (on behalf of all its States members)[g]	All substances included in Table I	19 May 2000[d]

Note: The names of territories are in italics.

[a] The Secretary-General has informed all Governments of the request of the notifying Government to receive a pre-export notification for some or all substances listed in Table II of the 1988 Convention as well.

[b] Government requested to receive pre-export notifications for pharmaceutical preparations containing ephedrine and pseudoephedrine as well.

[c] Governments requested to receive pre-export notifications for safrole-rich oils as well.

[d] On 19 May 2000, the Secretary-General communicated to Governments the request by the European Commission, on behalf of the States members of the European Union, to receive pre-export notifications for the indicated substances.

[e] Not yet notified by the Secretary-General as, in a subsequent communication, the Government of Belarus requested the Secretary-General to suspend such notification until a national mechanism to receive and process pre-export notifications was established.

[f] Since 17 May 2016, "Czechia" has replaced "Czech Republic" as the short name used in the United Nations.

[g] Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Annex XI

Licit uses of the substances in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988

Knowledge of the most common licit uses of substances in Table I and Table II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, including the processes and end products in which the substances may be used, is essential for the verification of the legitimacy of orders or shipments. The most common licit uses of those substances reported to the International Narcotics Control Board are as follows:

Substance	*Licit uses*
Acetic anhydride	Acetylating and dehydrating agent used in the chemical and pharmaceutical industries for the manufacture of cellulose acetate, for textile sizing agents and cold bleaching activators, for polishing metals and for the production of brake fluids, dyes and explosives
Acetone	As a common solvent and intermediate for a variety of substances in the chemical and pharmaceutical industries, including plastics, paints, lubricants, varnishes and cosmetics; also used in the manufacture of other solvents, such as chloroform
N-Acetylanthranilic acid	Used in the manufacture of pharmaceuticals, plastics and fine chemicals
4-anilino-*N*-phenethylpiperidine (ANPP)	Used in the pharmaceutical industry for the manufacture of fentanyl
Anthranilic acid	Chemical intermediate used in the manufacture of dyes, pharmaceuticals and perfumes; also used in the preparation of bird and insect repellents
Ephedrine	Used in the manufacture of bronchodilators (cough medicines)
Ergometrine	Used in the treatment of migraine and as an oxytocic in obstetrics
Ergotamine	Used in the treatment of migraine and as an oxytocic in obstetrics
Ethyl ether	Commonly used solvent in chemical laboratories and in the chemical and pharmaceutical industries; mainly used as an extractant for fats, oils, waxes and resins; also used for the manufacture of munitions, plastics and perfumes and, in medicine, as a general anaesthetic
Hydrochloric acid	Used in the production of chlorides and hydrochlorides, for the neutralization of basic systems and as a catalyst and solvent in organic synthesis
Isosafrole	Used in the manufacture of piperonal; to modify "oriental perfumes"; to strengthen soap perfumes; in small quantities, together with methyl salicylate, in root beer and sarsaparilla flavours; and as a pesticide
Lysergic acid	Used in organic synthesis

Substance	*Licit uses*
3,4-Methylenedioxyphenyl-2-propanone	Used in the manufacture of piperonal and other perfume components
Methyl ethyl ketone	Common solvent; used in the manufacture of coatings, solvents, degreasing agents, lacquers, resins and smokeless powders
Norephedrine	Used in the manufacture of nasal decongestants and appetite suppressants
N-Phenethyl-4-piperidone (NPP)	Used in the pharmaceutical industry for the manufacture of fentanyl and carfentanil
Phenylacetic acid	Used in the chemical and pharmaceutical industries for the manufacture of phenylacetate esters, amphetamine and some derivatives; also used for the synthesis of penicillins and in fragrance applications and cleaning solutions
alpha-Phenylacetoacetonitrile	None, except — in small amounts — for research, development and laboratory analytical purposes
1-Phenyl-2-propanone	Used in the chemical and pharmaceutical industries for the manufacture of amphetamine, methamphetamine and some derivatives; also used for the synthesis of propylhexedrine
Piperidine	Commonly used solvent and reagent in chemical laboratories and in the chemical and pharmaceutical industries; also used in the manufacture of rubber products and plastics
Piperonal	Used in perfumery, in cherry and vanilla flavours, in organic synthesis and as a component for mosquito repellent
Potassium permanganate	Important reagent in analytical and synthetic organic chemistry; used in bleaching applications, disinfectants, antibacterials and antifungal agents and in water purification
Pseudoephedrine	Used in the manufacture of bronchodilators and nasal decongestants
Safrole	Used in perfumery, for example in the manufacture of piperonal, and for denaturing fats in soap manufacture
Sulphuric acid	Used in the production of sulphates; as an acidic oxidizer; as a dehydrating and purifying agent; for the neutralization of alkaline solutions; as a catalyst in organic synthesis; in the manufacture of fertilizers, explosives, dyestuffs and paper; and as a component of drain and metal cleaners, anti-rust compounds and automobile battery fluids
Toluene	Industrial solvent; used in the manufacture of explosives, dyes, coatings and other organic substances and as a gasoline additive

About the International Narcotics Control Board

The International Narcotics Control Board (INCB) is an independent and quasi-judicial control organ, established by treaty, for monitoring the implementation of the international drug control treaties. It had predecessors under the former drug control treaties as far back as the time of the League of Nations.

Composition

INCB consists of 13 members who are elected by the Economic and Social Council and who serve in their personal capacity, not as government representatives. Three members with medical, pharmacological or pharmaceutical experience are elected from a list of persons nominated by the World Health Organization (WHO) and 10 members are elected from a list of persons nominated by Governments. Members of the Board are persons who, by their competence, impartiality and disinterestedness, command general confidence. The Council, in consultation with INCB, makes all arrangements necessary to ensure the full technical independence of the Board in carrying out its functions. INCB has a secretariat that assists it in the exercise of its treaty-related functions. The INCB secretariat is an administrative entity of the United Nations Office on Drugs and Crime, but it reports solely to the Board on matters of substance. INCB closely collaborates with the Office in the framework of arrangements approved by the Council in its resolution 1991/48. INCB also cooperates with other international bodies concerned with drug control, including not only the Council and its Commission on Narcotic Drugs, but also the relevant specialized agencies of the United Nations, particularly WHO. It also cooperates with bodies outside the United Nations system, especially the International Criminal Police Organization (INTERPOL) and the World Customs Organization.

Functions

The functions of INCB are laid down in the following treaties: Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol; Convention on Psychotropic Substances of 1971; and United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988. Broadly speaking, INCB deals with the following:

(a) As regards the licit manufacture of, trade in and use of drugs, INCB endeavours, in cooperation with Governments, to ensure that adequate supplies of drugs are available for medical and scientific uses and that the diversion of drugs from licit sources to illicit channels does not occur. INCB also monitors Governments' control over chemicals used in the illicit manufacture of drugs and assists them in preventing the diversion of those chemicals into the illicit traffic;

(b) As regards the illicit manufacture of, trafficking in and use of drugs, INCB identifies weaknesses in national and international control systems and contributes to correcting such situations. INCB is also responsible for assessing chemicals used in the illicit manufacture of drugs, in order to determine whether they should be placed under international control.

In the discharge of its responsibilities, INCB:

(a) Administers a system of estimates for narcotic drugs and a voluntary assessment system for psychotropic substances and monitors licit activities involving drugs through a statistical returns system, with a view to assisting Governments in achieving, inter alia, a balance between supply and demand;

(b) Monitors and promotes measures taken by Governments to prevent the diversion of substances frequently used in the illicit manufacture of narcotic drugs and psychotropic substances and assesses such substances to determine whether there is a need for changes in the scope of control of Tables I and II of the 1988 Convention;

(c) Analyses information provided by Governments, United Nations bodies, specialized agencies or other competent international organizations, with a view to ensuring that the provisions of the international drug control treaties are adequately carried out by Governments, and recommends remedial measures;

(d) Maintains a permanent dialogue with Governments to assist them in complying with their obligations under the international drug control treaties and, to that end, recommends, where appropriate, technical or financial assistance to be provided.

INCB is called upon to ask for explanations in the event of apparent violations of the treaties, to propose appropriate remedial measures to Governments that are not fully applying the provisions of the treaties or are encountering difficulties in applying them and, where necessary, to assist Governments in overcoming such difficulties. If, however, INCB notes that the measures necessary to remedy a serious situation have not been taken, it may call the matter to the attention of the parties concerned, the Commission on Narcotic Drugs and the Economic and Social Council. As a last resort, the treaties empower INCB to recommend to parties that they stop importing drugs from a defaulting country, exporting drugs to it or both. In all cases, INCB acts in close cooperation with Governments.

INCB assists national administrations in meeting their obligations under the conventions. To that end, it proposes and participates in regional training seminars and programmes for drug control administrators.

Reports

The international drug control treaties require INCB to prepare an annual report on its work. The annual report contains an analysis of the drug control situation worldwide so that Governments are kept aware of existing and potential situations that may endanger the objectives of the international drug control treaties. INCB draws the attention of Governments to gaps and weaknesses in national control and in treaty compliance; it also makes suggestions and recommendations for improvements at both the national and international levels. The annual report is based on information provided by Governments to INCB, United Nations entities and other organizations. It also uses information provided through other international organizations, such as INTERPOL and the World Customs Organization, as well as regional organizations.

The annual report of INCB is supplemented by detailed technical reports. They contain data on the licit movement of narcotic drugs and psychotropic substances required for medical and scientific purposes, together with an analysis of those data by INCB. Those data are required for the proper functioning of the system of control over the licit movement of narcotic drugs and psychotropic substances, including preventing their diversion to illicit channels. Moreover, under the provisions of article 12 of the 1988 Convention, INCB reports annually to the Commission on Narcotic Drugs on the implementation of that article. That report, which gives an account of the results of the monitoring of precursors and of the chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, is also published as a supplement to the annual report.

INTERNATIONAL NARCOTICS CONTROL BOARD

The International Narcotics Control Board (INCB) is the independent monitoring body for the implementation of United Nations international drug control conventions. It was established in 1968 in accordance with the Single Convention on Narcotic Drugs, 1961. It had predecessors under the former drug control treaties as far back as the time of the League of Nations.

Based on its activities, INCB publishes an annual report that is submitted to the United Nations Economic and Social Council through the Commission on Narcotic Drugs. The report provides a comprehensive survey of the drug control situation in various parts of the world. As an impartial body, INCB tries to identify and predict dangerous trends and suggests necessary measures to be taken.

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