



# 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 2012* (E/INCB/2012/1) is supplemented by the following reports:

*Narcotic Drugs: Estimated World Requirements for 2013—Statistics for 2011* (E/INCB/2012/2)

*Psychotropic Substances: Statistics for 2011—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/2012/3)

*Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2012 on the Implementation of Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988* (E/INCB/2012/4)

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.

### **Contacting the International Narcotics Control Board**

The secretariat of the Board may be reached at the following address:

Vienna International Centre  
Room E-1339  
P.O. Box 500  
1400 Vienna  
Austria

In addition, the following may be used to contact the secretariat:

Telephone: (+43-1) 26060  
Fax: (+43-1) 26060-5867 or 26060-5868  
E-mail: [secretariat@incb.org](mailto:secretariat@incb.org)

The text of the present report is also available on the website of the Board ([www.incb.org](http://www.incb.org)).



INTERNATIONAL NARCOTICS CONTROL BOARD

# **Precursors**

and chemicals frequently used in the  
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Report of the  
International Narcotics Control Board for 2012  
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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## **In memoriam: Hamid Ghodse**

After graduating as a Doctor of Medicine (M.D.) in the Islamic Republic of Iran (1965), Professor Ghodse specialized in psychology and psychiatry in the United Kingdom, where he was awarded a Diploma in Psychological Medicine (D.P.M.), United Kingdom (1974), Doctor of Philosophy (Ph.D.), University of London (1976), and Doctor of Science (D.Sc.), University of London (2002).

Professor Ghodse devoted his professional life to treatment, research and teaching in the field of drug addiction, becoming Professor of Psychiatry and of International Drug Policy, University of London, in 1987 and Director of the International Centre for Drug Policy at St. George's, University of London in 2003.

In addition to an extensive teaching career, Professor Ghodse was extremely active in research in fields of drug addiction, public health, psychiatry and drug policy. He was the author or editor of over 350 scientific books and papers on drug-related issues and addiction, including a number of highly regarded reference books. He was rapporteur, chairman and convener of various World Health Organization and European Community expert committees, review groups and other working groups on drugs and alcohol dependence.

Professor Ghodse's academic and professional achievements were recognized through numerous awards and recognitions, including: Honorary Fellowship, Faculty of Forensic and Legal Medicine (FFFLM) (2012); International Distinguished Fellow, American Psychiatric Association (2009); Fellow (1985) and Honorary Fellow (2006), Royal College of Psychiatrists (R.C.Psych.), United Kingdom; Honorary Fellow, World Psychiatric Association (FWPA) (2008); Honorary Professor, Peking University (since 1997); Honorary Fellow, St. George's, University of London (2011) and Lifetime Achievement Award, Royal College of Psychiatrists, United Kingdom (2011). He was a Fellow of the Royal College of Psychiatrists (F.R.C.Psych.), United Kingdom (1985); Fellow of the Royal College of Physicians (F.R.C.P.), London (1992); Fellow of the Royal College of Physicians of Edinburgh (F.R.C.P.E.), Edinburgh (1997); Fellow of the Faculty of Public Health Medicine (F.F.P.H.), United Kingdom (1997); Fellow of the Higher Education Academy (F.H.E.A.), United Kingdom (2005).

Professor Ghodse made major contributions to policymaking at the highest international level. He became a member of the International Narcotics Control Board in 1992 and served as its President in 1993, 1994, 1997, 1998, 2000, 2001, 2004, 2005, 2008, 2010 and 2011.

In recognition of his unparalleled contribution to international drug control, the Board dedicates this report to the memory of Professor Hamid Ghodse. He will be remembered for his unique and outstanding academic and scientific knowledge, his remarkable leadership, wisdom and elegant diplomacy and, above all, for his deepest compassion for the suffering of people affected by drug abuse, his passionate work to bring about changes to reduce such suffering worldwide and his warmth and kindness. Professor Ghodse's legacy and vision in the field of international drug control will provide guidance and inspiration to generations to come.



## Foreword

As chemical trafficking organizations are becoming more resourceful and increasingly adaptive, the international community must be proactive in order to maintain the momentum created in the first 20 years of successful precursor control. In the present report, the International Narcotics Control Board seeks to contribute to that momentum by making concrete recommendations to Governments in order to help fight the diversion of and trafficking in precursor chemicals.

The present report underlines the critical importance of having functioning domestic controls to ensure the effectiveness of the international system for monitoring precursor chemicals. The Board is concerned that many States do not appear to have such systems in place and may thus be unable to fulfil their obligations under the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988.

In this report, the Board presents an analysis of the movement of the 23 chemicals in Table I and Table II of the Convention. It also looks at the growing use of new substitute chemicals, as well as non-scheduled substances, in illicit drug manufacture. These developments require the urgent attention of the international community.

The report also makes it clear that Governments need to stem the flow of precursor chemicals diverted from domestic distribution channels, as it is becoming increasingly evident that traffickers are using those licit channels as a source and smuggling large quantities of chemicals across borders, often with negative effects on neighbouring countries. Addressing vulnerabilities of countries in regions where law enforcement and regulatory capacity is limited requires not only the political will and the recognition that precursor control is a shared responsibility, but also a long-term commitment to training national drug control authorities and ensuring that they are provided with adequate equipment.

The Precursors Incident Communication System (PICS), launched by the Board in March 2012, was developed to enhance the work of competent national authorities. PICS allows users to share information on diversions, attempted diversions and seizures of precursors. It can also be used to initiate national and bilateral investigations.

The Board's approach to finding flexible and effective solutions, based on joint efforts, has proved valuable in the past. PICS is but another example of this type of initiative, aimed at countering existing and emerging trafficking threats. PICS, together with the Pre-Export Notification Online (PEN Online) system, the stalwart of the international precursor control system, as well as international cooperative activities such as Project Prism and Project Cohesion, are effective tools that can be used by Governments to substantially enhance their precursor control efforts.



**Raymond Yans**

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 Tables I and 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.



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\* Annexes VII-XI are not included in the printed copies of the present report but are available in the CD-ROM version of the report and online from the website of the International Narcotics Control Board ([www.incb.org](http://www.incb.org)).

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## Explanatory notes

The boundaries and names shown and the designations used on the maps in this publication do not imply official endorsement or acceptance by the United Nations. A dotted line represents approximately the line of control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Disputed boundaries (China/India) are represented by cross hatch due to the difficulty in showing detail.

The designations employed and the presentation of the material in this 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 via the Pre-Export Notification Online (PEN Online) system and other official communications with competent national authorities. Unless otherwise specified, form D data are reported by the calendar year, the cut-off date for reporting being 30 June of the following year. The reporting period for data from the PEN Online system is from 1 November 2011 to 1 November 2012. In cases in which PEN Online data are used for multiple years, calendar years are used. Additional information was also provided through international and regional organizations, as indicated in the report.

Reference to “tons” is to metric tons, unless otherwise stated.

The following abbreviations have been used in the present report:

APAAN	<i>alpha</i> -phenylacetonitrile
GBL	<i>gamma</i> -butyrolactone
GHB	<i>gamma</i> -hydroxybutyric acid
MDMA	3,4-methylenedioxymethamphetamine
4-MMC	4-methylmethcathinone
3,4-MDP-2-P	3,4-methylenedioxyphenyl-2-propanone
Operation EPIG	Operation Ephedrine and Pseudoephedrine Intelligence Gaps in Africa
Operation PAAD	Operation Phenylacetic Acid and Its Derivatives
P-2-P	1-phenyl-2-propanone
PICS	Precursors Incident Communication System
PEN Online	Pre-Export Notification Online
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization





## Summary

The almost universal adherence of States to the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 is a concrete example of the political will that exists to prevent the diversion of precursors used in the illicit manufacture of drugs (only nine States have not yet become parties to the Convention).

During the reporting period, global trends and emerging threats to the control of precursor chemicals were identified using the information submitted by a total of 129 States and territories on form D (information on substances frequently used in the illicit manufacture of drugs). Countries have continued to strengthen their control over the import and export of substances listed in Table I and Table II of the 1988 Convention. Where loopholes exist, Governments have been closing them using temporary measures with a view to implementing longer-term solutions. A number of countries, including China, the Republic of Korea and Thailand, have continued broadening their legislation in order to address the diversion of precursors, particularly the diversion of pharmaceutical preparations containing ephedrine or pseudoephedrine.

A total of 136 States and territories have registered to use the Pre-Export Notification (PEN Online) system, developed by the International Narcotics Control Board. In those regions where it has been used consistently, the system has been a success, as traffickers have found it harder to divert precursor chemicals from international trade. However, those regions where the system has not been used consistently are the ones that particularly concern the Board, as they are at risk of being targeted by traffickers seeking to exploit weaker regulatory controls.

In response to rapidly changing trends, such as the emergence of non-scheduled substances and designer drugs, and with a view to complementing traditional mechanisms for reporting on individual seizures of precursors by collecting data on a real-time basis, the Board launched the Precursors Incident Communication System (PICS) in March 2012, during the fifty-fifth session of the Commission on Narcotic Drugs. The competent national authorities registered to use PICS have access to secure, real-time data on incidents and can use the system to immediately and directly follow up with counterparts in order to help launch bilateral or regional investigations into seizures and identified cases involving the diversion of precursor chemicals. The system also helps the Board to quickly identify emerging diversion patterns of precursor substances. As at 1 November 2012, there were 237 registered PICS users, including 58 Governments and 8 international and regional agencies.

In 2012, drug traffickers continued to look for additional sources of non-scheduled chemicals. The Board is concerned about the risk posed by diversion in regions where national law enforcement and regulatory capacity is limited. For that reason, Operation Ephedrine and Pseudoephedrine Intelligence Gaps in Africa (Operation EPIG) was launched in June 2012; 51 countries participated in the operation. The aim of the operation was to gather strategic information on the trade and trafficking in and illicit use of ephedrine and pseudoephedrine, including in the form of pharmaceutical preparations, in countries in Africa.

Following the ongoing investigations of the suspected diversion of significant amounts of pharmaceutical preparations containing ephedrines, concerns of the Board regarding the role of such preparations in the illicit manufacture of methamphetamine in West Asia and South-East Asia were again raised. Conversely, in Mexico and Central America there has been a significant shift away from the use of pseudoephedrine and ephedrine towards the use of 1-phenyl-2-propanone (P-2-P)

and non-scheduled substances in the illicit manufacture of methamphetamine. The diversion of acetic anhydride from domestic distribution channels, to be subsequently smuggled across national borders, remains the most common method of obtaining that chemical for use in illicit heroin manufacture. Potassium permanganate, a substance commonly used in the illicit manufacture of cocaine hydrochloride, is obtained by traffickers in a variety of ways: by illicitly manufacturing the substance; diverting it from domestic production; and smuggling.

The reduced number of reported incidents involving diversion of precursors from licit international trade serves to highlight the effectiveness of the control system. However, the continued availability of illicit drugs shows that traffickers can be resourceful when it comes to finding ways to illegally obtain the chemicals they require for illicit drug manufacture. Addressing diversion from domestic trade, in conjunction with continuing proactive and innovative activities at the international level, will be instrumental in further denying drug traffickers' access to the precursor chemicals they need. In order to respond adequately to future challenges, a renewed look at international cooperation beyond the minimum requirements set out in article 12 of the 1988 Convention is required.

## I. Introduction

1. The United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988<sup>1</sup> provides for measures to prevent the diversion of substances frequently used in the illicit manufacture of drugs. The International Narcotics Control Board monitors the control by Governments over precursor chemicals and assists them in preventing the diversion of those chemicals into the illicit traffic.

2. The present report on precursors has been prepared by the Board pursuant to article 23 of the 1988 Convention. Substantive reporting begins in chapter II, which provides statistical data and other information on action taken by Governments and the Board pursuant to article 12 of the 1988 Convention. This includes the utilization of the Pre-Export Notification Online (PEN Online) system and the results of task force operational support under Project Prism and Project Cohesion. Chapter III provides details of the extent of legitimate trade in precursor chemicals and the latest major trends in the trafficking and illicit use of those chemicals, highlighting the most relevant cases involving suspicious and stopped shipments and diversions or attempted diversions of those chemicals from international trade, as well as seizures of those chemicals.

3. Chapter IV, entitled “Challenges in international precursor control”, builds on the 2011 report on precursors and provides a thematic examination of the future of precursor control. It also provides a detailed analysis of the existing control gaps and an outline of future challenges to precursor control. Chapter V provides recommendations to Governments on effective precursor control at the national and international levels.

4. Annexes I-XI provide updated, practical information to assist competent national authorities in carrying out their functions, including information on estimated annual legitimate requirements for the import of selected substances frequently used in the illicit manufacture of amphetamine-type stimulants, a list of Governments that require pre-export notifications, information on the use of scheduled substances in illicit drug manufacture and a summary of applicable treaty provisions. Annexes I-VI can be found in the printed copy, while all annexes are available in the CD-ROM version of the report and online from the Board’s website ([www.incb.org](http://www.incb.org)).

<sup>1</sup> United Nations, *Treaty Series*, vol. 1582, No. 27627.

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

### A. Adherence to the 1988 Convention

5. As at 1 November 2012, the 1988 Convention had been ratified, acceded to or approved by 187 States and formally confirmed by the European Union (extent of competence: article 12).<sup>2</sup> Following the issuance of the Board’s 2011 report on precursors, the Holy See, Nauru and Niue became States parties to the 1988 Convention.<sup>3</sup> Of the nine States that have yet to become parties to the 1988 Convention,<sup>4</sup> five are in Oceania (see annex I). The Board 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.

### B. Reporting to the Board pursuant to article 12 of the 1988 Convention

6. Governments are obliged to report annually on substances frequently used in the illicit manufacture of narcotic drugs and psychotropic substances. That information, which is submitted on form D, is subsequently used to identify regional and global patterns and trends. As at 1 November 2012, a total of 129 States and territories had submitted form D for the year 2011 (see annex VII). Some Governments continue to miss the reporting deadline of 30 June, fail to report altogether, submit blank forms or only provide partial information, thus making it difficult to accurately assess the global situation with regard to the diversion of precursor chemicals. For example, six States parties to the 1988 Convention (Burundi, Gabon, Liechtenstein, Marshall Islands, San Marino and Somalia) have never submitted form D to the Board, while an

<sup>2</sup> The Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol and the Convention on Psychotropic Substances of 1971 each have 183 States parties.

<sup>3</sup> The Holy See ratified the 1988 Convention on 25 January 2012, Nauru acceded to it on 12 July 2012 and Niue acceded to it on 16 July 2012. For the Holy See, the Convention entered into force on 24 April 2012; for Nauru, on 10 October 2012; and for Niue, on 14 October 2012.

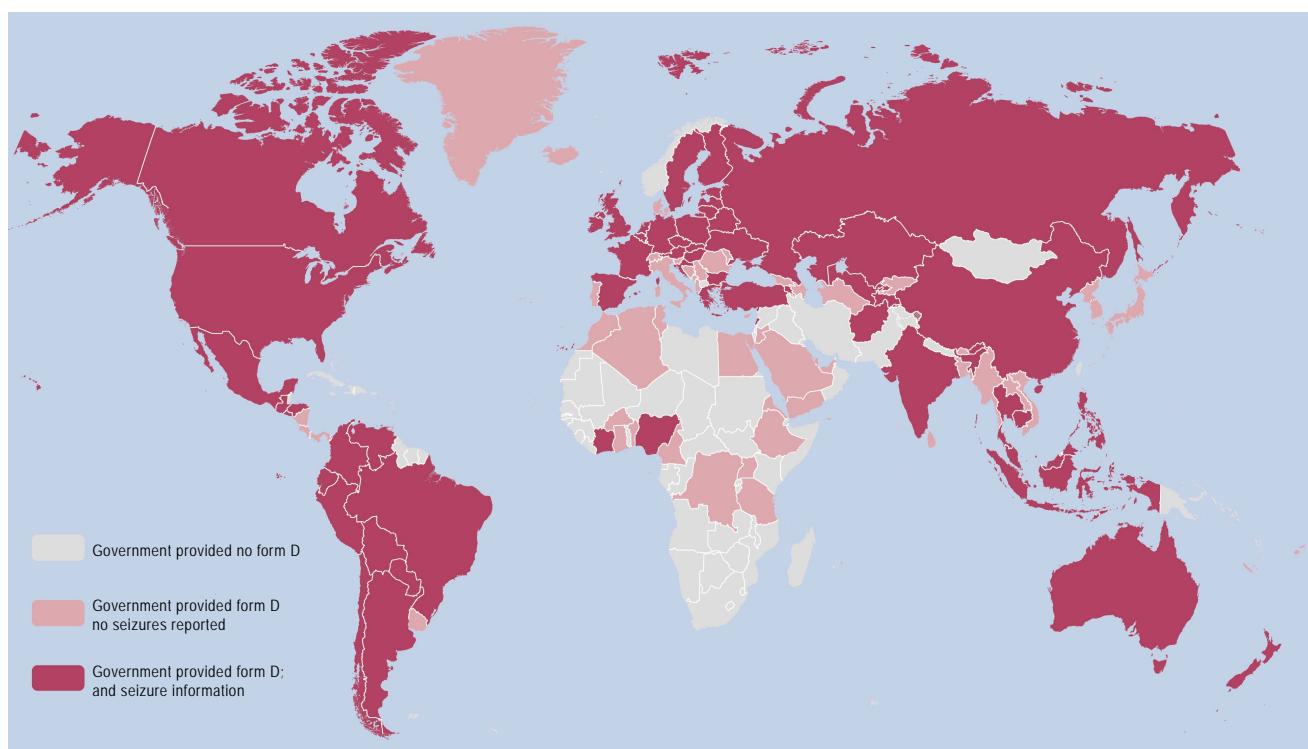
<sup>4</sup> Equatorial Guinea, Kiribati, Palau, Papua New Guinea, Solomon Islands, Somalia, South Sudan, Timor-Leste and Tuvalu.

additional 20 States<sup>5</sup> have not submitted form D in the past five years. The Board wishes to remind all States parties that reporting pursuant to the 1988 Convention is not an option but an obligation and that they are to complete and submit the latest version of form D in a timely manner. The latest version of form D is available in all six official languages of the United Nations from the Board's website ([www.incb.org](http://www.incb.org)). The Board stands ready to assist any Government in meeting its obligations under the 1988 Convention.

7. Of the 129 Governments that had submitted form D as at 1 November 2012 (see map 1), 59 (46 per cent of responding Governments) had reported seizures of

substances in Table I or II in 2011. (For details on substances in Table I and Table II reported seized by region, see annex VIII.) Thirty-nine (30 per cent) of Governments had also reported seizures of substances not in Table I or II. However, details regarding seizures — such as methods of diversion, stopped shipments or illicit manufacture of substances — are often not reported, and that hampers the ability of the Board to identify and analyse emerging trends in trafficking in precursors and illicit manufacture of drugs. The Board wishes to remind Governments effecting seizures of their obligation to provide comprehensive, mandatory information on methods of diversion, stopped shipments and the illicit manufacture of substances.

**Map 1. Governments submitting form D and those providing seizure data for 2011**  
(As at 1 November 2012)



### C. Legislation and control measures

8. In accordance with Economic and Social Council resolution 1992/29, the Board collects information on the specific controls applied to the substances in Table I and

Table II of the 1988 Convention and maintains a directory of those requirements to assist Governments in monitoring trade in controlled chemicals. Since November 2011, several changes in control measures exercised by Governments have been brought to the attention of the Board.

<sup>5</sup> Antigua and Barbuda, Bahamas, Barbados, Comoros, Djibouti, Grenada, Guinea, Kuwait, Lesotho, Libya, Mali, Micronesia (Federated States of), Nepal, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Samoa, Sierra Leone, Sudan, Suriname and Togo.

9. In March 2012, the Board signed a memorandum of understanding with the World Customs Organization. The agreement institutionalizes the Board's constructive and longstanding cooperation with that Organization. One area

of cooperation has been the establishment of unique Harmonized Commodity Description and Coding System codes for pharmaceutical preparations containing ephedrine and pseudoephedrine, with a view to strengthening the monitoring of international trade in those preparations. Until those codes for pharmaceutical preparations containing ephedrine and pseudoephedrine are adopted by the World Customs Organization, the European Commission has introduced codes for pharmaceutical preparations containing ephedrine, pseudoephedrine and norephedrine as part of the amended Combined Nomenclature for 2013. Those codes will be applicable in January 2013. The Board encourages States and regions to follow that example by introducing interim codes in order to be able to monitor shipments of, and prevent the diversion of, such pharmaceutical preparations.

10. The Russian Federation decided that, starting in July 2011, preparations containing small quantities of precursors should be controlled by the same control measures that apply to the precursors themselves; the decision exempts pharmaceutical preparations containing precursors in combination with other active pharmaceutical substances but prohibits their transfer by mail and governs their issuance to individuals.

11. In New Zealand, the Misuse of Drugs Act 1975 was amended to reclassify ephedrine and pseudoephedrine, making them available only with a prescription from a medical practitioner starting in September 2011.

12. In January 2012, Uruguay classified pharmaceutical preparations containing ephedrine or pseudoephedrine as psychotropic or narcotic pharmaceuticals, requiring a prescription; the decree limits the import and export of ephedrine and pseudoephedrine, as well as semi-finished and final products containing them, to registered pharmaceutical manufacturers and requires a valid import or export authorization to be available.

13. Ukraine further strengthened the control of preparations containing ephedrine and pseudoephedrine for human and veterinary use by reducing the content of pseudoephedrine in preparations from 60 to 25 mg, effective March 2012; exceptions to this regulation require a special licence.

14. The Government of Thailand notified the Board that, since April 2012, all pharmaceutical preparations containing ephedrine and pseudoephedrine have been classified as psychotropic substances in category II of the Psychotropic Substances Act and, consequently, cannot be sold by pharmacies and can be provided only by licensed government and private hospitals and private clinics,

which are required to submit monthly reports that are strictly monitored by the competent national authorities in Thailand.

15. In its efforts to deter illicit drug production, China informed the Board in June 2012 that it had clarified laws applicable to pharmaceutical preparations containing ephedrine.<sup>6</sup> Persons found to have supplied ephedrine preparations for illicit trade or to have extracted ephedrine or pseudoephedrine from such compounds are considered to have committed a crime. The severity of the sentence is dependent upon the quantities of substance extracted. China reported that since September 2012, pharmacies have been required to check and register the identity of people purchasing medicines containing ephedrine. The new controls limit the maximum amount of individual purchases of these substances. The Government has also applied stricter market admittance requirements for new medicines containing ephedrine.

16. Since June 2012, the Republic of Korea has applied a scheme requiring approval by the Korea Food and Drug Administration prior to importing, exporting and manufacturing ephedrine and pseudoephedrine, which limits the export of those substances in the form of pharmaceutical preparations.

17. In its 2009 report on precursors,<sup>7</sup> the Board encouraged the European Commission and States members of the European Union to introduce appropriate remedial measures to control the movement of acetic anhydride. The Board acknowledges the action taken by the European Commission, which in September 2012 made a proposal to the European Parliament and the Council of the European Union to amend current European Union legislation on precursors. The proposal is aimed at strengthening controls over inter-communitarian trade in acetic anhydride. The European Commission also proposed new legislative measures for the monitoring of international trade in pharmaceutical preparations containing ephedrine and pseudoephedrine. The Board encourages the European Union to bring to a conclusion those efforts directed at preventing diversion and use of precursor chemicals in the illicit manufacture of drugs.

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<sup>6</sup> These include pharmaceutical preparations containing ephedrine, pseudoephedrine, norephedrine or their salts, including in the form of extracts or extract powder.

<sup>7</sup> *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2009 on the Implementation of Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988* (United Nations publication, Sales No. E.10.XI.4), para. 95.

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

18. In accordance with Economic and Social Council resolution 1995/20, parties to the 1988 Convention provide data on their licit trade in, uses of and requirements for substances in Table I and Table II of the Convention. As at 1 November 2012, 109 States and territories had provided information on licit trade in those substances, and 101 had furnished data on licit uses of and requirements for those substances (see annex IX). The provision of those data, while voluntary, enables the Board to identify normal patterns in legitimate international trade in substances under international control, thereby preventing their diversion. The Board requests all parties to the 1988 Convention to provide comprehensive data on trade in those substances, in accordance with Council resolution 1995/20.

## E. Annual legitimate requirements for the imports of precursors of amphetamine-type stimulants

19. In its resolution 49/3, the Commission on Narcotic Drugs requested Member States to provide the Board with annual estimates of their legitimate requirements for the imports of four substances frequently used in the manufacture of amphetamine-type stimulants: 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 can be easily used or recovered by readily applicable means.

20. As at 1 November 2012, 150 Governments had provided such estimates for at least one substance. That constitutes a notable increase in reporting since the Board published its 2011 report on precursors. Eight States<sup>8</sup> and four territories<sup>9</sup> provided such information for the first time. The estimated annual legitimate requirements submitted by States and territories as at 1 November 2012 are provided in annex II and are regularly updated on the Board's website.

21. As recommended by the Board, many Governments revise their estimates of annual legitimate requirements each year to reflect changing market conditions. The Governments of India and Singapore both provided

substantially revised estimates for 2012. The Board calls upon Governments, especially those with significant trade (including re-exports) involving the substances 3,4-MDP-2-P, pseudoephedrine, ephedrine and P-2-P and their preparations, to exercise continuing vigilance to ensure that their estimates of annual legitimate requirements are commensurate with prevailing market conditions.

22. The Board continues to be concerned about relatively high annual legitimate requirements for imports of ephedrine and pseudoephedrine, as well as multiple seizures of ephedrine in 2010 and 2011, destined for several countries in high-risk parts of Asia. Since March 2012, the alleged diversion of significant amounts of ephedrines in Pakistan has led to high-profile investigations in the country. In Pakistan, according to national regulations, 500 kg is the maximum annual quota issued to each pharmaceutical company for the manufacture of pharmaceutical preparations containing ephedrine. However, court filings allege that some companies were allotted quotas exceeding that amount. Such allegations, if substantiated, would raise questions about the destination of the substance and the legitimacy of its end use.

23. Thailand has significantly revised downward its annual legitimate requirement for the import of pseudoephedrine (from 38.5 to 12 tons) after it was determined that large numbers of tablets containing pseudoephedrine had been disappearing from hospitals. The Board encourages all Governments that have identified significant diversion of precursor chemicals of amphetamine-type stimulants to re-evaluate their annual legitimate requirements for the import of those chemicals and to inform the Board about changes to their annual legitimate requirements without delay.

## F. Controls over international trade

### 1. Export authorizations systems for precursors

24. Traffickers try to exploit weak areas of systems for regulating the export and import of internationally controlled substances. While the majority of Governments have controls in place, the controls are not uniform in nature. Some Governments do not apply any system for authorizing the export of certain precursors listed in Table I and Table II of the 1988 Convention. Others base the export authorization solely on the issuance of a general permit. About 30 Governments had either no controls or required only a general permit for the export of substances in Table I and Table II. About 70 Governments required specific export licences for all substances in both Tables.

<sup>8</sup> Bolivia (Plurinational State of), Brunei Darussalam, Eritrea, France, Japan, Maldives, Qatar and Tunisia.

<sup>9</sup> Curaçao, Faroe Islands, Greenland and Norfolk Island.



25. States that have no controls or require only general permits for the export of substances in Table I and Table II may not be in a position to comply with their obligation under article 12, paragraph 10 (a), of the 1988 Convention to provide notifications to importing countries prior to exporting precursors. The Board therefore urges all Governments to ensure that they are informed of any proposed export of precursors and are able to provide pre-export notifications, particularly to the importing countries that have officially requested such notifications.

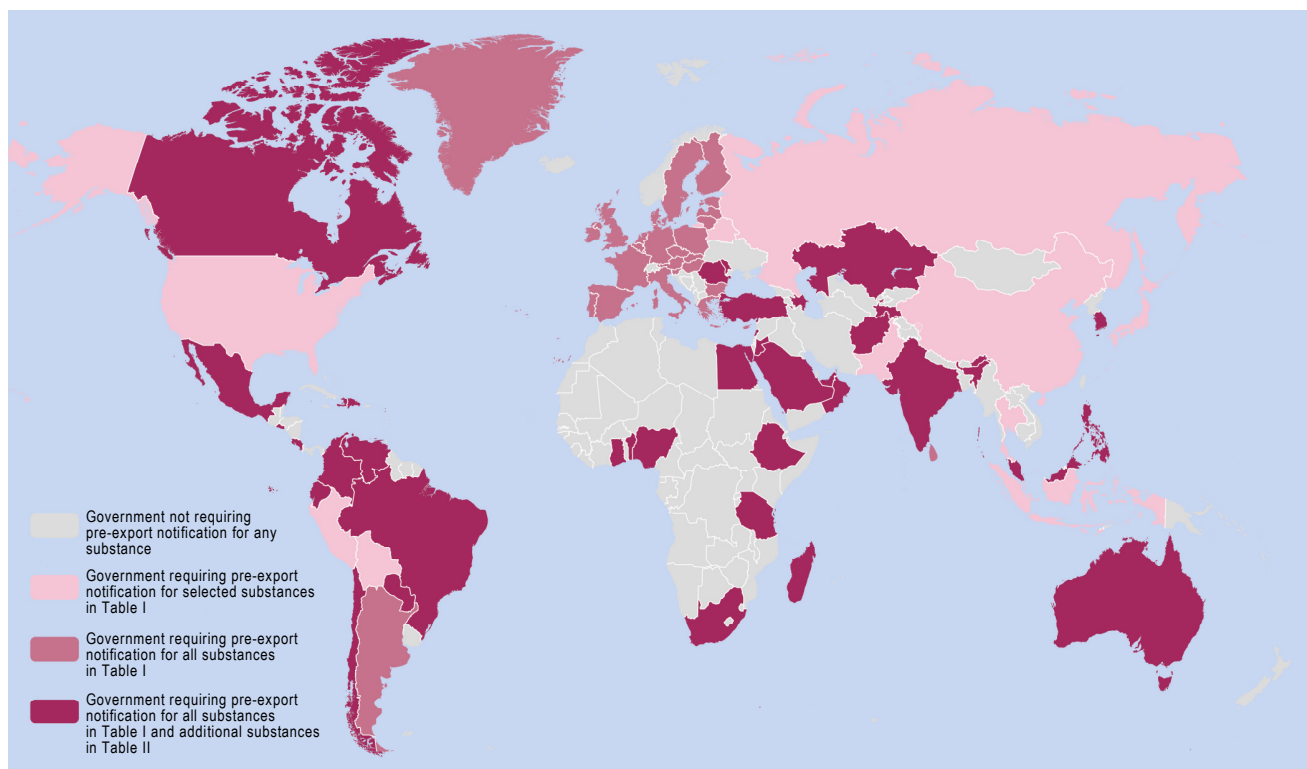
## 2. Pre-export notifications

26. To help prevent trafficking in precursor chemicals under international control, Governments of importing countries may require exporting countries to inform them of exports before they are shipped. This can be done by invoking article 12, paragraph 10 (a), of the 1988 Convention. The Board reminds the Governments of

all countries exporting scheduled chemicals to countries that have invoked article 12, paragraph 10 (a), of their obligation to notify the authorities of the importing country about the shipment of exports prior to the departure of the shipments and furthermore recommends using the PEN Online system for such notifications.

27. As at 1 November 2012, only 78 States and 2 territories had formally requested pre-export notifications (see map 2 and annex X). Since the Board's 2011 report on precursors was published, the Government of Chile has invoked article 12, paragraph 10 (a), of the 1988 Convention and required notification for the export of all substances in Table I and Table II prior to export. The Board calls upon all Governments to invoke the provisions of article 12, paragraph 10 (a), of the 1988 Convention without further delay. In addition, the Board strongly encourages interested Governments and organizations to use bilateral, regional and multilateral initiatives to help Governments invoke those provisions for all scheduled substances.

**Map 2. Governments invoking article 12, paragraph 10 (a), of the 1988 Convention, requiring pre-export notification for selected substances<sup>a</sup>**  
(As at 1 November 2012)



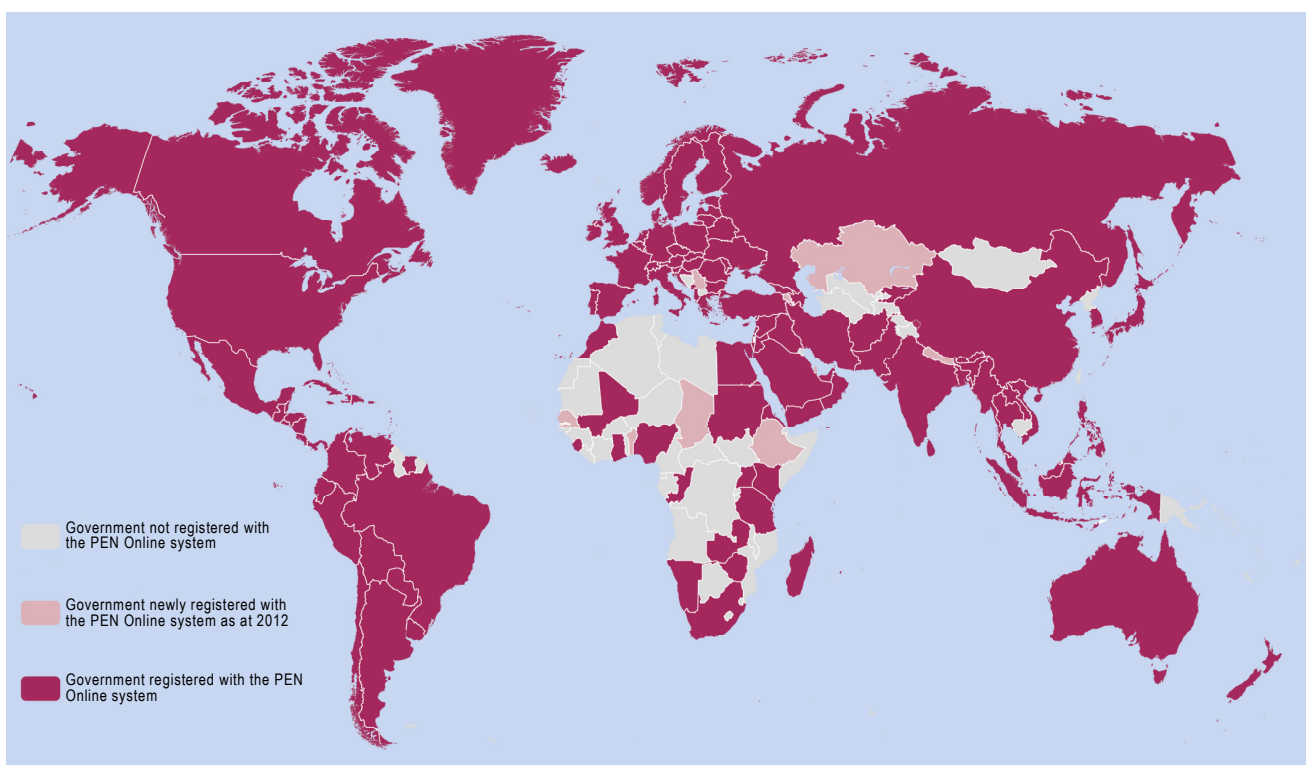
<sup>a</sup> For details, see annex X to the present publication.

### 3. PEN Online

28. The PEN Online system, launched in March 2006, is a tool that makes it possible for the competent national authorities of exporting and importing countries to securely communicate international trade. The information shared through PEN Online enables assessment of licit trade at the country and company levels. The information assists the competent national authorities, and the Board, in identifying and confirming the legitimacy of individual shipments of precursors and enables suspicious shipments to be suspended or stopped in an efficient and timely manner.

29. As at 1 November 2012, 136 countries and territories had registered to use PEN Online (see map 3). Since the Board's 2011 report on precursors, Armenia, Benin, Chad, Ethiopia, Kazakhstan, Nepal, Qatar, Senegal and Serbia, as well as the British Virgin Islands, have registered to use the PEN Online system. On average, more than 1,800 pre-export notifications are communicated through the system every month. The Board encourages all Governments to actively review the pre-export notifications sent to them and to communicate with each other via the PEN Online system so that the flow of legitimate trade in chemicals can be maintained.

**Map 3. Governments registered with the Pre-Export Notification Online (PEN Online) system**  
(As at 1 November 2012)



30. Nearly all Governments that engage in significant trade in precursors do so using the PEN Online system. Each year, more Governments are using the system and more pre-export notifications are being issued and reviewed through the PEN Online system. However, a number of registered Governments do not utilize the system or fail to use it for every chemical transaction. The Board urges Governments that have already registered with the PEN Online system to make use of the system for every transaction involving precursors. In cases in which there are any grounds for suspicion, exporting countries

are encouraged to release shipments only upon official confirmation from the competent authority of the importing country. Importing countries are reminded to use the reply function of the PEN Online system (rather than sending e-mails or faxes) to provide any necessary feedback, in order to ensure an unbroken chain of monitoring throughout the system.

31. As noted by the Board in its prior reports on precursors, timely submission of notifications and subsequent feedback are fundamental elements of the



PEN Online system. However, some countries continue exporting chemicals before sending a pre-export notification. In other cases, chemicals are being shipped without providing enough time for the importing country to review the pre-export notification. For example, in the United States of America, national legislation allows for the concept of “regular customer” status to be given to the foreign importing company when an established business relationship exists, with the rationale that the bona fides of the importer have already been verified so there is no reason to wait for pre-export review.<sup>10</sup> Experience has shown, however, that traffickers of precursors use legitimate companies for illegitimate transactions. The recommended practice is to provide 5-14 days from the time of export notification to the time when the consignment departs from the exporting country. The Board reminds Governments of exporting countries of their obligation under article 12 of the 1988 Convention to provide notification regarding exports of chemicals before such exports depart from their territory. Governments are also encouraged to respond by the verification deadline when denying authorization for a shipment. If more time is needed for the verification of a particular transaction, the competent authorities of the importing country should inform the exporting country and ask it to delay the delivery of the shipment, pending the outcome of the verification.

32. While Taiwan Province of China continues to be one of the world’s largest traders in some scheduled precursors, no relevant trade information is provided to the Board. It appears that Taiwan Province was among the top five traders of ephedrine (in terms of the overall trade volume) and was ranked as the world’s third largest exporter of pseudoephedrine in 2010. The Board is also aware that the provincial authorities have routinely made significant seizures of ephedrine, pseudoephedrine and norephedrine and have dismantled large-scale illicit methamphetamine laboratories. This situation continues to be of serious concern to the Board as it represents a significant weakness in the international drug and chemical control system. The Board therefore reiterates its invitation to the Government of China to work with the Board to devise appropriate ways and means of addressing pre-export notifications, suspicious shipments and chemical diversion cases related to Taiwan Province of China.

## G. Activities and achievements under Project Prism and Project Cohesion

33. Project Prism and Project Cohesion, two international initiatives of the Board, serve as communication platforms

for the monitoring of chemical transactions and for launching targeted, time-bound operations. Participants in Project Prism and Project Cohesion continued to be alerted to suspicious shipments, actual and attempted diversions, as well as emerging precursors. A meeting of the joint task forces of Project Prism and Project Cohesion was held in Lyon, France, in July 2012.

34. Operation Ephedrine and Pseudoephedrine Intelligence Gaps in Africa (Operation EPIG), an activity under Project Prism, was launched on 1 June 2012 and ended on 31 August 2012. It was the first intelligence-gathering operation to focus on ephedrine and pseudoephedrine trade and diversion specifically in Africa. It involved the participation of 51 countries. The aim of the operation was to gather strategic information on the licit trade and trafficking in and illicit use of ephedrine and pseudoephedrine, including in the form of pharmaceutical preparations, in countries in Africa. Limited law enforcement and regulatory capacity of many of the countries in the region makes it extremely difficult to gather valuable intelligence.

35. Operation Pila ended on 31 March 2010. Since then, however, there has been a decrease in ephedrine and pseudoephedrine cases involving Mexico and Central American countries in line with the shift in those countries — from the use of ephedrine and pseudoephedrine to the use of P-2-P — in illicit methamphetamine manufacture; at the same time, there has been an increase in ephedrine and pseudoephedrine cases involving Asian countries. Since the Board’s 2011 report on precursors was published, eight communications have been issued to alert Governments to seizures or stopped shipments involving 2.5 tons of P-2-P, 1.5 tons of bulk ephedrine and 2.7 tons of ephedrine and pseudoephedrine in the form of pharmaceutical preparations. Between April 2010 and August 2012, a total of 35 post-operational communications were issued, resulting in 95 tons of precursor chemicals having been stopped or seized: 44 per cent (42 tons) of the chemicals were in the form of *Ephedra* and *Ephedra* plant products, 8.8 tons were ephedrines in bulk, more than 24 tons were ephedrine and pseudoephedrine in the form of preparations and 2.5 tons were P-2-P (see map 4).

36. Information received during the post-operation period of Operation Phenylacetic Acid and Its Derivatives (Operation PAAD) suggests that there has been a discernible drop in the number of seized shipments of phenylacetic acid and its esters and the amounts seized. The decrease in activity may be partly attributable to changes in trafficking routes (e.g. using Central America and the Caribbean as a transit area (see map 5)), the diversification of sources (e.g. India and South Africa) and

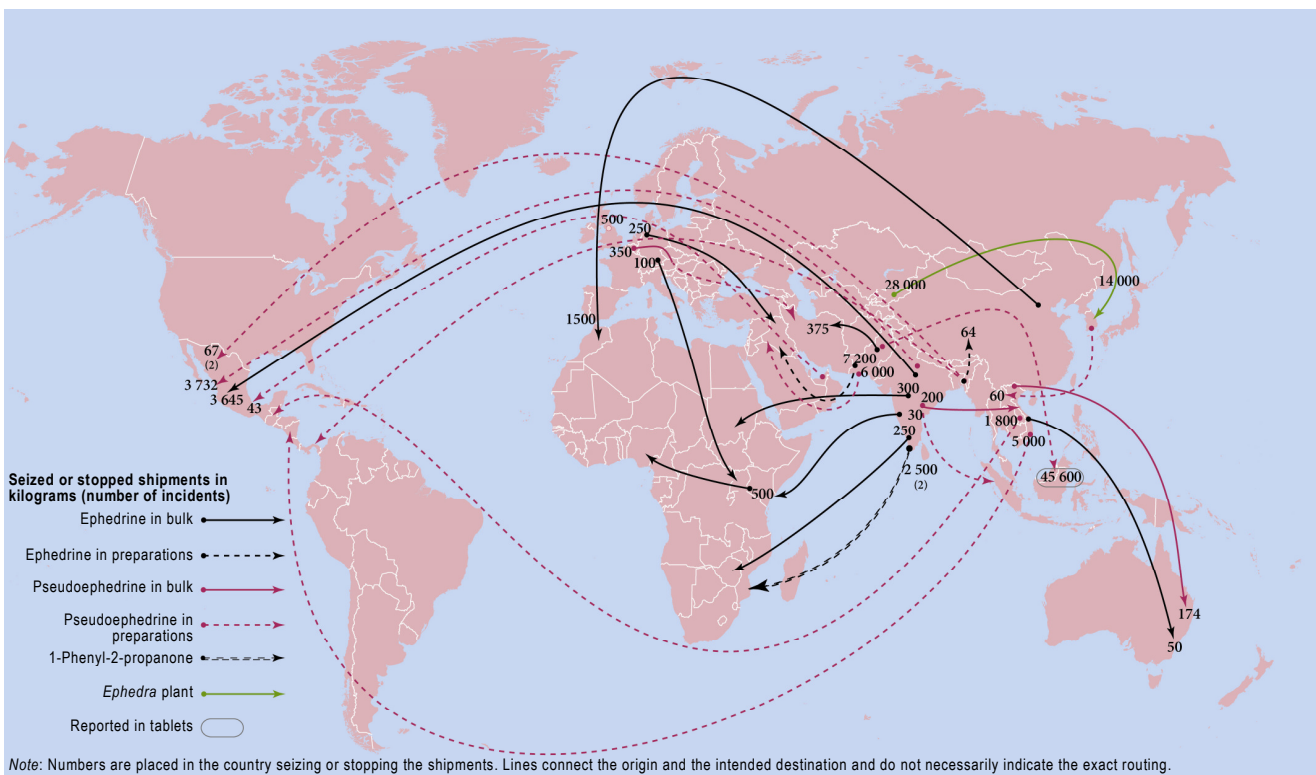
<sup>10</sup> United States of America, Code of Federal Regulations (§ 1313.24).

the emerging use of other substances as alternatives to esters of phenylacetic acid in the illicit manufacture of methamphetamine (see para. 89 below). Another likely scenario includes considerable amounts of esters of phenylacetic acid, which may also have been already stockpiled for future use, as considerable amounts of methylamine (an essential chemical that, together with phenylacetic acid, is required for the illicit manufacture of methamphetamine) continue to be seized throughout North America and Central America (see para. 56 below).

37. International cooperation to counter trafficking in non-scheduled chemicals is increasing. In 2011, successful

backtracking investigations at one of the largest clandestine laboratories ever dismantled in Mexico indicated that several large shipments of non-scheduled esters of phenylacetic acid were trafficked through the territory of the United States during 2011 and 2012. China stopped a shipment of 15 tons of esters of phenylacetic acid in August 2012, after Guatemalan authorities informed the Board that the company involved did not exist. The Board notes that the Government of China has stopped shipments of non-scheduled substances that were likely to be used for illicit drug manufacture and encourages other Governments to follow that example.

**Map 4. Post-Operation-Pila communications identifying trafficking routes, seizures and stopped shipments of substances, April 2010-October 2012**



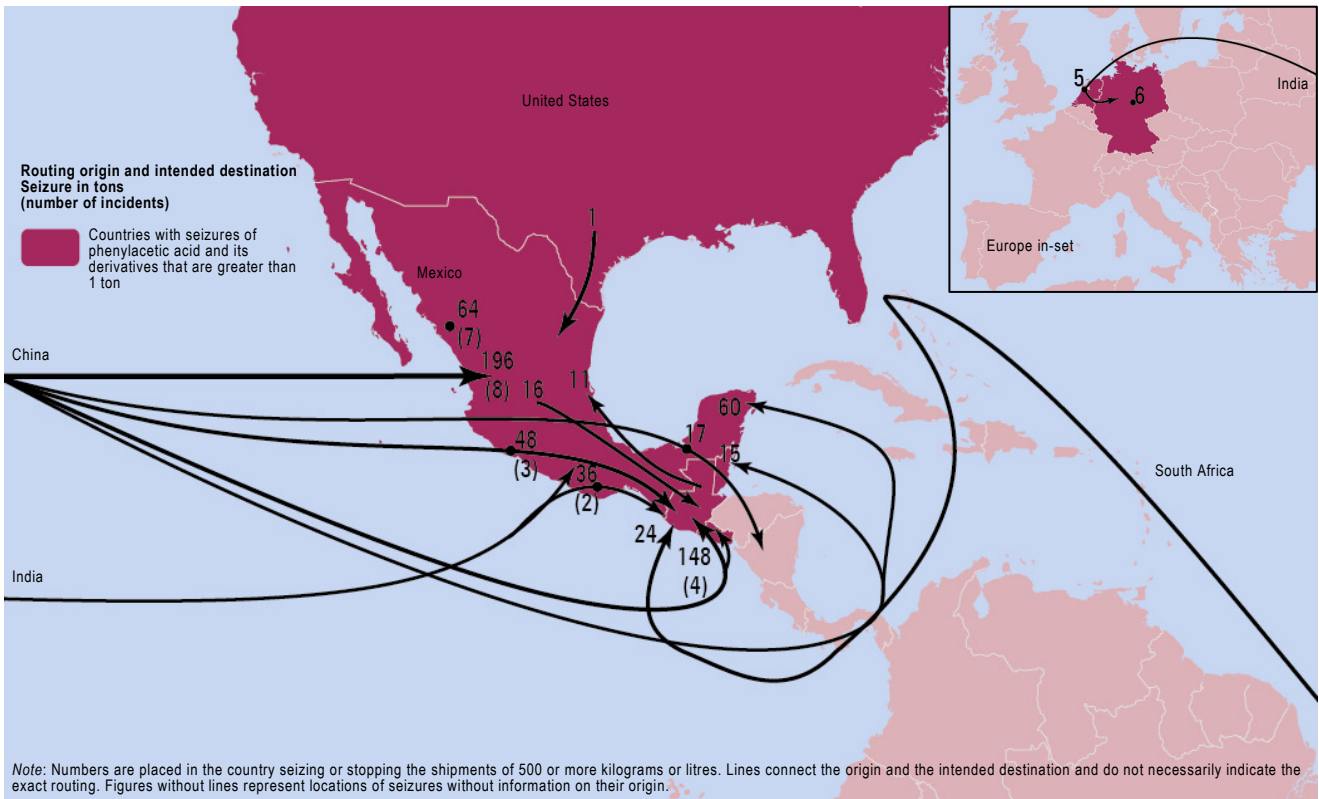
## H. Precursors Incident Communication System

38. The Precursors Incident Communication System (PICS) was launched by the Board, together with the Project Prism and Project Cohesion task force members, during the fifty-fifth session of the Commission on Narcotic Drugs, in March 2012. The secure communication platform is designed to quickly share — among national regulatory and law enforcement authorities of interested countries — information about seizures, diversions and attempted diversions of precursors, shipments of precursors stopped in transit and seizures of illicit laboratories and equipment. Facilitating intelligence-

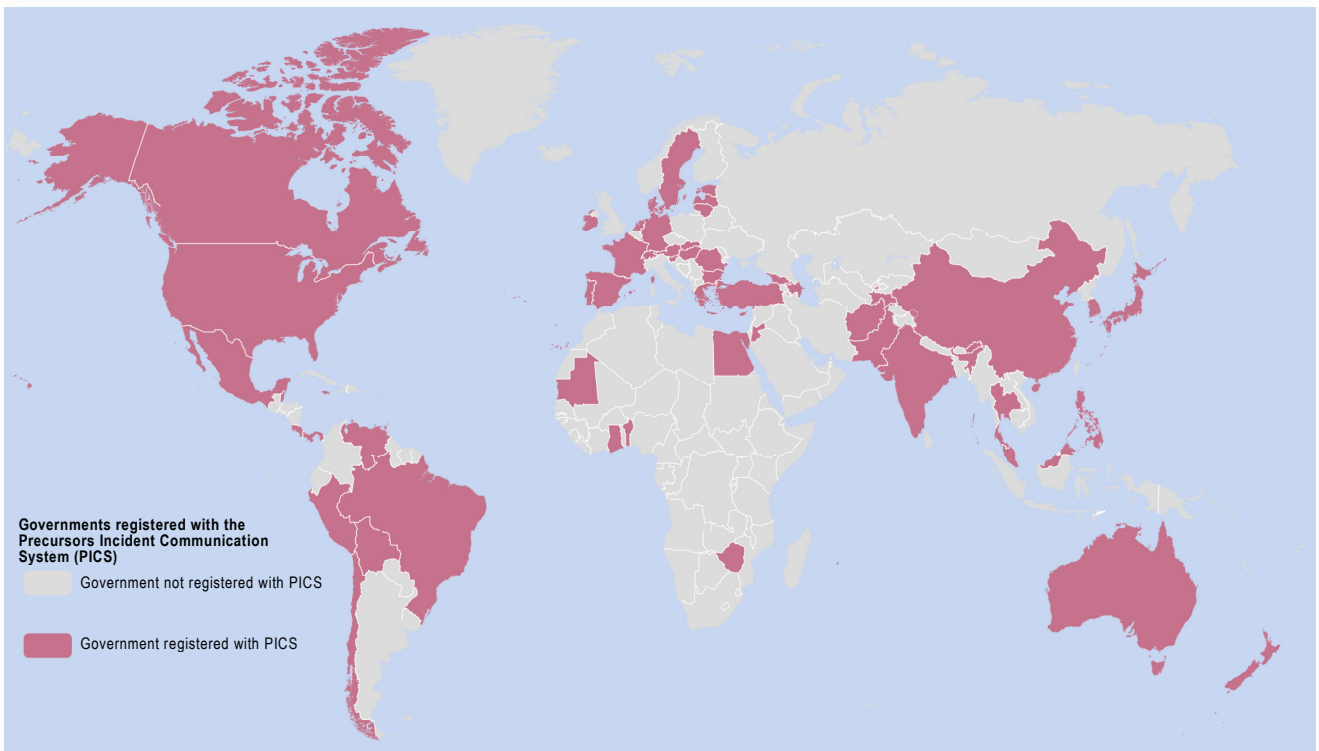
sharing enables effective bilateral and regional investigations to be launched without delay.

39. As at 1 November 2012, there were 237 registered users of PICS, from 58 Governments and 8 international and regional agencies (see map 6). PICS has been used to communicate more than 400 incidents involving 74 different countries and territories. The Board encourages all States to register with PICS focal points for each of their relevant national authorities involved in precursor control, such as national regulatory, law enforcement, customs and drug control agencies, and to use the system to communicate all incidents involving precursor chemicals with a view to enhancing intelligence-sharing.

**Map 5. Trafficking routes and seizures of precursor chemicals communicated under Operation PAAD**



**Map 6. Governments registered with the Precursors Incident Communication System (PICS)**  
 (As at 1 November 2012)



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

40. The proportion of seized substances in Table I of the 1988 Convention is often small when compared with international trade in those substances reported by Governments (see table 1). For example, seizures of acetic anhydride or potassium permanganate account for less than 1 per cent of international trade as reported by

Governments. In the case of some substances, seizures represent a more sizeable proportion compared with international trade; seizures of ephedrine, in bulk or in the form of pharmaceutical preparations, account for approximately 15 per cent of all reported trade in that substance. There is almost no legitimate trade in 3,4-MDP-2-P; thus, seizures of that substance reflect figures that are far in excess of the volume of licit commerce. Substances in Table II have such widespread legitimate industrial uses that seizures of those substances account for an insignificant proportion of international trade (see table 2).

**Table 1. Substances in Table I of the 1988 Convention: seizures as a proportion of trade reported by Governments on form D, 2007-2011**

<i>Substance</i>	<i>Average amount reported seized annually</i>	<i>Average amount reported in international trade annually</i>	<i>Seizures as a proportion of average annual trade (percentage)</i>
Acetic anhydride (litres)	139 000	288 997 000	<1
<i>N</i> -Acetylthranilic acid (kilograms)	<100	2 000	<1
Ephedrine (kilograms)			
Bulk	28 800	212 000	14
Preparations	800	5 000	16
Ergometrine (grams)	700	48 000	1
Ergotamine (grams)	18 000	869 000	2
Isosafrole (litres)	100	16 000	1
Lysergic acid (grams)	300	3 000	7
3,4-Methylenedioxyphenyl-2-propanone (litres)	1 100	100	1 100
Norephedrine (kilograms)	200	168 000	<1
1-Phenyl-2-propanone (litres)	8 600	57 000	15
Phenylacetic acid (kilograms)	259 700	2 464 000	11
Piperonal (kilograms)	1 600	8 476 000	<1
Potassium permanganate (kilograms)	59 500	16 895 000	<1
Pseudoephedrine (kilograms)			
Bulk	16 300	1 068 000	2
Preparations	2 700	71 000	4
Safrole, safrole-rich oils (sassafras) (litres)	13 200	4 075 000	<1

*Notes:* These data must be viewed against a number of limitations, such as inconsistent reporting by Governments, and should be considered in a broader context, reflecting time periods longer than the actual reporting year. Therefore, the data and conclusions presented reflect information that covers multiple years.

Figures are based on a five-year average of data provided on form D (2007-2011). Seizure data are rounded to the nearest hundred, and trade data are rounded to the nearest thousand. Trade data reflect the Government-reported imports or exports (whichever is greater) by substance group. Data do not include instances where pharmaceutical preparations are reported by Governments in units instead of standardized measures.

**Table 2. Substances in Table II of the 1988 Convention: seizures as a proportion of trade reported by Governments on form D, 2007-2011**

<i>Substance</i>	<i>Average amount reported seized annually</i>	<i>Average amount reported in international trade annually</i>	<i>Seizure as a proportion of average annual trade (percentage)</i>
Acetone (litres)	1 243 000	973 288 000	<1
Anthranilic acid (kilograms)	<1 000	1 549 000	<1
Ethyl ether (litres)	66 000	6 717 000	1
Hydrochloric acid (litres)	760 000	348 515 000	<1
Methyl ethyl ketone (litres)	69 000	1 424 389 000	<1
Piperidine (litres)	<1 000	1 410 000	<1
Sulphuric acid (litres)	1 048 000	8 500 353 000	<1
Toluene (litres)	102 000	963 563 000	<1

*Notes:* Figures are based on a five-year average of data provided on form D (2007-2011). Both seizure data and trade data are rounded to the nearest thousand. Trade data reflect the Government-reported imports or exports (whichever is greater) by substance group.

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

41. Significant international trade occurs in many of the precursors used in the manufacture of amphetamine-type stimulants. Several precursors of amphetamine-type stimulants continue to be diverted from international trade for use in the illicit manufacture of drugs. During the reporting period, the authorities of 44 exporting countries used the PEN Online system to report over 5,000 transactions involving shipments of precursors of amphetamine-type stimulants.

### 1. Ephedrine and pseudoephedrine

42. Ephedrine and pseudoephedrine — used in illicit methamphetamine manufacture — are some of the most frequently traded substances in Table I of the 1988 Convention and, as such, significant diversions of those substances, often in the form of pharmaceutical preparations, continue to be reported throughout the world. Although large amounts of ephedrine and pseudoephedrine continue to be seized in regions with significant illicit methamphetamine manufacture, the reliance upon those precursor chemicals may be decreasing, particularly in parts of Latin America where other methods are increasingly being used. Countries in South-East Asia reported seizing an increasing amount of ephedrine and pseudoephedrine in the form of pharmaceutical preparations; however, comprehensive reporting remains problematic. West Asian countries have high annual legitimate requirements for the import of those substances, while the number of dismantled clandestine methamphetamine laboratories and the smuggling of the

precursors used in those laboratories have grown. There have been few reports of seizures of such substances in African countries; however, the increasing number of dismantled clandestine methamphetamine laboratories in Africa suggests that diverted precursors are also available throughout the continent.

### *Licit trade*

43. Details regarding 3,840 notifications of shipments of ephedrine and pseudoephedrine, in bulk and in the form of pharmaceutical preparations, were submitted through the PEN Online system during the reporting period. The shipments consisted of 1,036 tons and 7,570 litres of pseudoephedrine, in addition to 2.5 million tablets containing pseudoephedrine; and 300 tons of ephedrine and 130,000 tablets containing ephedrine. The shipments of ephedrine and pseudoephedrine originated in 42 exporting countries and territories and were destined for 147 importing countries and territories.

44. Several shipments of ephedrine and pseudoephedrine were stopped in the reporting period. A shipment of 500 kg of bulk pseudoephedrine sulfate sent from Belgium to Egypt was stopped as the company had no import authorization. The Islamic Republic of Iran stopped a shipment of 300 kg of preparations containing pseudoephedrine that were to have been tableted in Austria; the bulk material is believed to have originated in Belgium. A shipment containing 1,800 kg of pseudoephedrine preparations originating in the Lao People's Democratic Republic and destined for Guatemala was stopped after Guatemalan authorities contacted the Board and the Board notified the Lao authorities that the importation of the substance was prohibited in the country



of destination. A shipment of 60 kg of ephedrine originating in India via the United Kingdom of Great Britain and Northern Ireland and destined for Panama, was stopped after authorities in Panama informed the Board that the company was unknown.

### Trafficking

45. Thirty-eight Governments indicated on form D that they had seized a total of 75.9 tons of ephedrine and pseudoephedrine in bulk and in the form of pharmaceutical preparations, of which 29.2 tons (38 per cent) were bulk ephedrine, 33.8 tons were ephedrine in the form of pharmaceutical preparations, 6.4 tons were pseudoephedrine and 2.3 tons were pseudoephedrine in the form of pharmaceutical preparations. In addition, 15.1 million tablets of preparations containing pseudoephedrine and 447,078 tablets containing ephedrine were also reported seized. In 2011, Australia, China, India, Malaysia, Mexico and the United States<sup>11</sup> each reported multi-ton seizures of ephedrines. The number of Governments reporting seizures of ephedrine and pseudoephedrine regardless of their physical form has increased 26 per cent since 2007.

46. Significant seizures of ephedrine and pseudoephedrine in the form of pharmaceutical preparations continue to be reported throughout East and South-East Asia. The increase in seizures may be related to improved awareness and controls over bulk ephedrine and pseudoephedrine, resulting in greater difficulty in obtaining those bulk precursors. The trafficked pharmaceutical preparations are primarily destined for illicit manufacture of methamphetamine in Myanmar (and, increasingly, Cambodia).

47. A significant amount of pharmaceutical preparations containing pseudoephedrine is diverted from the Republic of Korea. This issue was highlighted in the Board's 2011 report on precursors. Since then, six additional seizures and stopped shipments have been reported. In 2012, authorities in Hong Kong, China, requested that two shipments destined for their territory — 600 kg and 1 million tablets — be stopped. An unauthorized shipment of 60 kg of pseudoephedrine hydrochloride in the form of a pharmaceutical preparation was seized in the Lao People's Democratic Republic. Thailand reported the seizure of

2 million tablets containing pseudoephedrine that had originated in the Republic of Korea and transited Singapore. The results of investigations by authorities of Singapore and Thailand led to a second seizure: 2 million tablets en route to Malaysia by air. Finally, a shipment of 300,000 tablets destined for Ghana was requested to be stopped, as the company had no import authorization.

48. Authorities in Thailand identified the disappearance of large amounts of pharmaceutical preparations containing pseudoephedrine from various private and public hospitals in the central, north-eastern and northern parts of Thailand and alleged irregularities concerning orders of the substance for licit use, resulting in significant discrepancies between the number of tablets ordered from the national competent authority and the number in hospital inventories. There are indications that the tablets were subsequently smuggled into neighbouring countries for use in illicit methamphetamine manufacture. Several health officials and hospital staff members were implicated in activities that were believed to have occurred over a three-year period.

49. In 2011, China reported on form D the seizure of 5.4 tons of ephedrine and pseudoephedrine — a figure similar to the one reported the previous year. In 2011, a review of the precursor industry established that there were more than 160,000 precursor operators in China. The review facilitated the inspection of companies manufacturing compound preparations containing ephedrine, which led to the dismantling of a number of illegal operations. The number of cases involving illicit manufacture of synthetic drugs increased by 20 per cent between 2010 and 2011: a total of 529 cases were reported in 2011, many of them involving illicit methamphetamine manufacture. In 2011, 14.3 tons of methamphetamine were seized, an increase of 44 per cent over the previous year, while the number of people registered for abusing synthetic drugs, including methamphetamine, reached 58,700 in 2011, a 10-fold increase over 2005.<sup>12</sup> Several cases of ephedrine and pseudoephedrine being trafficked into China were communicated via PICS during the reporting period. In one particular case, 776,000 tablets containing pseudoephedrine were seized after they had been smuggled out of Singapore. Authorities in China also seized 64 kg of ephedrine in the form of deteriorating pharmaceutical preparations that had originated in Bangladesh.

<sup>11</sup> The United States revised upward its seizures of precursor chemicals since 2006; it now reports total seizures, which include local, state and federal sources. The revisions are reflected in annex VIII of the present report. Ephedrine (in bulk and in the form of pharmaceutical preparations) figures reported from the United States for 2011 may inadvertently include sizable seizures of *Sida cordifolia* (see para. 64) and/or *Ephedra* plant extracts, and are thus not comparable with past figures.

<sup>12</sup> China, National Narcotics Control Commission, *Annual Report on Drug Control in China 2012*, p. 50.

50. In the Board's 2010 report on precursors,<sup>13</sup> Bangladesh was identified as the source of most of the diverted preparations containing ephedrine and pseudoephedrine, including those with a high pseudoephedrine content and most often destined for Guatemala. Once again, there have been reports of pharmaceutical preparations containing pseudoephedrine, manufactured in Bangladesh and transiting (or smuggled via) Europe and seized while en route to Central America. Authorities in the Netherlands seized a shipment of 500 kg of pseudoephedrine; the misdeclared tablets had been exported from Bangladesh to an unknown recipient in Panama. In August 2011, the authorities in Guatemala seized a shipment of 37,980 pseudoephedrine tablets that had been manufactured in Bangladesh, shipped from Singapore via Europe and destined for Guatemala; the shipment had been sent on behalf of a Pakistan company. In a disturbing new development, consignments of bulk pseudoephedrine are now being reported "lost" at the international airport at Dhaka. The Board wishes to remind all exporting Governments that shipments of ephedrine and pseudoephedrine, regardless of their form, are prohibited in Guatemala, as well as in Belize, Colombia, El Salvador, Honduras, Mexico and Nicaragua.<sup>14</sup> The Board strongly recommends that the Government of Bangladesh should review and strengthen domestic control measures for precursors without delay.

51. West Asian countries continued to experience considerable trafficking in methamphetamine and its precursors, as evidenced by seizures of those substances. According to a report by the Islamic Republic of Iran, 3.8 tons of ephedrine were seized in that country in 2011, along with 3.9 tons of methamphetamine — nearly triple the figure for the previous year.<sup>15</sup> As there have been no indications that the precursors used in the manufacture of methamphetamine included P-2-P, it would require nearly 6 tons of ephedrine or pseudoephedrine, along with significant amounts of acids and solvents, to synthesize that amount of methamphetamine. The Iranian Government reported several significant incidents involving the smuggling of ephedrine from neighbouring Iraq (50 kg) and Pakistan (530 kg) in 2011.

<sup>13</sup> *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2010*, para. 37.

<sup>14</sup> Exceptions for the limited imports of injectable preparations and/or bulk material for their manufacture exist (for details, see [www.incb.org/documents/PRECURSORS/ANNUAL-LICIT-REQUIREMENTS/INCB\\_ALR\\_WEB.pdf](http://www.incb.org/documents/PRECURSORS/ANNUAL-LICIT-REQUIREMENTS/INCB_ALR_WEB.pdf)).

<sup>15</sup> Islamic Republic of Iran, Drug Control Headquarters, *Drug Control in Iran 2011* (Tehran, March 2012).

52. As a result of domestic pharmacy dispensing limits set in 2009 in the Czech Republic, laboratories illicitly manufacturing methamphetamine on a small scale rely primarily on pharmaceutical preparations containing pseudoephedrine, which are increasingly being brought in from neighbouring countries. In 2011, Czech authorities dismantled 338 laboratories involved in the illicit manufacture of methamphetamine (known locally as "pervitin") and reported having seized in illicit laboratories a variety of scheduled chemicals (hydrochloric acid, sulphuric acid and toluene), along with large amounts of non-scheduled substances, including formic acid, hydriodic acid, iodine, red phosphorus, sodium hydroxide and potassium hydroxide.

53. Several countries in Africa also reported the seizure of modest amounts of ephedrine in 2012. Three separate seizures, each involving 25 kg of bulk ephedrine, were communicated through PICS, each involving Southern Africa: Nigeria reported seizing an air cargo consignment en route to Mozambique; a consignment originating in India was seized in Mozambique when traffickers attempted to enter South Africa with the consignment; and finally, a multi-drug seizure in South Africa led authorities to 25 kg of ephedrine at a suspected illicit methamphetamine laboratory in May 2012. There are indications that abuse of amphetamine-type stimulants — primarily methamphetamine and, to a lesser degree, methcathinone — is spreading in South Africa, as evidenced by the fact that in 2011 admissions to treatment for the abuse of amphetamine-type stimulants accounted for 28 per cent of all admissions to treatment for drug abuse, an increase over the 2008 figure (22 per cent).<sup>16</sup> There continue to be open source reports on the dismantling of illicit drug manufacturing operations in South Africa; however, the Board notes with regret that the Government of South Africa has not submitted form D since 2009.

54. The spread of illicit drug manufacture in West Africa continues to be a matter of concern. In February 2012, the Government of Nigeria dismantled a large illicit methamphetamine laboratory, the second one in less than a year; the authorities seized 41 kg of bulk ephedrine, along with a variety of other scheduled substances and some non-scheduled substances such as acetone, toluene, hypophosphorous acid, iodine, hydrochloric acid and sodium hydroxide, the sources of which remain unknown. Consignments of methamphetamine destined for the lucrative illicit markets in East Asia and arriving on flights from several countries in West Africa give increasing credence to concerns about undetected illicit manufacture

<sup>16</sup> Annual report questionnaire, 2008 and 2011.

of amphetamine-type stimulants in West Africa. Another worrisome trend is the increasing illicit demand for amphetamine-type stimulants in the region, suggesting the possibility of a growing illicit market for the substances, as evidenced by a recent World Health Organization (WHO) study of students in Benin that found that 1.8 per cent of students reported having used amphetamine and/or methamphetamine.<sup>17</sup>

55. There continue to be concerns about the theft and diversion of precursors in East Africa, as noted in the Board's 2011 report on precursors. The results of investigations into several cases involving the theft of ephedrine and pseudoephedrine since 2009 at Jomo Kenyatta International Airport, at Nairobi, have still not been reported to the Board. Seizures of methamphetamine originating in East African countries have been reported since 2011.

56. The United States continues to grapple with a strong resurgence of small-scale illicit methamphetamine manufacture, the number of dismantled methamphetamine laboratories growing to 7,348 in 2011 — an increase of 30 per cent over the past two years. Individuals and chemical trafficking organizations continue to circumvent purchase limits on pharmaceutical preparations containing pseudoephedrine in order to manufacture methamphetamine (primarily for personal consumption), often using a simple low-yield “one-pot” manufacturing method that requires small amounts of precursors. It is estimated that 80 per cent of the methamphetamine entering the United States enters the country via Mexico.<sup>18</sup>

57. Seizures of ephedrine and pseudoephedrine in Mexico and neighbouring Central American countries continue to decline, as the P-2-P-based manufacturing process dominates the region. Mexico reported on form D for 2011 that it had seized a mere 315 kg of ephedrine and pseudoephedrine, far less than the 9 tons reported the previous year. Guatemala, which also continued to be a source of illicitly manufactured methamphetamine in the region, reported on form D that its seizures in 2011 had dropped, compared with the previous year, to 100 kg of ephedrine, 95 kg of pseudoephedrine and 550,000 pseudoephedrine tablets and that little had been seized after May 2011. Illicit manufacture of methamphetamine in Guatemala is increasing — 13 laboratories illicitly manufacturing methamphetamine

on a large scale were reported to have been dismantled between January and September 2012.

58. Significant illicit manufacture of methamphetamine continues to occur in Oceania, relying largely on smuggled ephedrine and pseudoephedrine in bulk and in the form of pharmaceutical preparations. In December 2011, Australian authorities seized 650 kg of ContacNT, a distinct granular pharmaceutical formulation containing pseudoephedrine; it had been concealed within the metal frames of cargo shipping containers imported into Australia. Australia reported the dismantling of 703 clandestine laboratories in 2010/2011 — the majority had been involved in the illicit manufacture of methamphetamine using ephedrine or pseudoephedrine — the highest number ever reported to be dismantled. New Zealand reported the dismantling of 109 methamphetamine laboratories in 2011 — a decrease over 2010 — along with decreases in border detections of ContacNT.

## 2. Norephedrine and ephedra

59. International trade in norephedrine, which can be used in the manufacture of amphetamine, is low compared with trade in other precursors. The Board is aware that ephedrine alkaloids extracted from plants of the genus *Ephedra* have been used in the illicit manufacture of methamphetamine, but there is no requirement to report trade in ephedra or ephedra-based products. Although both norephedrine and ephedra have been found in illicit drug laboratories, such occurrences are unusual, accounting for a tiny proportion of substances reported to be found in such laboratories.

### *Licit trade*

60. According to the PEN Online system, during the reporting period, 12 countries exported norephedrine to 33 countries: 141 transactions involving a total of 41 tons of norephedrine. There were no suspended shipments of norephedrine communicated through PEN Online.

### *Trafficking*

61. Seizures of small amounts of norephedrine were reported on form D for 2011 by the authorities from Australia, Germany, New Zealand, Ukraine and the United States.

62. Seizures of *Ephedra* plant totalling 28 tons were reported on form D for 2011 by Australia, Kyrgyzstan and New Zealand. Kyrgyzstan reported seizing 27.8 tons of the substance. In 2011, Australia identified 84 consignments of *Ephedra* plant totalling 14.5 kg, a notable increase over the previous year's figures (34 consignments totalling 3 kg).

<sup>17</sup> World Health Organization, “Global school-based student health survey (GSHS): Benin full report” (2011), p. 17.

<sup>18</sup> United States, Department of Justice, National Drug Intelligence Center, *National Drug Threat Assessment 2011* (August 2011), p. 13, figure 1.



Most of the seized consignments had been sent through the postal system, primarily from New Zealand, Taiwan Province of China and the United States, often in the form of dietary or weight-loss supplements. However, it remains unclear whether they had been intended for use in the illicit drug manufacture.

63. The Board is aware through open source reports of a significant seizure of *Ephedra* plant material in China in May 2012. Authorities dismantled a clandestine ephedrine extraction laboratory, seizing 14 tons of *Ephedra* plant material and 47 kg of processed ephedrine. There are indications suggesting that the suspects had originally obtained 18 tons of *Ephedra* plant. It is unclear whether the ephedrine had been intended for domestic or international destinations.

64. The plant *Sida cordifolia* and its extracts, which contain ephedrine, have been found in clandestine methamphetamine laboratories in several countries. The United States reported seizing 14 tons of the plant material in New York in October 2011; the seized plant material had originated in India and the organization procuring it had previously been involved in transporting significant quantities of the material to organized criminal groups operating in Mexico. Authorities in New Zealand have determined that the plant has been used in a small but growing number of clandestine methamphetamine laboratories since 2005 and that seizures of the plant material or extracts containing it were reported in 2011. Small amounts of the plant material were also reported seized by Australian customs authorities in 2010/11.

### 3. 1-Phenyl-2-propanone and phenylacetic acid

65. P-2-P can be synthesized from phenylacetic acid and can be used in the illicit manufacture of amphetamine or methamphetamine. Licit international trade in phenylacetic acid is significant and widespread, especially if the non-scheduled esters and derivatives of phenylacetic acid are taken into account. Licit trade in P-2-P is far more limited, in terms of both the volume and the number of countries involved. Methods based on the use of P-2-P, including those that start with phenylacetic acid and its esters, are the predominant methods used for the illicit manufacture of methamphetamine, particularly by organized criminal groups operating in Mexico and neighbouring countries. Seizures of P-2-P that had been intended primarily for use in illicit amphetamine manufacture continue to be made in Europe. In Jordan, imports of P-2-P for the alleged use in the manufacture of cleaning products have now been prohibited by the Government.

66. During the reporting period, the Board was informed of a shipment of 400 kg of P-2-P sent from India to Azerbaijan. The authorities of Azerbaijan informed the Board that the original import authorization had been issued for hydrochloric acid, and not P-2-P. The shipment was subsequently stopped by India.

#### *Licit trade*

67. In the reporting period, the PEN Online system was used to send notifications about only 36 shipments of P-2-P, totalling 22,900 litres. There were 411 shipments of phenylacetic acid, amounting to 307 tons, which represented an increase over previous years, as the substance was moved to Table I of the 1988 Convention in January 2011. Only 27 Governments reported legitimate requirements for P-2-P; 7 of those Governments reported having an annual legitimate requirement for the import of the substance that was greater than 1 kg per year.

68. In February 2012, India sent a pre-notification for a shipment of 2 tons of P-2-P destined for Mozambique. The importer was new and the Indian authorities requested the competent authorities of Mozambique to confirm the legitimacy of both the transaction and the import authorization. The Mozambican authorities informed the Indian authorities that the company was not authorized to import the substance and that the import certificate had been falsified.

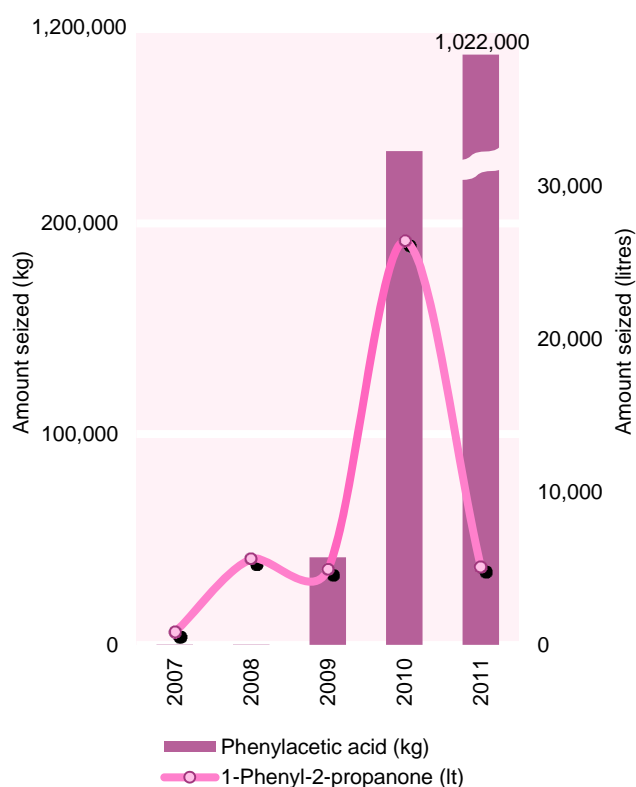
69. The Polish authorities requested that a shipment of 18 tons of phenylacetic acid, which had been ordered in China, be stopped because the company was not authorized to import the substance and, according to the company, it had only requested the price to possibly order the substance through the Internet. According to trade data reported on form D and transactional data from PEN Online, Poland has so far had only modest imports of phenylacetic acid. **The Board recommends that Governments analyse the history of patterns of trade in phenylacetic acid (and its esters) so that attempts at diversion may be identified and thwarted. The Board stands ready to assist Governments where required.**

#### *Trafficking*

70. Twelve Governments reported to the Board on form D that they had seized a total of 5,312 litres of P-2-P in 2011 — of which more than half was reported to have been seized in Europe. Seizures of phenylacetic acid totalling 1,027 tons were reported by six Governments on form D for 2011; the seizures had been made largely in North America (Mexico and the United States) (see figure I). The United States reported seizing 997 tons of the substance, an amount which may also contain

seizures of its unscheduled esters, and represents the largest amount of the substance ever reported seized in a single year. The amount is illustrative of the increasing role of the substance in illicit manufacture of methamphetamine in neighbouring Mexico.

**Figure I. Seizures of 1-phenyl-2-propanone and phenylacetic acid reported by Governments on form D, 2007-2011**



71. Mexico reported seizing 2,184 litres of P-2-P in 2011. That figure is not reflective of the method used for illicit methamphetamine manufacture based on the use of P-2-P because the starting material used in that process is primarily phenylacetic acid or its derivatives. Several European countries, above all Lithuania (600 litres) and Bulgaria (545 litres), reported seizures of P-2-P totalling 1,648 litres.

72. The Russian Federation accounted for 1,060 litres of P-2-P reported seized in 2011. The sources and circumstances relating to this amount of seized P-2-P have not been provided to the Board. The Russian Federation is no longer a manufacturer of P-2-P; the last facility for the manufacture of P-2-P in the country closed in 2009.

73. Bulgaria and Turkey have been important sources of amphetamine and the production of fake Captagon tablets for illicit markets in the Middle East — primarily in Saudi Arabia and its neighbouring countries — but the declining number of seizures in those countries suggests that illicit manufacture of those substances is occurring closer to those markets. Nonetheless, Bulgarian authorities reported the dismantling of two large illicit amphetamine laboratories in 2011, seizing 256 and 290 kg of P-2-P, respectively. In January 2012, as the result of an international investigation and a controlled delivery operation, Bulgarian authorities reported the dismantling of three illicit amphetamine laboratories, seizing 15 kg of amphetamine, 75 litres of amphetamine base, over 1,400 litres of various undisclosed precursors and two tableting machines.

74. Authorities in Lebanon reported the dismantling of an illicit amphetamine laboratory in 2012 and the seizure of 92 litres of amphetamine base and 13 litres of P-2-P. More than 5 tons of caffeine were also seized, an indication of the scale of the illicit manufacturing operation. The source of the chemicals and points of diversion were not reported to the Board. In September 2012, an incident involving a foiled attempt to smuggle drug manufacturing equipment from China into Lebanon was communicated via PICS.

75. The European Commission reported the outcome of an investigation conducted jointly by the authorities of Germany and the Netherlands involving phenylacetic acid imported from India and destined for Germany. A total of 11 tons of the substance were destined for a German company. Subsequent investigation by the authorities resulted in 6 tons of phenylacetic acid and 2.5 tons of other chemicals being seized in Germany. In addition, 5 tons of phenylacetic acid were also seized in Rotterdam, Netherlands. The investigation concluded that the chemicals had been diverted for use in illicit amphetamine manufacture in Poland.

76. Forensic profiling of seized methamphetamine in the United States shows that nearly all of the methamphetamine seized and analysed in that country has been manufactured using P-2-P-based methods. In the second quarter of 2012, 94 per cent of samples tested had been manufactured using P-2-P-based methods, a significant increase over the figure for 2010 (69 per cent). In 2010, record seizures of methamphetamine were reported by Mexico (12.9 tons) and the United States (8.7 tons); that, combined with significant seizures of precursor chemicals in Mexico (see para. 91 below), suggests that illicit methamphetamine manufacture has increased. That is also evidenced by the retail price per pure gram of methamphetamine in the United States,

which in 2011 was at the lowest level ever recorded (\$123 per pure gram). The price reflects greater market availability, resulting from a combination of increased large-scale P-2-P-based manufacture and trafficking from Mexico and increased small-scale domestic manufacture in the United States, coupled with lower illicit demand in the United States (reflected in historic lows in the incidence and prevalence of methamphetamine use among the general population). Sustained low prices, however, may fuel demand in the near term, given the high potency and purity of methamphetamine at the retail level. And that could increase the number of incidents of hospitalization due to problem drug use and overdose.

#### 4. 3,4-Methylenedioxyphenyl-2-propanone and piperonal

77. There is little legitimate use for 3,4-MDP-2-P, and subsequently little international trade in the substance. The opposite is true for piperonal. Both 3,4-MDP-2-P and piperonal can be used in the illicit manufacture of 3,4-methylenedioxymethamphetamine (MDMA, commonly known as “ecstasy”) and its analogues. Seizures of MDMA have been declining for several years — particularly in Europe — but there are now indications that MDMA may once again be returning to illicit drug markets. Few Governments have a legitimate need for the import of 3,4-MDP-2-P, and those which do report minimal amounts: just five Governments need more than 1 kg of the substance per year (see annex II). Governments are not requested to provide the Board with their annual legitimate requirements for the import of piperonal.

##### *Licit trade*

78. During the reporting period, only one shipment of 1 litre of 3,4-MDP-2-P was reported through the PEN Online system, while 541 shipments of piperonal totalling 1,831 tons were reported. Fourteen Governments informed the Board of an annual legitimate requirement for the import of 3,4-MDP-2-P totalling 133 kg annually, while 87 indicated that they had no legitimate need for the substance.

##### *Trafficking*

79. Only three countries — Australia, Canada and Lithuania — reported on form D for 2011 the seizure of 3,4-MDP-2-P (total: only 124 litres). The seizure of piperonal was reported by the United Kingdom (10 kg) and three other countries; and seizures of insignificant amounts of piperonal were reported by Australia, Lithuania and Mexico.

80. During the reporting period, a single seizure of piperonal was communicated via PICS. In January of 2012, the Government of the Philippines seized 1 kg of piperonal after successfully conducting a controlled delivery operation involving international mail. The seized shipment of piperonal was part of a series of shipments that had arrived from China and had been mislabelled as sodium tungstate. The Board encourages Governments to conduct controlled deliveries and backtracking investigations of shipments of precursors and to communicate the results of those efforts via the existing mechanisms of Project Prism and Project Cohesion.

#### 5. Safrole, safrole-rich oils and isosafrole

##### *Licit trade*

81. During the reporting period, the Board was informed of 56 shipments of safrole, including in the form of safrole-rich oils, with a total volume of 176,200 litres. About 80 per cent of the trade in safrole involved safrole in the form of safrole-rich oils, while only two shipments of isosafrole (1 litre each) were notified via PEN Online. There were no suspended shipments of isosafrole communicated via the PEN Online system, again reflecting the limited international trade in the substance. Governments are not required to provide the Board with their annual legitimate requirements for the import of those substances.

##### *Trafficking*

82. Seizures of safrole and safrole-rich oils, after declining for several years, rebounded in 2011, as nine countries used form D to report seizures of those substances totalling 17,122 litres. Australia, Cambodia, Malaysia, Mexico and the United States each reported seizing more than 2,000 litres of those substances, while smaller amounts were reported to have been seized by Belgium, Canada, Hungary and the Netherlands. Several countries in East and South-East Asia — where a significant amount of legitimate production occurs — were reported to be sources of the substances. Australia reported on form D for 2011 that trace amounts of isosafrole had been seized.

83. Cambodia has continued to seize significant amounts of safrole and safrole-rich oils. In 2011, Cambodian authorities seized 2,058 litres of those substances in the Cardamom mountain area, which had been destined for neighbouring Thailand and Viet Nam. The harvesting and exporting of safrole-rich oils are prohibited in Cambodia.

84. Malaysian authorities dismantle laboratories illicitly manufacturing amphetamine-type stimulants, in particular MDMA. In 2011, they dismantled three MDMA

laboratories and seized 7,675 litres of safrole. The source of the safrole was not reported.

85. Australian authorities dismantled an organized crime syndicate in Sydney and made the largest seizure of safrole in Australian history: more than 2,800 litres of low-concentration safrole oil (equivalent of about 288 litres of pure safrole), misdeclared as liquid hair and cleaning products originating in China.

86. The Board is also aware of a single seizure made by Belgian customs authorities of almost 10,000 litres of safrole-rich oil arriving in a container from Thailand and destined for the Netherlands. After several years of declining seizures and purity of MDMA tablets in large European markets such as the Netherlands, Spain and the United Kingdom, data suggest that the availability of MDMA in Europe has increased.

## 6. Non-scheduled substances and trends in illicit manufacture of amphetamine-type stimulants

87. Decreases in diversions of, or seizures in, traditional precursors — such as various ephedrines and 3,4-MDP-2-P — have been observed by the Board over the past several years, yet the availability of drugs such as methamphetamine and, more recently, MDMA appear to be on the increase. This apparent contradiction is attributable to: increased international control, which has resulted in shipments of traditional precursors being halted before they can be diverted, thus preventing them from being seized; trafficking routes shifting to more vulnerable regions with weak or non-existent precursor control mechanisms; increased diversion of under-regulated pharmaceutical preparations and challenges in monitoring and reporting pharmaceutical preparations; and traffickers relying more on non-scheduled chemicals. In its 2011 report on precursors, the Board identified the uptake in alternative precursors used in illicit manufacture as being largely region-specific. However, there are now indications that new chemicals previously identified in one region are also being used in others.

88. *alpha*-Phenylacetoacetonitrile (APAAN), a non-scheduled substance that can be easily converted into P-2-P at a ratio of about 1.4 to 1, continues to be the preferred substitute used in P-2-P-based illicit amphetamine laboratories in Europe, and there are indications that its use is spreading. In 2011, three European countries reported on form D that they had seized shipments of APAAN totalling more than 3.5 tons; the intended destination of all the shipments appears to have been the Netherlands. Authorities in the Netherlands seized eight shipments of APAAN totalling 2,810 kg in 2011 and have continued seizing APAAN in 2012. Between April and October 2012,

authorities of Belgium, Bulgaria, the Netherlands and Romania communicated via PICS 17 incidents involving 13.6 tons of APAAN; in all cases, the substance originated in China. The Board understands that the authorities of the countries concerned are fully cooperating with each other in order to address this significant development.

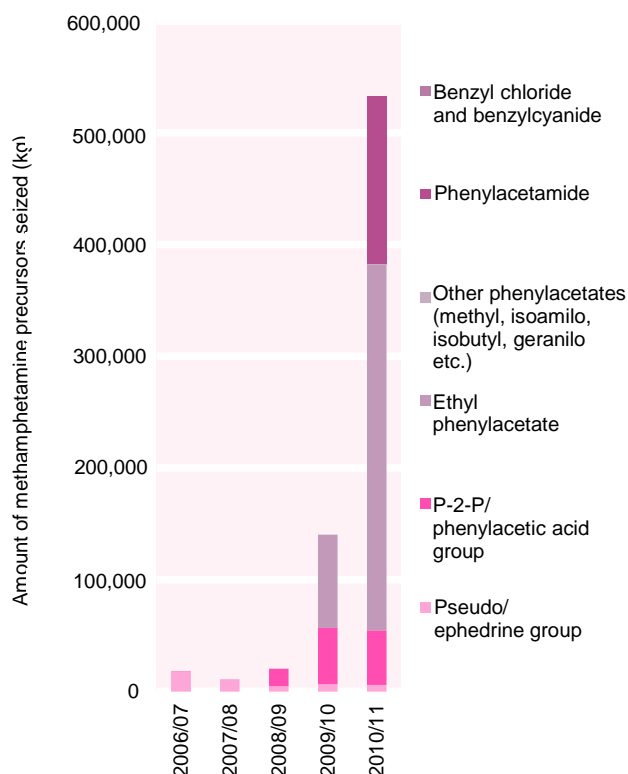
89. In 2012, Canada communicated via PICS the seizure of two shipments of APAAN — the first of such cases in the Americas known to the Board. The two seized APAAN shipments, totalling 6.7 tons, had originated in China. Although in Europe it has been used for the illicit manufacture of amphetamine, APAAN can also be used for the illicit manufacture of methamphetamine, which is more commonly encountered in Canada. The increased trafficking in APAAN, together with the increasing geographical area in which seizures of the substance have been made, may be attributable to its low cost compared with P-2-P.

90. Criminal organizations trafficking in precursor chemicals are becoming increasingly large, resourceful, well organized and adaptable, capable of circumventing the growing number of control measures that have been introduced. As highlighted in the Board's 2011 report on precursors, significant amounts of ethyl phenylacetate, a non-scheduled derivative of phenylacetic acid, were reported seized during Operation PAAD, predominately in Mexico, but also in neighbouring Belize, El Salvador, Guatemala and Nicaragua. On form D for 2011, Mexico reported seizing 369 tons and 117,000 litres of ethyl phenylacetate and El Salvador reported seizing 157 tons of the substance. Mexico also reported seizing 313,000 litres of methyl phenylacetate — another ester of phenylacetic acid — and lesser amounts of other esters. Although the frequency of the seizures of esters of phenylacetic acid and the amounts seized have decreased since then, the scale of legitimate trade in those substances and the ease with which they can be converted into phenylacetic acid warrant continued awareness by the industries concerned and national authorities. In Mexico, the substances have been under national control since November 2009.

91. Nearly all of the precursors seized in Mexico in 2007 were ephedrines-based; in 2011, the proportion of seized ephedrines-based precursors dropped precipitously to less than 1 per cent (see figure II). The decrease is the result of increased seizures of a variety of non-scheduled precursor chemicals other than ephedrines, including phenylacetamide and benzylchloride (300 tons and 77,000 litres, respectively, reported on form D for 2011) and small amounts of 2-phenylethanol. The experimenting in the use of non-traditional non-scheduled chemicals is likely a consequence of stricter controls over more "traditional" precursors, including esters of phenylacetic acid. Based on

seizures of precursors expressed as illicitly manufactured high-potency *d*-methamphetamine, the amount of drugs prevented from being illicitly manufactured has increased 20-fold since 2006.<sup>19</sup>

**Figure II. Seizures of scheduled and non-scheduled precursors in Mexico, 2006-2011**



Sources: Form D and, for 2006, Inter-American Drug Abuse Control Commission, *Mexico: Evaluation of Progress in Drug Control 2007-2009* (Washington, D.C., 2010).

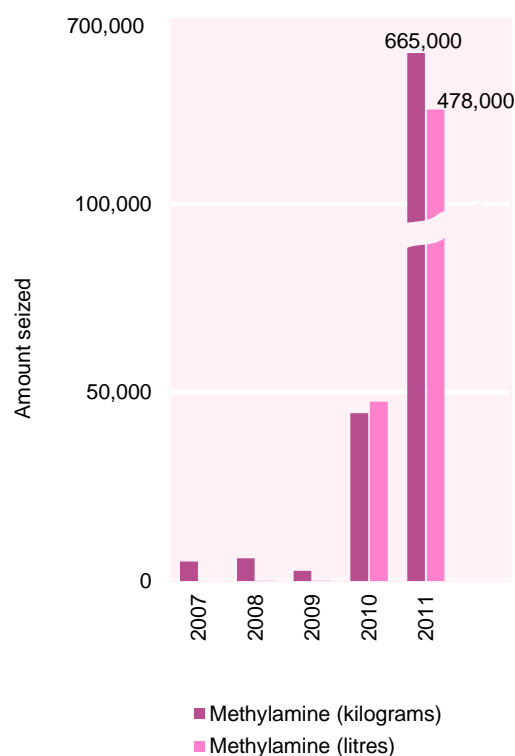
Notes: Values based on two-year moving average of scheduled and non-scheduled precursors reported seized.

92. Styrene is an industrial starting material for the production of plastics (polystyrene), but it can also be used in the synthesis of phenylacetic acid. In June 2012, authorities in Mexico dismantled an illicit methamphetamine laboratory where 5,600 litres of styrene were seized, along with other chemicals. That was the first report received by the Board of a large amount of styrene being identified as being used in illicit methamphetamine

manufacture. (In 2007, there was a report about a smaller amount of styrene being seized in Australia.) Governments should be aware that as traditional precursors of amphetamine-type stimulants come under closer scrutiny, it may be more common for trafficking to turn to alternative substances such as styrene use in the illicit manufacture of amphetamines.

93. Methylamine, together with P-2-P (or 3,4-MDP-2-P), can be used in the illicit manufacture of methamphetamine (or MDMA). In 2011, four Governments reported seizures of methylamine totalling 665 tons and 478,000 litres, the highest levels ever reported to the Board (see figure III). Mexico accounted for 56 per cent of the seizures of methylamine — 597 tons and 70,600 litres (combined totals seven times higher than in the previous year); it was followed by the United States, which accounted for 38 per cent of the seizures. Between January and October 2012, the Board was informed of six seizures of methylamine in four countries in Central America and North America, totalling more than 130,000 litres; 90 per cent of the seized methylamine originated in China. Additional incidents were communicated via PICS.

**Figure III. Seizures of methylamine reported by Governments on form D, 2007-2011**



<sup>19</sup> This assumes that all seized precursors would have been used in illicit drug manufacture. Conversion factors for scheduled precursors are provided in annex IV of the present publication; conversion factors for non-scheduled substances were calculated assuming yields of 30-65 per cent in practice, depending on the substance. The yield for non-ephedrine-based methamphetamine was calculated at a racemic ratio of 50 to 50.



94. The cyclic emergence of non-scheduled substances, as a reaction by illicit drug manufacturers to Governments' increased awareness of the diversion of commonly used precursors (and the resulting strengthened controls over those precursors) is part of a "cat-and-mouse" phenomenon, involving different substances at different times in different regions. It has been observed since the beginning of international precursor control. Enhanced, comprehensive cooperation with industry to identify and investigate suspicious orders is a key element in efforts to prevent diversion of precursors. When substitute chemicals are identified (stopped or seized) in international trade, it is important to communicate widely the reasons why the shipment was stopped or seized so as to alert the relevant authorities — nationally and globally — so that they can identify future shipments routed through different border crossings, ports or countries. Similarly, detailed information on seizures of substitute chemicals in illicit laboratories provides an opportunity for follow-up investigations, identifying those involved and preventing future diversions. The Board therefore urges all Governments to improve the extent, frequency and level of detail of shared information, also in relation to non-scheduled chemicals.

## B. Substances used in the illicit manufacture of cocaine

### 1. Potassium permanganate

95. Potassium permanganate — the common oxidizing agent used in the illicit manufacture of cocaine hydrochloride — is one of the most commonly traded substances in Table I of the 1988 Convention. While there is little licit international trade in potassium permanganate with coca-producing countries, that subregion continues to account for a large proportion of global seizures of the precursor. According to data on legitimate trade and the results of backtracking investigations, alternative chemicals are utilized instead of potassium permanganate for illicit cocaine manufacture or potassium permanganate is diverted from domestic distribution and subsequently smuggled into illicit channels. However, potassium permanganate is also being illicitly manufactured, and that, together with the use of other oxidizers and the shifting of cocaine processing to more vulnerable regions, has resulted in far fewer seizures of potassium permanganate than before.

#### *Licit trade*

96. During the reporting period, 1,631 shipments of potassium permanganate, totalling 27,900 tons, were reported through the PEN Online system. Thirty-one

countries exported potassium permanganate to 126 countries. China was the largest exporter, accounting for more than three quarters of notifications; it was followed by the United States, India and Hong Kong, China. As in previous years, the Islamic Republic of Iran continued to be the major importer of the substance; it was followed by Thailand, Belgium, Brazil and the Republic of Korea.

97. The three coca-producing countries in South America continue to play an insignificant role in the overall trade in potassium permanganate notified through the PEN Online system, accounting for less than 10 per cent of global imports of the substance. This supports the conclusion that alternative chemicals, and smuggled or illicitly manufactured potassium permanganate have been used in the illicit manufacture of cocaine.

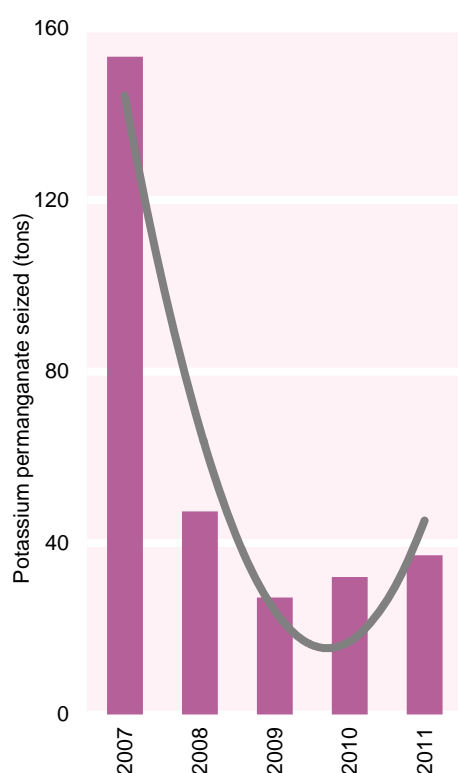
#### *Trafficking*

98. Fifteen Governments reported on form D seizures of potassium permanganate in 2011; those seizures totalled 37 tons (see figure IV). As in previous years, Colombia reported the greatest amount seized (accounting for 65 per cent of the total); it was followed by the Plurinational State of Bolivia with 27 per cent (the highest amount of potassium permanganate ever reported seized in that country). Of the total volume of potassium permanganate reported seized in 2011, South American countries (almost exclusively the coca-producing countries) accounted for 99 per cent. It is estimated that approximately 12-25 per cent of the potassium permanganate available each year for illicit use in the coca-producing countries is seized.<sup>20</sup>

99. Coca production occurs primarily in Bolivia (Plurinational State of), Colombia and Peru, which also account for the bulk of the world's dismantled illicit cocaine laboratories.<sup>21</sup> The number of cocaine paste, base and hydrochloride crystallization laboratories reported dismantled remained relatively unchanged in Colombia between 2007 and 2011, but the number has nearly doubled in both Bolivia (Plurinational State of) and Peru (see table 3).

<sup>20</sup> Revised estimates based on updated potassium permanganate seizures for the period 2007-2011 and revised conversion factors (see annex IV to the present publication; and *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2011 on the Implementation of Article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988* (United Nations publication, Sales No. E.12.XI.4), table 1).

<sup>21</sup> Illicit cocaine-processing laboratories have also been dismantled in Argentina, Chile, Ecuador, Honduras, Spain and Venezuela (Bolivarian Republic of), among others.

**Figure IV. Seizures of potassium permanganate reported by Governments, 2007-2011**

100. Between 60 and 80 per cent of the potassium permanganate seized in Colombia is estimated to have been obtained through illicit manufacture and not diverted from international trade channels. Between 2002 and 2011, there were 91 illicit potassium permanganate laboratories dismantled in Colombia (see figure V), the only country where such activity is reported. The starting material typically used is manganese dioxide, a common ore of manganese, which is converted to potassium manganate and further to potassium permanganate.

101. While illicit cocaine laboratories have been reported in nearly each of the 32 departments in Colombia, illicit potassium permanganate laboratories have only been reported in the capital and 13 departments since 2002. Departments with a greater number of dismantled laboratories processing cocaine base and paste are typically those where more laboratories illicitly manufacturing potassium permanganate are located. In 2011, seven laboratories for the illicit manufacture of potassium permanganate were dismantled, the highest number since 2006.

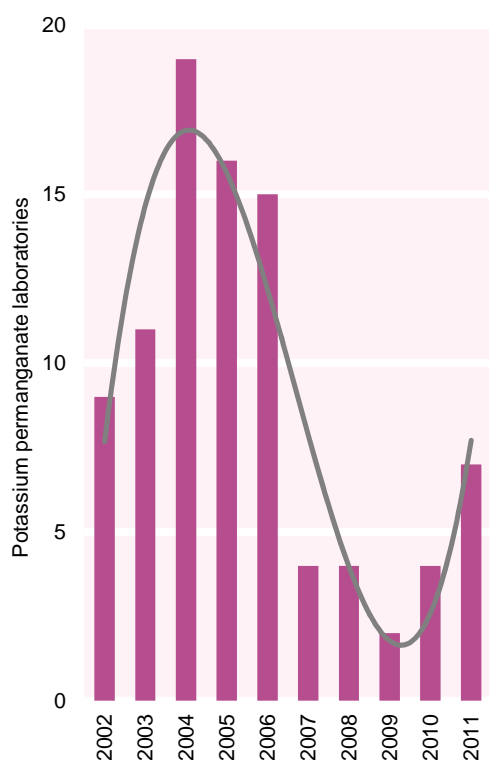
**Table 3. Illicit cocaine-processing laboratories dismantled in coca-producing countries, by type of laboratory, 2007-2011**

Country	Laboratory type	2007	2008	2009	2010	2011
Bolivia (Plurinational State of)	Cocaine paste, base and crystallization	3 087	4 988	4 864	5 922	5 252
Colombia	Cocaine paste and base	2 186	3 147	2 670	2 334	2 200
	Cocaine crystallization	285	296	285	262	200
Peru	Cocaine paste and base	649	1 205	1 217	1 296	..
	Cocaine crystallization	16	19	25	21	..
<b>Total</b>	<b>Cocaine paste, base and crystallization</b>	<b>6 223</b>	<b>9 655</b>	<b>9 061</b>	<b>9 835</b>	<b>..</b>

Sources: United Nations Office on Drugs and Crime and Plurinational State of Bolivia, *Estado Plurinacional de Bolivia: Monitoreo de Cultivo de Coca 2011* (2012); United Nations Office of Drugs and Crime and Colombia, *Colombia: Censo de Cultivos de Coca 2011* (2012); and United Nations Office of Drugs and Crime and Peru, *Peru: Monitoreo de Cultivos de Coca 2010* (2011).

Note: Two dots (..) indicate that data are not available.

**Figure V. Illicit potassium permanganate laboratories dismantled in Colombia, 2002-2011**



Source: Colombia, Ministerio de Justicia y del Derecho, Observatorio de Drogas de Colombia, 2012.

**2. Other chemicals used in the illicit manufacture of cocaine**

102. Acids and solvents are required at various stages of nearly all illicit drug manufacture. The majority of the world’s reported seizures of some acids and solvents in

Table II of the 1988 Convention occur in the coca-producing countries in the Andean subregion. Between 2007 and 2011, Bolivia (Plurinational State of), Colombia and Peru accounted for on average from about one third to nearly two thirds of global seizures of ethyl ether, hydrochloric acid, methyl ethyl ketone and sulphuric acid. Almost 90 per cent of global seizures of acetone were also reported in those countries (see table 4 and annex VIII to the present publication).

103. Acids and solvents in Table II of the 1988 Convention are reported to be smuggled and also illicitly manufactured. Panama used form D to inform the Board in 2011 of a single multi-substance seizure of acetone, hydrochloric acid, toluene and acetic acid totalling 3.6 tons; the substances had been hidden in a shipping container originating in Italy. Ecuador informed the Board on form D for 2011 of attempts of illicit manufacture of hydrochloric acid.

104. Illicit cocaine-processing laboratories, especially cocaine crystallization laboratories, are increasingly being reported along established trafficking routes outside of Bolivia (Plurinational State of), Colombia and Peru. The Board is aware of cocaine crystallization occurring in Honduras, Spain and Venezuela (Bolivarian Republic of). In August 2012, Honduran authorities reported dismantling a large cocaine laboratory near their country’s border with Guatemala. (They had dismantled a similar laboratory in March 2011.) In 2012, two incidents communicated via PICS involved the seizure, at a seaport in Guatemala of 20 tons of sodium sulfate — used as a drying agent in the illicit manufacture of cocaine — and 35 tons of sodium carbonate, a common alkali. As processing cocaine base into hydrochloride can occur anywhere along trafficking routes, the Board urges all Governments to pay particular attention to shipments of chemicals that can be used in the illicit manufacture of cocaine.

**Table 4. Acids and solvents in Table II of the 1988 Convention: percentage of global seizures reported by coca-producing countries, 2007-2011**

Solvent or acid	2007	2008	2009	2010	2011	Average for the period 2007-2011
Acetone	91	93	90	85	79	88
Ethyl ether	32	83	15	13	8	30
Hydrochloric acid	55	47	57	45	37	48
Methyl ethyl ketone	74	68	53	51	7	50
Sulphuric acid	66	58	77	64	21	57
Toluene	41	12	6	52	35	29

Source: Form D and other Government sources; see also annex VIII to the present publication.



105. Sodium metabisulfite is a chemical anti-oxidant associated with the illicit manufacture of cocaine. Three countries — Bolivia (Plurinational State of), Ecuador, Venezuela (Bolivarian Republic of) — used form D for 2011 to report the seizure of 6.5 tons of the substance. In April 2012, the Government of Honduras reported seizing a container originating in Germany after a routine inspection identified 980 sacks containing 24.5 tons of the substance destined for a company that had not been authorized to import the substance. This is the largest amount ever reported seized to the Board.

## C. Substances used in the illicit manufacture of heroin

### 1. Acetic anhydride

106. Acetic anhydride — used primarily in heroin manufacture but recently also in the illicit manufacture of P-2-P and subsequently methamphetamine — is one of the most frequently traded substances in Table I of the 1988 Convention. Currently available information indicates that diversion of acetic anhydride from international trade channels is uncommon. Afghanistan — the epicentre of global heroin manufacture — has no legitimate trade in or manufacture of acetic anhydride; each year, hundreds of thousands of litres of the substance are diverted from domestic trade channels in other countries and subsequently smuggled into Afghanistan. Heroin manufacture also occurs in countries of the so-called Golden Triangle area of South-East Asia; all countries in that area except China report few if any seizures of acetic anhydride. Increased seizures of acetic anhydride in and around Mexico appear to be largely related to the increased use of P-2-P in the manufacture of methamphetamine, rather than any substantial increases in heroin manufacture. Less than 17 per cent of the acetic anhydride diverted for illicit heroin manufacture is seized each year.<sup>22</sup>

#### Licit trade

107. Figures on licit trade in acetic anhydride during the reporting period are comparable with those in earlier years. On average, there are fewer than 30 exporting countries,

exporting to slightly fewer than 100 importing countries (see box 1 and figure VI).

108. The number of identified diversion attempts involving acetic anhydride traded internationally continued to be low during the reporting period, except in a few countries in West Asia. Significant seizures brought to the attention of the Board in recent years have often occurred in countries or regions where the control mechanisms are weak, particularly in certain countries with exemptions related to amounts and/or operators in legitimate trade, especially, end-user registration.

109. In view of the insufficient information on patterns of licit trade in acetic anhydride and the scope of its domestic control, the Board encourages all Governments, in particular those of major trading countries, to inform it of any measures taken at the national level to prevent diversion of acetic anhydride, in particular from domestic trade and distribution channels, into the illicit traffic. The Board also encourages the Governments of all countries manufacturing the substance to report details of such manufacture through the established communication channels.<sup>23</sup> This information would assist Governments, and the Board, in identifying and addressing any deficiencies in the current control system.

#### Box 1. Facts and figures on acetic anhydride manufacture and trade

Based on estimated amounts of acetic anhydride required for the illicit manufacture of heroin each year (between 600,000 and 1,500,000 litres), less than 1 per cent of legitimate trade would be needed to supply the illicit heroin manufacture in the world.<sup>a</sup>

Only six countries officially reported the licit manufacture of acetic anhydride, by a total of 44 companies; other sources of information suggest considerably larger numbers of countries and companies. For example, a recent survey on acetic anhydride conducted by the Government of the United States found that acetic anhydride was licitly manufactured in 17 countries, by more than 90 companies.

The capacity of individual countries, and companies, to manufacture acetic anhydride is largely unknown.

Global manufacture of acetic anhydride is estimated by the private sector to be approximately 2.13 billion litres

<sup>22</sup> Revised estimates based on updated acetic anhydride seizures for the period 2007-2011 and revised conversion factors (see annex IV to the present publication; and *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2011*, para. 124).

<sup>23</sup> Annual report questionnaire. Available from [www.unodc.org/unodc/en/commissions/CND/10-GlobalData.html](http://www.unodc.org/unodc/en/commissions/CND/10-GlobalData.html).

annually, about two thirds of which are used directly by the manufacturing companies themselves — the remainder is available for domestic and international trade.

In the past five years, the Governments of about 60 countries have informed the Board of their annual legitimate requirements for acetic anhydride, totalling on average about 330 million litres annually.

In 2011, 25 exporting countries used PEN Online for more than 1,500 proposed shipments of acetic anhydride, amounting to 336 million litres, destined for about 340 companies in 94 importing countries. About half of the 340 companies ordered acetic anhydride in amounts totalling less than 2,000 litres, and about 25 per cent ordered it in amounts exceeding 100,000 litres; about 20 per cent of the companies imported the substance in 2011 for the first time, typically in amounts of less than 2,000 litres (see figure VI).

The amounts of the acetic anhydride reported by Governments of importing and exporting countries on form D and through pre-export notifications suggest that sizeable amounts of acetic anhydride appear to be exported every year to the proposed importing countries without being pre-notified via the PEN Online system. In addition, according to data provided on form D, the amounts of the substance imported are considerably lower than the amounts of the substance exported.

The above-mentioned figures suggest that the magnitude and patterns of legitimate trade in acetic anhydride still need further analysis.

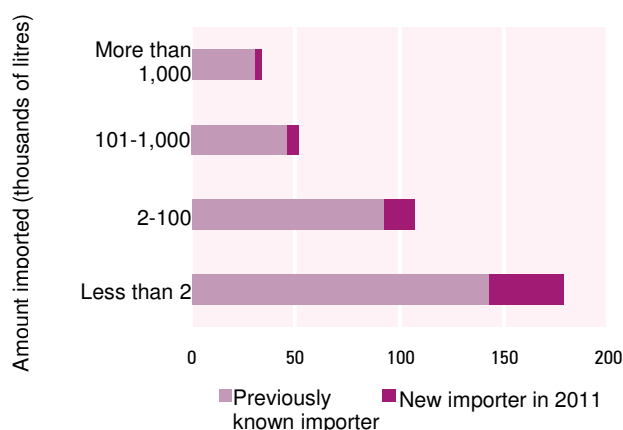
<sup>a</sup> Revised estimates based on updated acetic anhydride seizures for the period 2007-2011 and revised conversion factors (see annex IV to the present publication and *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2011*, para. 124).

### Trafficking

110. In 2011, global seizures of acetic anhydride, as reported by 17 Governments on form D, amounted to 198,000 litres. The following six countries reported seizing acetic anhydride in amounts exceeding 1,000 litres: Mexico (76,625 litres), Afghanistan (68,245 litres), the United States (24,713 litres), China (16,946 litres),

Slovakia (6,020 litres)<sup>24</sup> and Turkey (3,706 litres). Between 2007 and 2011, the top five countries reporting seizures of acetic anhydride were Afghanistan (140,398 litres), Slovenia (92,600 litres), Mexico (81,900 litres), Hungary (63,600 litres) and Turkey (51,666 litres). Most seizures of acetic anhydride in countries other than Afghanistan that have been brought to the attention of the Board involved acetic anhydride believed to have been diverted from domestic distribution channels.

**Figure VI. New and known companies importing acetic anhydride as notified via the Pre-Export Notification Online (PEN Online) system, 2011**



Note: “New importer” may reflect new physical locations or the renaming or merging of known companies.

111. Since the Board’s 2011 report on precursors was published, the cooperation of — and reporting by — the Government of Afghanistan in the area of precursor control has improved. The Government of Afghanistan provided on form D missing information on seizures of acetic anhydride from 2008 to 2011. According to that information, the following amounts of acetic anhydride were seized in the country: 12,275 litres in 2008; 36,618 litres in 2009; 23,260 litres in 2010; and 68,245 litres in 2011. In addition, the competent national authorities of Afghanistan registered to use PICS and are now actively communicating incidents through the system. The largest single seizure of acetic anhydride between January and October 2012 was confirmed and communicated through PICS; it involved the seizure of 10,000 litres of acetic anhydride that had been concealed in a container transported from the Islamic Republic of Iran in July.

<sup>24</sup> The seizure was reported as part of a controlled delivery operation involving Hungary (see *Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances: Report of the International Narcotics Control Board for 2011*, para. 122).

### Box 2. What the price of a precursor on the black market says about an invisible market

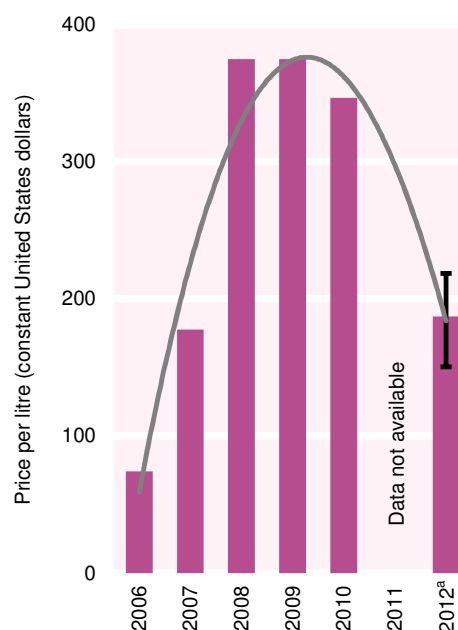
Changes in the black market price of precursor chemicals, like changes in the street price of drugs, can provide valuable illicit market information. A 2012 review by the Board found that few Governments systematically collect information and monitor illicit precursor prices. The Government of Afghanistan is an exception. The Ministry of Counter Narcotics of Afghanistan, along with UNODC, collects and reports on illicit acetic anhydride prices from around the country. After a sharp rise between 2006 and 2008, the price for illicitly obtained acetic anhydride remained relatively stable until 2010, when it began to drop (see figure VII). Between May 2010 and May 2012 prices declined from about US\$ 416 per litre to US\$ 165-232, a range estimated on the basis of the perceived quality of the substance. In contrast, acetic anhydride obtained from legitimate wholesale sources costs roughly US\$ 1.5 per litre. Global opium production followed a similar pattern, with sharp increases between 2006 and 2008, then declined in 2010 due to an opium poppy disease. The more recent decline in price indicates the possibility that supplies of, or access to, acetic anhydride may have increased in Afghanistan.

112. Countries that border, or are in close vicinity of, Afghanistan, are at higher risk of being targeted by traffickers supplying acetic anhydride for illicit heroin manufacture in that country. That applies particularly to China, India, Iran (Islamic Republic of) and Uzbekistan — countries that manufacture acetic anhydride or countries in which a significant amount of the substance is available because of domestic or international trade.

113. Iraq has continued to be targeted by traffickers attempting to obtain acetic anhydride at points as close as possible to the Afghan borders although to a lesser extent than in previous years. In January 2012, Iraqi authorities objected to a shipment of 32 tons of acetic anhydride from China, involving a company that had neither a licit need nor an import authorization for the substance. There is no information on whether or not any law enforcement investigations were carried out into this and similar incidents in the past. The Board continues to be concerned that the trafficking organizations operating in the country may have continued their illicit activities and diversion attempts involving Iraq or other countries in West Asia. The Board therefore reiterates its request to Governments of countries that export acetic anhydride to unknown companies in Iraq to require authorization before releasing the shipment.

114. Although illicit opium poppy cultivation occurs in Mexico, seizures of acetic anhydride in the country have been primarily linked with the illicit manufacture of P-2-P, a precursor of methamphetamine, rather than with the illicit manufacture of heroin, which also occurs. In Mexico, reported seizures of acetic anhydride increased exponentially in the five-year period 2007-2011 — from 10 to 76,600 litres (see figure VIII).

Figure VII. Price of acetic anhydride on the black market in Afghanistan, 2006-2012

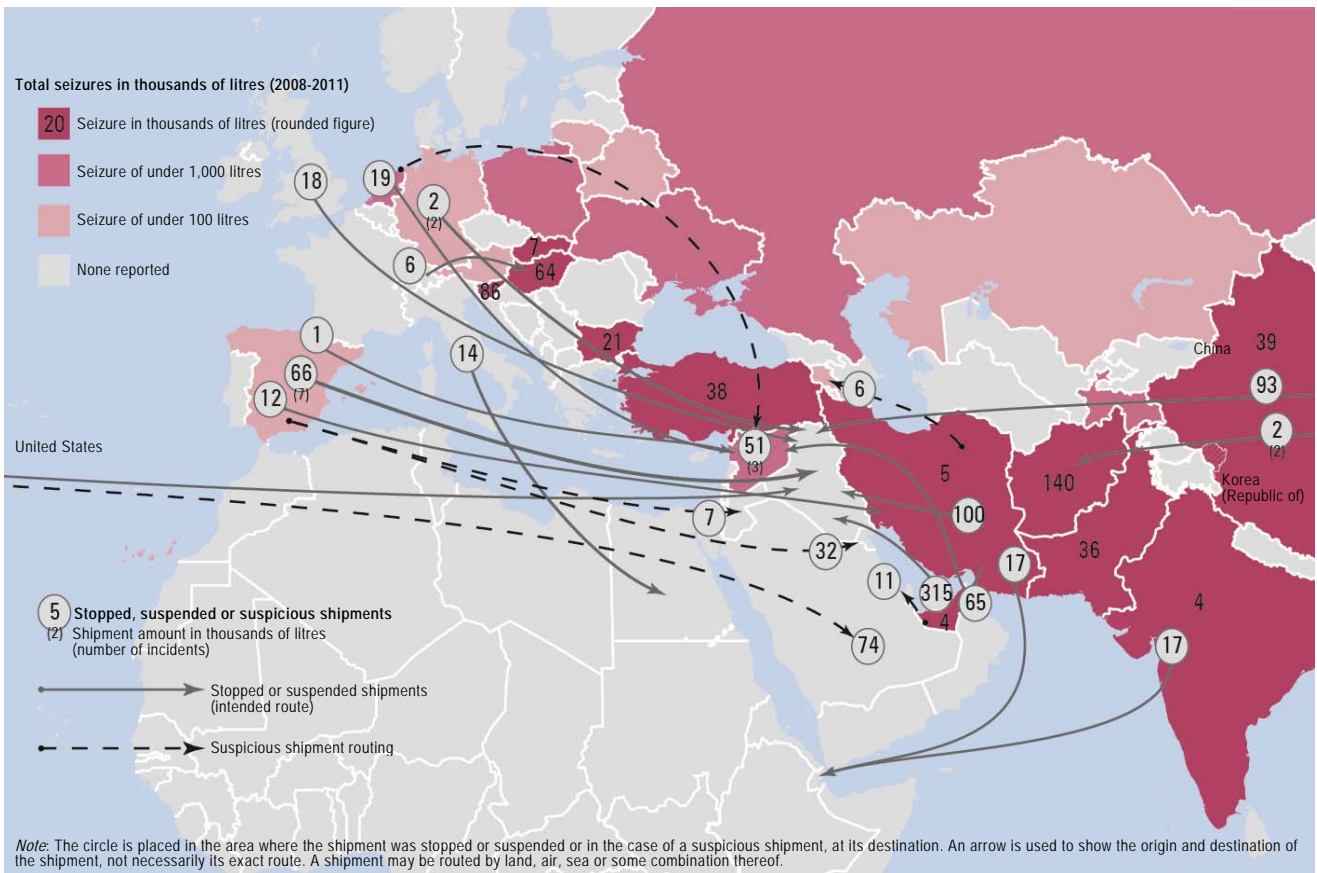


Sources: Ministry of Counter Narcotics of Afghanistan and the United Nations Office on Drugs and Crime.

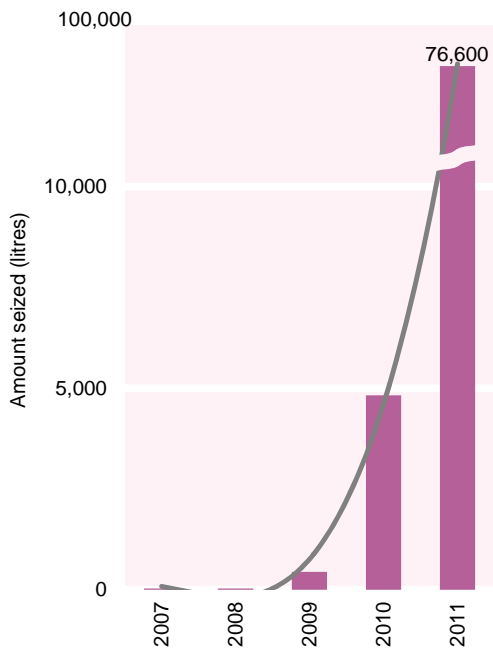
<sup>a</sup> Data for 2012 are for the period from March to October; values represent the unweighted average of all samples. Error bars represent the average illicit price range based on the perceived quality of acetic anhydride, which were reported beginning in 2012.

115. While seizures are an important indicator of the level of activity of drug trafficking organizations, it is important to note that they are also indicators of known diversions that have been successful. The international precursor control system is primarily aimed at the prevention of diversion. Comparative figures on stopped, suspended or suspicious shipments show that although seizures of acetic anhydride during the period 2008-2011 amounted to 551,000 litres, nearly double that amount — 943,000 litres — was either stopped or suspended (a total of 761,000 litres) or identified as suspicious (182,000 litres) through the PEN Online system (see map 7).

**Map 7. Seizures of acetic anhydride reported by Governments on form D and stopped, suspended or suspicious shipments identified via the Pre-Export Notification Online (PEN Online) system, 2008-2011 (As at 1 November 2012)**



**Figure VIII. Seizures of acetic anhydride reported by Mexico on form D, 2007-2011**



**2. Non-scheduled substances and trends in illicit manufacture of heroin**

116. Ammonium chloride is commonly used as part of the extraction of morphine from opium. During the reporting period, three seizures totalling 16.6 tons of ammonium chloride were communicated via PICS. Two of the seizures occurred in Afghanistan in May 2012; one shipment of 16 tons of ammonium chloride was reported seized in the border area with Pakistan. In a seizure communicated in January 2012, 260 kg of the substance was found at an illicit methamphetamine laboratory in Mexico. Mexico reported on form D for 2011 that 1.4 tons of the substance had been seized. The Board wishes to remind all Governments to fully investigate suspicious transactions and seizures of non-scheduled substances and report the results of those investigations to the Board, in order to improve the understanding of the substances actually being used in illicit heroin manufacture and their sources, which can then be used as a basis for devising adequate responses.



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

### 1. Ergot alkaloids and lysergic acid

#### *Licit trade*

117. Ergot alkaloids (ergometrine and ergotamine and their salts) are used in the treatment of migraines and as an oxytocic in obstetrics, but there is comparatively limited international trade in these substances. During the reporting period, 384 shipments of ergot alkaloids totalling 1,620 kg were reported; 17 countries exported to 50 importing countries. In addition, there were 6 shipments of lysergic acid totalling 17 kg during the reporting period.

118. A shipment containing a large amount (95 kg) of ergotamine sent from Chile to Honduras was stopped after Honduran authorities informed the Board that the import authorization had been issued for only 133 g of the substance. During the reporting period, the median weight of a shipment of ergotamine was just 1 kg.

#### *Trafficking*

119. Seizures of ergot alkaloids and lysergic acid are rare and typically involve very small amounts of the substance that do not appear to have been diverted from international trade. In 2011, only Australia (4 g) provided on form D information on seizures of ergot alkaloids; the seized substance originated in Singapore and South Africa. Three Governments provided information on seizures of lysergic acid: India (62.4 g), Ireland (44.9 g) and the United States (2.5 g). Ireland identified the Netherlands as the source of the lysergic acid seized in three of the four seizures reported.

### 2. *N*-Acetylanthranilic acid and anthranilic acid

#### *Licit trade*

120. *N*-Acetylanthranilic acid is used in the manufacture of pharmaceuticals, plastics and fine chemicals, while anthranilic acid is a chemical intermediate used in the manufacture of dyes, pharmaceuticals and perfumes and is also used in the preparation of bird and insect repellents. However, both are also used in the illicit manufacture of methaqualone, a sedative-hypnotic. During the reporting period, eight shipments of *N*-acetylanthranilic acid, totalling 2.4 kg, were reported; three countries exported the substances to five importing countries. In addition, there were 263 shipments of anthranilic acid totalling 1,030 tons during the reporting period.

#### *Trafficking*

121. Seizures of either *N*-acetylanthranilic acid or anthranilic acid are not commonly reported. Since 2006, only seven Governments have reported such seizures on form D, the largest seizure being made in India: 675 kg of anthranilic acid seized in 2006. In 2011, the Government of Sweden reported dismantling an illicit methaqualone laboratory, seizing small amounts of anthranilic acid, the origin which was not reported. South Africa regularly reports the dismantling of illicit methaqualone laboratories; five such laboratories were reported to have been dismantled in 2010 (the most recent year for which data were reported), and some of them were capable of illicitly manufacturing the substance on an industrial scale.

## E. Non-scheduled substances

122. *gamma*-Butyrolactone (GBL) is a substance used in the illicit manufacture of *gamma*-hydroxybutyric acid (GHB) and is also converted into GHB in the body when ingested. GBL is also one of several "date-rape drugs". Governments are reporting seizures of GBL with increasing frequency and in increasing amounts. The World Customs Organization reports that seizures of GBL by customs authorities increased steadily between 2009 and 2011, with Finland reporting the single largest seizure of the substance: a seizure of 1 ton of the substance in 2011 originating in China.<sup>25</sup> Between January and October 2012, seizures of GBL in Bulgaria, Canada and the Netherlands were communicated via PICS; the seizures totalled more than 45,000 litres. In January 2012, Canadian authorities seized an air cargo consignment of 2,900 litres of GBL. In September 2012, the authorities of the Netherlands seized 42,000 litres of GBL from a warehouse, representing the single largest seizure of the substance ever reported to the Board. In both incidents, the shipments had originated in China. Since 2007, GBL has been on the limited international special surveillance list of non-scheduled substances.

123. 'Hydroxylimine' is the common name for an immediate precursor used to manufacture ketamine, an anaesthetic commonly used in human and veterinary medicine. Ketamine is increasingly being abused, particularly in countries in East and South-East Asia. China reported on form D that 8,710 kg of 'hydroxylimine' were seized in both 2010 and 2011. Simply heating 'hydroxylimine' converts it almost completely to ketamine. After controls over 'hydroxylimine' were strengthened,

<sup>25</sup> World Customs Organization, *Customs and Drugs Report 2011* (Brussels, 2012).

China reported the emergence of a substitute chemical in the form of a precursor of hydroxylamine.

124. 4-Methylmethcathinone (4-MMC), also known as mephedrone, is a synthetic amphetamine-type stimulant of the cathinone class, and it is not under international control. Polish authorities reported on form D for 2011 the dismantling of two clandestine laboratories manufacturing 4-methylmethcathinone from 4-bromopropiophenone.

## IV. Challenges in international precursor control

125. The Board's 2011 report on precursors focused on achievements and progress in terms of implementing the framework requirements established under the 1988 Convention, related resolutions and the available tools. The present chapter contains a more detailed analysis of the existing gaps and outlines the future challenges of precursor control. From the Board's analysis of the implementation of article 12 of the 1988 Convention, it emerges that at this stage the key challenges of precursor control are related to two main areas:

- The lack of comprehensive implementation of the provisions of the 1988 Convention and related resolutions at the national level (i.e. domestic controls)
- The emergence of new challenges not comprehensively addressed in the existing legal framework

### A. The lack of comprehensive implementation of the provisions of the 1988 Convention and related resolutions at the national level

126. The backbone of the international precursor control system is article 12 of the 1988 Convention, complemented by resolutions of the Commission on Narcotic Drugs, the Economic and Social Council and the General Assembly. Over the years, more than 20 resolutions have been devoted exclusively to issues involving precursors, requesting complementary measures.<sup>26</sup> In addition, elements of precursor control have been mentioned in at least 10 additional resolutions, in the context of drug control in general, including Security Council resolution 1817 (2008)

<sup>26</sup> General Assembly resolution S-20/4; Economic and Social Council resolutions 1991/40, 1992/29, 1993/40, 1995/20, 1996/29, 1997/41, 1999/31, 2001/14, 2003/39, 2004/38; and Commission on Narcotic Drugs resolutions 42/1, 42/2, 43/9, 43/10, 45/12, 48/11, 49/3, 49/7, 50/5, 50/6, 50/10, 51/10, 51/16, 53/15 and 54/8.

on the situation in Afghanistan. The 1988 Convention also provides for a number of other measures relevant to the prevention of diversion of associated materials and equipment (article 13) and to ensure the integrity of the movement of consignments by commercial carriers (article 15), by sea (article 17), via free trade zones and free ports (article 18) and the mail (article 19).

### 1. National control as a prerequisite for the effective prevention of diversion

127. With 187 States parties, the 1988 Convention is now the most adhered to of the three international drug control treaties. The 1988 Convention gives significant discretion to each party in taking measures to achieve the central goal of article 12, namely to prevent the diversion of substances used for illicit drug manufacture. Such discretion is given specifically with regard to various measures to monitor licit manufacture and domestic distribution, recognizing the different roles and circumstances of countries regarding the nature and extent of legitimate industry and trade and of illicit drug manufacture within their borders. It is critical to recognize that the ability to comply with the requirements set out in the 1988 Convention for the monitoring of international trade is very closely intertwined with the existence of the corresponding legal basis at the national level and of an appropriate regulatory framework, procedures and working mechanisms. Without information about the domestic market and its players, including end users, a party may not be in a position to comply with its obligations related to preventing the diversion of precursors.

128. One element of such strategic information is knowledge about legitimate manufacturers. The Economic and Social Council, in its resolution 1995/20, requested Governments to submit information on manufacturers of substances in Table I of the 1988 Convention. However, since 2007, only 19 Governments have provided information on any substance in Table I.<sup>27</sup>

129. Other areas of weaknesses may include inadequate systems for the national registration of operators involved in the manufacture, distribution and commercialization, brokerage, import and export and/or end use of scheduled substances, or the inconsistent implementation of those systems.

<sup>27</sup> See *Manufacture of Narcotic Drugs, Psychotropic Substances and Their Precursors: 2011* (United Nations publication, Sales No. T.12.XI.6).

## 2. Threshold quantities of precursor chemicals below which monitoring requirements for import, export or domestic distribution do not apply

130. One related area of concern is the establishment of thresholds for the import and distribution of certain substances in Table I and Table II of the 1988 Convention. Considering that the diversion of a very small proportion of legitimately traded precursor chemicals would be sufficient to supply illicit drug manufacture, thresholds based on legitimate trade volumes might thus still allow significant diversion into illicit drug manufacture. A case in point are identified diversions and seizures of acetic anhydride, which were primarily reported by countries and/or related to regions with inadequate or light regulations relating to domestic trade, including thresholds and the requirement of end-user registration. These included, for example, Hungary, Mexico and Slovenia, which were among the world's top five countries reporting seizures of acetic anhydride in the period 2007-2011. According to information available to the Board, the identified weaknesses are currently being addressed. Another example is the domestic manufacture in Canada and the United States that is partially the result of circumventing purchase limits on pharmaceutical preparations containing pseudoephedrine or ephedrine: in the United States, existing purchase limits allow the spread of small-scale illicit methamphetamine manufacture for personal consumption; and in Canada, illicit drug manufacturers are relying on dietary health products that do not typically fall under the tighter controls of pharmaceutical preparations containing pseudoephedrine and ephedrine.

## 3. Difficulty in assessing actual needs

131. The Commission on Narcotic Drugs, in its resolution 49/3, requested Member States to provide the Board with annual estimates of their legitimate requirements for imports of four precursor chemicals of amphetamine-type stimulants (see para. 19 above). While the number of both Governments and substances for which such estimates are provided have been increasing steadily over the past couple of years and currently stands at 150 countries and territories, the Board also notes the difficulty some Governments are facing in providing adequate estimates. Too often, Governments build in a "safety margin" of significant proportions to ensure that possible increases during a year are accommodated rather than trying to establish realistic estimates as an additional tool to exercise their regulatory functions and role in diversion control. For example, in the case of countries for which both data sets are available, 45 countries imported significantly less (at least 40 per cent less) in 2011 than

what they had estimated to be their annual legitimate import requirements for either ephedrine or pseudoephedrine (both in raw form and in the form of preparations). Discrepancies are highest in Eastern Europe, Central America and the Caribbean and South Asia for pseudoephedrine and in South Asia and North America for ephedrine. By contrast, the Governments of 16 countries exceeded their annual legitimate requirements for imports of these substances by 120 per cent or more.<sup>28</sup>

132. The Board recognizes the difficulties encountered by some countries in establishing accurate estimates for these precursor chemicals, especially when the chemicals are not used in the importing country but instead imported for the purpose of re-export (i.e. by countries with a significant proportion of trading and re-exporting companies). However, for at least two of the four precursors concerned, namely P-2-P and 3,4-MDP-2-P, licit trade is limited and legitimate uses are very limited. Establishing estimates for such limited use, or prohibiting the import of those substances, should therefore be relatively straightforward. Indeed, 50-60 per cent of Governments reporting legitimate requirements for imports have established a zero import requirement for the two substances and two Governments have prohibited the import of P-2-P; the Governments of seven additional countries (all in Latin America), have prohibited the import of ephedrine and/or pseudoephedrine and preparations containing them.<sup>29</sup> All Governments are reminded of the need to share their methodologies for preparing estimates with each other and the Board so as to gradually improve the methodologies used. Governments are also reminded of the *Guide on Estimating Requirements for Substances under International Control*, developed jointly by the Board and WHO, and the Board's guidance note on issues that Governments may consider when determining annual legitimate requirements for ephedrine and pseudoephedrine, both available on the Board's website ([www.incb.org](http://www.incb.org)).

## 4. Compartmentalization and lack of cooperation at the national level

133. One of the obstacles to a more comprehensive implementation of the 1988 Convention and related resolutions remains the compartmentalization of precursor control. This is evident in the various types of legislation on

<sup>28</sup> Mostly Governments of countries in South-Eastern Europe and Africa exceeding their requirements for imports of ephedrine.

<sup>29</sup> Exceptions for the limited imports of injectable preparations and/or bulk material for their manufacture exist (for details, see [www.incb.org/pdf/e/precursors/REQUIREMENTS/INCB\\_ALR\\_WEB.pdf](http://www.incb.org/pdf/e/precursors/REQUIREMENTS/INCB_ALR_WEB.pdf)).

precursor issues at the national level and is grounded in the differences in the nature of the substances involved, ranging from industrial chemicals to pharmaceutical raw materials and medical products. This is further compounded by the absence — in many countries — of a central authority responsible for precursor control, as well as the absence of adequate levels of cooperation and information-sharing between all the agencies concerned at the national level and with their counterparts in other countries. To address the challenges of the future, Governments should review precursor-related information-sharing and practical working mechanisms between concerned regulatory and law enforcement agencies. They should ensure that there are neither gaps nor overlaps in responsibility that might be exploited by organizations trafficking in precursors.

## 5. Common markets

134. Improving or facilitating international trade has an impact on the flow of all items of commerce, including precursor chemicals. The European Union single market will be celebrating 20 years of its existence on 1 January 2013, and there is a growing move towards customs unions elsewhere (e.g. the Caribbean Community Single Market and Economy, the Common Market of the South (MERCOSUR), the African Community Common Market (i.e. Burundi, Kenya, Rwanda, Uganda and the United Republic of Tanzania) and the declaration by the Governments of Belarus, Kazakhstan and the Russian Federation to deepen mutual economic integration by establishing a common economic space in 2012), increasing the volume of trade and reducing the number of international trade transactions. **The creation of common internal markets may present some difficulties regarding control that competent national authorities should be aware of and effectively address.** The European Union, for example, is adjusting its regulations concerning acetic anhydride and pharmaceutical preparations containing ephedrine and pseudoephedrine.

135. Similarly, increases in transportation networks, including container trade, as well as free trade zones, sometimes pose new challenges to precursor control.

## 6. Equipment and materials

136. Article 13 of the 1988 Convention concerns the prevention of trade in and diversion of materials and equipment used for the illicit manufacture of drugs. The scope of this article is considered to range from substances not listed in Table I or II of the Convention, to cutting agents, diluents, tablet excipients, packaging material, manufacturing equipment such as laboratory glassware and equipment (for example, tableting machines, including

those obtained from legitimate sources, new or second-hand, and specialized or oversized pieces of equipment). Although the specific measures are at the discretion of the parties, the article requires States parties to cooperate with each other in order to prevent not only the use of such materials and equipment on their own territory but also the smuggling of such materials and equipment into other countries for use in illicit drug manufacture there.

137. Against the background of the successes in monitoring international trade in substances in Table I and Table II of the 1988 Convention, article 13 offers another complementary but as yet underutilized tool for countering illicit drug manufacture. Some countries or regions already make use of the provisions of article 13, for both regulatory and investigative purposes, such as the coordinated efforts within the European Union. A voluntary code of conduct for industries that produce or trade in this equipment (a code of conduct similar to the one for industries that produce or trade in chemicals) could be applied.

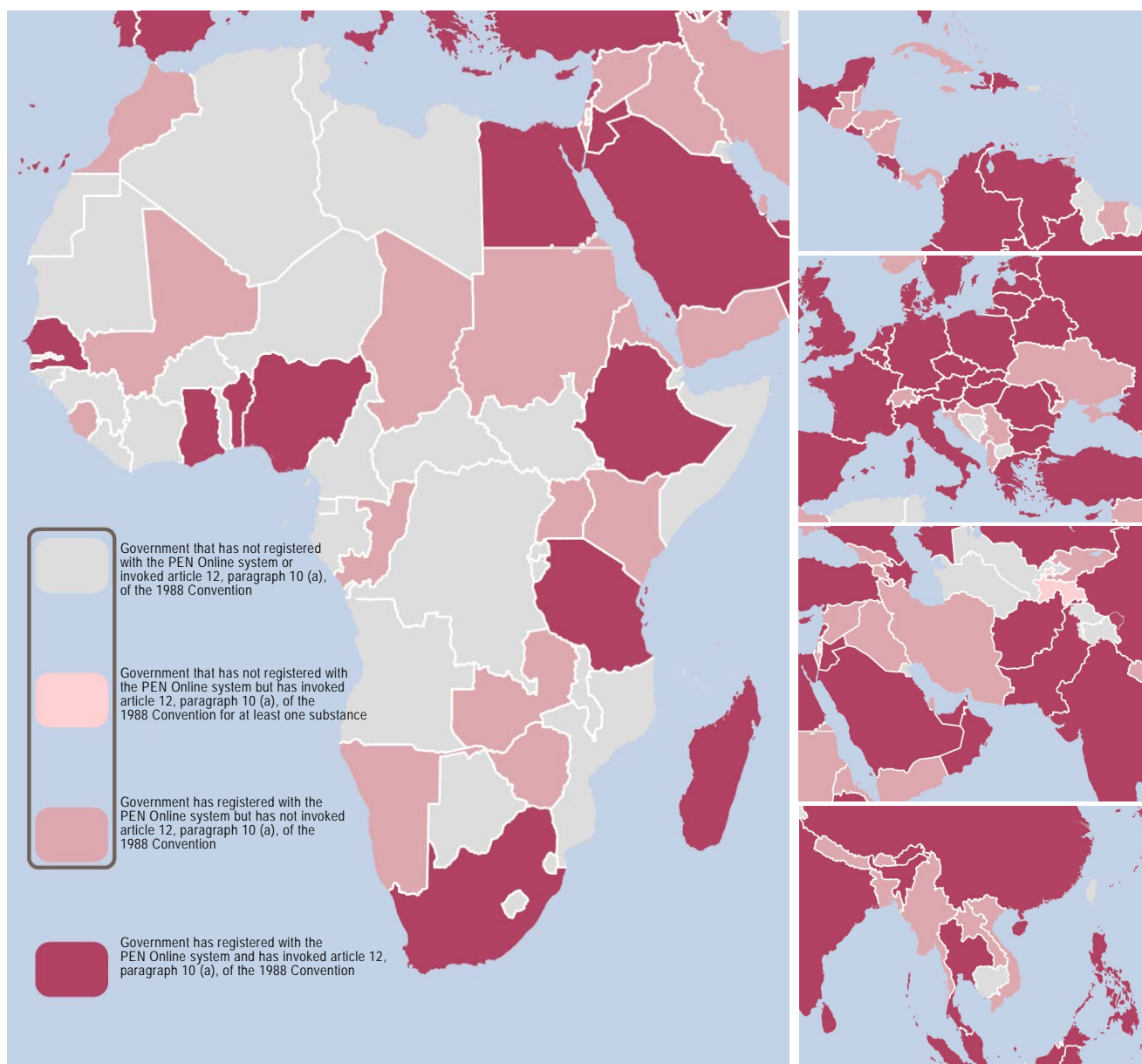
## B. International controls

### 1. Countries not making use of basic tools

138. Article 12, paragraph 10 (a), of the 1988 Convention provides the possibility for States parties to make it mandatory for an exporting country to inform the importing country of the planned export of any substances in Table I. Since 1990, when the Convention entered into force, only 80 Governments have made use of this provision, leaving the notification of exports to more than 100 countries at the exporting countries' discretion. Closer analysis indicates that gaps in this mechanism correlate with regions and subregions currently being targeted by traffickers, including parts of Africa, Central America and the Caribbean, Central Asia, South-East Asia and South-Eastern Europe (see map 8). **The countries concerned have to recognize their responsibility to create the conditions for being notified of exports of precursor chemicals. Otherwise, they may continue to be regarded as easy targets by organizations trafficking in such chemicals. The provisions of article 12, paragraph 10 (a), if used and implemented by all, could create a robust and practical mechanism for the control of international trade in scheduled chemicals.**

139. A comparison of shipments of precursors pre-notified through the PEN Online system with actual imports in a particular year shows that there are significant discrepancies in both directions. While higher amounts pre-notified through PEN Online might not be of immediate concern, as not all planned imports might materialize, the Board is concerned that about half of the



**Map 8. Examples of regions with weak mechanisms for monitoring the import of precursor chemicals<sup>a</sup>**

<sup>a</sup> See annex X to the present publication.

30 countries for which both data sets are available for 2011 reported on form D imports to be higher than indicated by the pre-export notifications. Discrepancies are particularly evident for substances in Table II of the 1988 Convention, and for some substances in Table I, particularly acetic anhydride and phenylacetic acid.

## 2. Not all countries apply a system of import and export control

140. Governments that do not apply some system of control over exports of precursors are not in a position to comply with their treaty obligation to contribute to the prevention of diversion, which is a shared responsibility.

In addition, those Governments which do not apply any system of authorization to exports of certain precursors in Table I and Table II of the 1988 Convention, or which base their exports of those substances solely on the issuance of a general permit may not be in a position to comply with their obligation to provide notifications to importing countries prior to the export of precursors pursuant to article 12, paragraph 10 (a), of the Convention. The Board is aware of about 70 Governments which require individual authorizations for the export of all substances in Table I and Table II, while fewer than 30 Governments which had informed the Board of their export authorization systems indicated that they had only a general permit or no export controls in place.

### 3. Objections through PEN Online

141. An analysis of the replies of importing countries sent in response to pre-export notifications from exporting countries shows that about 7 per cent of pre-export notifications, accounting for 4 per cent of the total volume, resulted in the importing country objecting to the shipment. Most of the objections related to pre-export notifications for shipments of solvents in Table II of the 1988 Convention. Some pre-export notifications resulted in the importing country objecting to the shipment of substances in Table I, above all ephedrine and pseudoephedrine, potassium permanganate and acetic anhydride. At this stage, however, it is difficult to assess how many of those objections were for administrative reasons and how many were because of suspicion. In any case, the analysis of pre-export notifications resulting in objections and the reasons for the objections, from the perspective of both exporting and importing countries, could help to determine patterns that, in turn, could be used to identify weaknesses at the national level, and that information could subsequently be used to strengthen existing systems. It is therefore important for importing countries that object to shipments of precursors to indicate the reasons for their objections.

### C. Emerging precursors and other non-scheduled substances used in illicit drug manufacture

142. Another key challenge is the emergence of substitute or alternative chemicals, which are used to replace traditional precursors under international control. Moreover, a number of non-scheduled substances are required, in addition to the scheduled precursors or their substitutes, in the illicit manufacture of drugs. The number of substances in Table I and Table II of the 1988 Convention has remained unchanged since 2000, when norephedrine, a precursor of amphetamine-type stimulants, was added to Table I; the other changes affecting the scheduling of those substances involved only transferring substances from Table II, containing substances under less stringent control, to Table I (see figure IX). However, seizures of non-scheduled substances, reported to the Board on form D, increased from 24 to 225 (almost 10-fold) between 2003 and 2011 (see figure X).

143. The emergence of substitute chemicals used in illicit drug manufacture is partly attributable to increased controls, at the national and international levels, over the chemicals traditionally used in such manufacture and to an

Figure IX. Substances in Table I and Table II of the 1988 Convention, 1988-2011

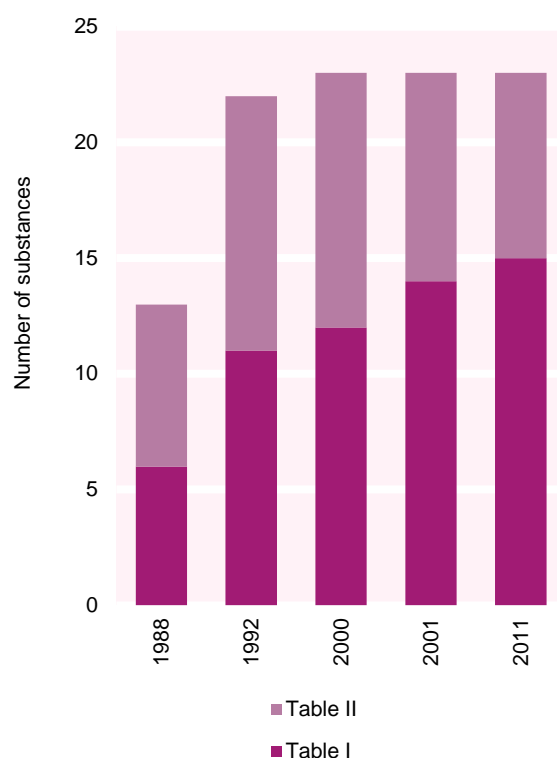
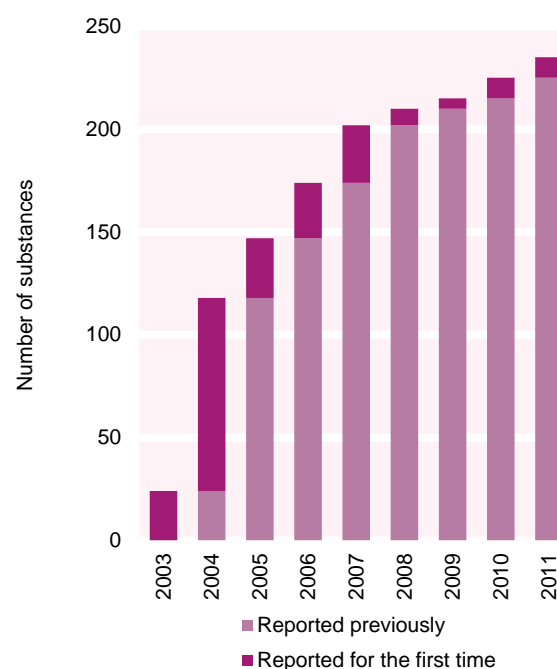


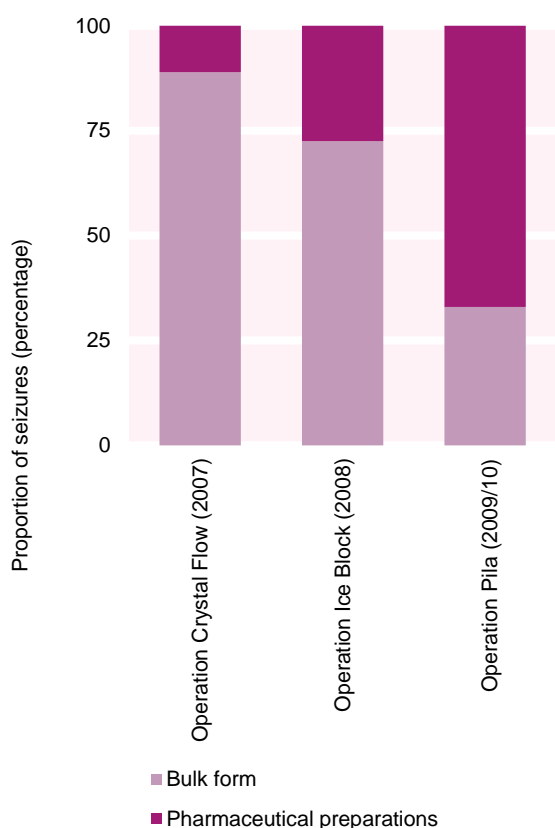
Figure X. Cumulative number of non-scheduled substances reported seized by Governments on form D, 2003-2011



unprecedented increase in the diversification, sophistication and scale of the illicit manufacture of drugs and precursors, enabling those involved in that illegal activity to use manufacturing methods that were impossible to use in illicit settings before.

144. One area that has seen significant growth at a level that was unanticipated during the drafting of the 1988 Convention is the diversion of pharmaceutical preparations containing ephedrine and pseudoephedrine. The same trend is reflected in scientific analysis of methamphetamine end-products, which indicates significant use of pharmaceutical preparations in the illicit manufacture of methamphetamine throughout the world (see figure XI).

**Figure XI. Proportion of seizures of ephedrine and pseudoephedrine by physical form reported under Project Prism initiatives, 2007-2010**



145. This development, which emerged initially in North America, has most recently reached countries in South-East Asia, where amphetamine-type stimulants have been illicitly manufactured for many years and where the use of ephedrine and pseudoephedrine in bulk has predominated. Since 2003, the Board has recommended that international trade in pharmaceutical preparations should

be monitored in the same manner as the precursors that those preparations contain. Similarly, in several resolutions, most recently Commission on Narcotic Drugs resolution 54/8, there have been calls for strengthening measures to prevent diversion, while recognizing the need not to impair their availability for medical use. However, the situation is complicated by the fact that in several countries the regulatory entities responsible for the control of pharmaceutical preparations are different from the entities responsible for the control of the precursors that such preparations contain. Maintaining seamless and effective regulatory controls over both precursor chemicals and pharmaceutical preparations containing those chemicals requires close cooperation between different competent authorities.

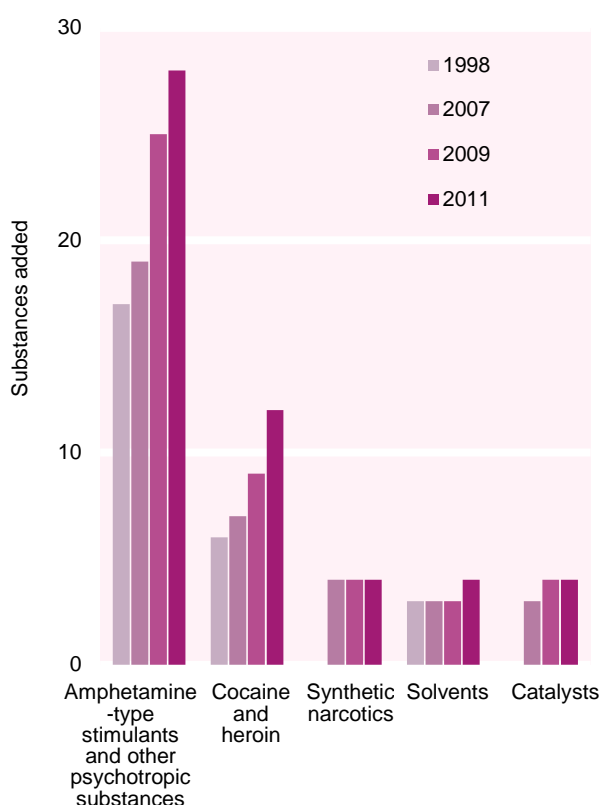
146. From a technical point of view, the PEN Online system allows for the sending of pre-export notifications for pharmaceutical preparations and other preparations. Since 2009, there has been an average of about 28 countries that regularly use the system to notify importing countries of the export of ephedrine and pseudoephedrine. The Governments of the vast majority of those countries send pre-export notifications for those substances in bulk form and in the form of pharmaceutical preparations. The authorities of three countries — Malaysia, Thailand and the United Arab Emirates — have formally requested the Board to be notified of the export of pharmaceutical preparations containing ephedrine and pseudoephedrine to their territory.

147. Pursuant to Economic and Social Council resolution 1996/29, the Board established already in 1998 a list of non-scheduled substances that are likely to be diverted from legitimate trade in order to be substituted for, or to be used together with, substances in Table I or II of the 1988 Convention, or that are likely to be used in the illicit manufacture of drugs that cannot be manufactured using the precursors controlled under the Convention. The list, known as the limited international special surveillance list of non-scheduled substances, is aimed at assisting Governments, in partnership with industry, in targeting non-scheduled substances in a flexible manner, preventing their use in the illicit manufacture of drugs and, at the same time, being sensitive to the requirements of legitimate trade. The number of substances on the list has doubled since 1998 — from 26 to 52 (see figure XII).

148. In addition, individual Governments have introduced regulations for additional substances not under international control. The Board is aware that 48 countries, in addition to 27 European Union member States, have established some form of control over a total of 150 substances that are not included in Table I or II of the

1988 Convention or on the limited international special surveillance list of non-scheduled substances. Governments' responses to this newly emerging situation are varied. While some Governments have expanded their control measures to include the new substances on a substance-by-substance basis, others have responded by enacting legislation allowing them to proactively counter such new developments. Others have turned to practical solutions based on voluntary cooperation by industry. In order to properly address these developments, it will be necessary for Governments to share their experiences with each other. The Board is currently reviewing the various approaches implemented by Governments.

**Figure XII. Substances included on the limited international special surveillance list of non-scheduled substances, grouped by use, 1998-2011**  
(As at 1 November 2012)



### D. Role of the Internet: unregulated sale of precursors

149. The use of the Internet for trading in precursors may justify a more in-depth analysis, considering the different forms of legitimate trade through the Internet and the

modus operandi of those using the Internet for unlawful purposes. The issue was addressed in 2000 by the Commission on Narcotic Drugs in its resolution 43/8. There is a need to enhance the exchange of experiences and lessons learned by Governments experimenting with different approaches in order to decrease the likelihood of the Internet becoming a major vehicle for the unregulated supply of precursor chemicals.

### E. Conclusion

150. There are a range of tools already available to Governments to control diversion. However, the use of those tools continues to be uneven, providing opportunities for trafficking organizations to circumvent existing legislation. Such trends could be better addressed by proactive cooperative measures, such as voluntary cooperation with industries and acting in the spirit of the 1988 Convention (i.e. preventing diversion). A key element in this concept is intragovernmental cooperation between the various agencies involved in precursor control. In addition, as successes in reducing diversion from international trade have resulted in trafficking organizations increasingly obtaining precursors through diversion and subsequently smuggling the precursors across national borders, efforts to counter such smuggling should also be stepped up, as part of an integrated strategy in which law enforcement efforts and regulatory efforts complement each other. The starting points for new approaches are varied, as the previous paragraphs have highlighted. This also implies a willingness to reconsider currently underutilized tools, as well as a readiness to recognize that new challenges may require new solutions.

### V. Recommendations

151. The Board has decided to provide Governments with another tool for preventing the diversion of and trafficking in precursor chemicals — the Precursors Incident Communication System (PICS), a secure online communication platform. PICS was launched in March 2012; since then, its use and the number of registered Governments and reported incidents have been rapidly expanding. Governments are encouraged to register with PICS multiple focal points in appropriate law enforcement, drug control and regulatory agencies to enable them to be alerted to rapid changes in trafficking in chemicals and the modi operandi used by traffickers and to enable follow-up investigations and communication to take place.

152. The diversion of chemicals from domestic distribution channels has become the most common method used by traffickers to obtain certain chemicals such as acetic anhydride. A Government's regulatory control system is a prerequisite for monitoring international trade and, therefore, a shared responsibility in ensuring that domestic distribution control systems fit their purpose. Domestic controls include: establishing a system of end-user registration and declaration of end use in order to understand the legitimate requirements for specific substances; being cognizant of legitimate requirements and setting realistic limits on the importation of controlled chemicals, particularly those with little or no legitimate use, as a preventive measure; and notifying importing countries of all exports of chemicals prior to their departure. The Board urges Governments to review their domestic systems for the control of chemicals to determine if weaknesses exist and to work on closing any existing gaps in those systems.

153. Similarly, there is little indication that potassium permanganate is being diverted from international trade. In addition, chemicals used in the illicit manufacture of cocaine are being illicitly manufactured. To further complicate matters, the crystallization, refinement and/or adulteration of cocaine hydrochloride is occurring — in some cases on a large scale — in countries that are outside the traditional coca-producing areas. Governments, particularly the Governments of countries along known trafficking routes, should be aware of these developments and should remain vigilant to prevent organizations trafficking in chemicals from setting up sites for illicit manufacture on their territory.

154. As was the case in 2011, the Board regrets that communication with the Governments of a number of countries continues to be inadequate. Some enquiries about suspicious transactions go unanswered and the rate of participation and the exchange of information in Project Prism and Project Cohesion remains low. Governments have a shared responsibility to quickly communicate information relating to the diversion or attempted diversion of precursors in order to facilitate international efforts to counter trafficking in precursors.

155. The Board has continued to remind all States parties that submitting annual reports pursuant to the 1988 Convention is not an option but in fact an obligation. The Board therefore wishes to remind Governments to submit form D each year, using the latest version available, on time (by 30 June). Reports must include relevant information from all appropriate regulatory and law enforcement agencies, regardless of which is the competent national authority.

156. Not all Governments have made use of the available tools and instruments, such as the PEN Online system and the requirement for exporting countries to notify importing countries of impending shipments of precursors by invoking article 12, paragraph 10 (a), of the 1988 Convention. This is particularly true for Governments of low-income countries, in which limited investment and slow implementation continue to hamper progress. Nevertheless, the PEN Online system is capable of sending pre-export notifications to all Governments, including those not yet registered to use the system via the integrated fax and e-mail options. The Board urges all exporting countries to use the PEN Online system regardless of whether the Government of the importing country has registered to use the system or has invoked article 12 of the Convention, requiring pre-export notification.

157. In many countries — particularly low-income countries — and indeed in entire subregions, some of the most fundamental notification tools have not been used, leaving those countries or areas vulnerable to traffickers. Interested Governments and organizations are strongly encouraged to use bilateral and multilateral initiatives to assist Governments in invoking article 12, paragraph 10 (a), of the 1988 Convention, and in registering to use the PEN Online system and PICS without further delay.

158. Chemical trafficking organizations are becoming increasingly resourceful, well organized and adaptable in order to circumvent existing control measures. Derivatives and other substitute chemicals beyond the scope of existing international drug control measures, such as APAAN and esters of phenylacetic acid, are increasingly being used in the illicit manufacture of amphetamine-type stimulants, and there are indications that their use is also spreading to other regions. Governments currently confronted with significant illicit manufacture of amphetamine or methamphetamine should be aware that traffickers may already be attempting to obtain, through additional sources, large amounts of those new chemicals and should proactively monitor those chemicals through partnerships with industry.

159. The cyclic emergence of non-scheduled substances in response to tighter controls over commonly used precursors is a phenomenon that has been observed since the beginning of international precursor control. It is therefore important that Governments exchange information on incidents involving non-scheduled substances in the same manner as those involving commonly used precursors. This includes the exchange of information on the reasons why a shipment was stopped or seized — to prevent future diversions of shipments of the same substances routed through different border crossings, ports or countries. It should

also include the full investigation of seizures of substitute chemicals in illicit laboratories in order to improve the understanding of the substances actually being used in illicit drug manufacture. The Board therefore urges all Governments to improve the extent, frequency and level of detail of shared information in relation to non-scheduled chemicals, as a basis for devising adequate responses.

160. Considering the difficulties in the implementation of the provisions of the 1988 Convention and related resolutions and, in particular, in view of the challenges, outlined in the present report, that have begun to emerge after 20 years of international precursor control, the Board encourages Governments to reinforce their commitment to the shared responsibility of precursor control by cooperating to proactively address those challenges.

# Annexes\*

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\*Annexes VII-XI are not included in the printed copies of this report but are available in the CD-ROM version of the report and online from the Board's website ([www.incb.org](http://www.incb.org)).





## Annex I

## Parties and non-parties to the 1988 Convention, by region, as at 1 November 2012

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

<i>Region</i>	<i>Party to the 1988 Convention</i>	<i>Non-party to the 1988 Convention</i>	
<b>Africa</b>	Algeria (9 May 1995)	Eritrea (30 January 2002)	
	Angola (26 October 2005)	Ethiopia (11 October 1994)	
	Benin (23 May 1997)	Gabon (10 July 2006)	
	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)	
	Cameroon (28 October 1991)	Guinea-Bissau (27 October 1995)	
	Cape Verde (8 May 1995)	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)	
			Equatorial Guinea
			Somalia
			South Sudan

PRECURSORS

<i>Region</i>	<i>Party to the 1988 Convention</i>	<i>Non-party to the 1988 Convention</i>
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)		
<hr/>		
<i>Regional total</i>	<b>51</b>	<b>3</b>
<b>Americas</b>		
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)	

<i>Region</i>	<i>Party to the 1988 Convention</i>	<i>Non-party to the 1988 Convention</i>
	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)
<i>Regional total</i>	<b>35</b>	<b>0</b>
<b>Asia</b>	Afghanistan (14 February 1992)	Democratic People's Republic of Korea (19 March 2007)
	Armenia (13 September 1993)	Georgia (8 January 1998)
	Azerbaijan (22 September 1993)	India (27 March 1990)
	Bahrain (7 February 1990)	Indonesia (23 February 1999)
	Bangladesh (11 October 1990)	Iran (Islamic Republic of) (7 December 1992)
	Bhutan (27 August 1990)	Iraq (22 July 1998)
	Brunei Darussalam (12 November 1993)	Israel (20 March 2002)
	Cambodia (2 April 2005)	Japan (12 June 1992)
	China (25 October 1989)	

PRECURSORS

<i>Region</i>	<i>Party to the 1988 Convention</i>	<i>Non-party to the 1988 Convention</i>
Jordan (16 April 1990)	Qatar (4 May 1990)	
Kazakhstan (29 April 1997)	Republic of Korea (28 December 1998)	
Kuwait (3 November 2000)	Saudi Arabia (9 January 1992)	
Kyrgyzstan (7 October 1994)	Singapore (23 October 1997)	
Lao People's Democratic Republic (1 October 2004)	Sri Lanka (6 June 1991)	
Lebanon (11 March 1996)	Syrian Arab Republic (3 September 1991)	
Malaysia (11 May 1993)	Tajikistan (6 May 1996)	
Maldives (7 September 2000)	Thailand (3 May 2002)	
Mongolia (25 June 2003)	Turkey (2 April 1996)	
Myanmar (11 June 1991)	Turkmenistan (21 February 1996)	
Nepal (24 July 1991)	United Arab Emirates (12 April 1990)	
Oman (15 March 1991)	Uzbekistan (24 August 1995)	
Pakistan (25 October 1991)	Viet Nam (4 November 1997)	
Philippines (7 June 1996)	Yemen (25 March 1996)	
<i>Regional total</i>		
<b>46</b>	<b>45</b>	<b>1</b>
<b>Europe</b>	Albania (27 July 2001)	Belgium <sup>a</sup> (25 October 1995)
	Andorra (23 July 1999)	Bosnia and Herzegovina (1 September 1993)
	Austria <sup>a</sup> (11 July 1997)	Bulgaria <sup>a</sup> (24 September 1992)
	Belarus (15 October 1990)	Croatia (26 July 1993)

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

PRECURSORS

<i>Region</i>	<i>Party to the 1988 Convention</i>		<i>Non-party to the 1988 Convention</i>
<i>Regional total</i>	<b>46</b>		<b>0</b>
<b>Oceania</b>	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)	Solomon Islands
	Micronesia (Federated States of) (6 July 2004)	Vanuatu (26 January 2006)	Tuvalu
	Nauru (12 July 2012)		
<i>Regional total</i>	<b>16</b>		<b>5</b>
<i>World total</i>	<b>197</b>		<b>9</b>

<sup>a</sup> State member of the European Union.

<sup>b</sup> 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 2012. (For updates, see [www.incb.org/documents/PRECURSORS/ANNUAL-LICIT-REQUIREMENTS/INCB\\_ALR\\_WEB.pdf](http://www.incb.org/documents/PRECURSORS/ANNUAL-LICIT-REQUIREMENTS/INCB_ALR_WEB.pdf).)

**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 2012 (Kilograms)**

<i>Country or territory</i>	<i>Ephedrine</i>	<i>Ephedrine preparations</i>	<i>Pseudoephedrine</i>	<i>Pseudoephedrine preparations</i>	<i>3,4-MDP-2-P<sup>a</sup></i>	<i>P-2-P<sup>b</sup></i>
Afghanistan	50	50	6 000	5 000	0	0
Albania	3	0	0	0	0	0
Algeria	1		17 000		0	0
Argentina	77		20 709		0	1
<i>Ascension Island</i>	0	0	0	0	0	0
Australia	5	10	6 000	1 450	1	1
Austria	142	213	1	1 400	1	1
Azerbaijan	20		10		0	0
Bahrain	0	0			0	
Bangladesh	200		49 021			
Barbados	250		160			
Belarus	0	25	25	0	0	0
Belgium	300	200	11 000	8 000	5	1
Belize			P	P		
Benin	2		8	10		
Bhutan	0	0	0	0	0	0
Bolivia (Plurinational State of)	20 500	1	1 235	2 530	0	0
Bosnia and Herzegovina	7	0	1 010	0	0	0
Botswana	300					
Brazil	700 <sup>c</sup>		20 000 <sup>c</sup>		0	1
Brunei Darussalam	0	4	0	224	0	0
Bulgaria	3 000		500		0	0
Cambodia	200	50	300	900		
Canada	2 000	5	20 000		0	0
Chile	95	200	6 440	1 000		
China	155 000		200 000			
<i>Hong Kong SAR of China</i>	4 500	0	7 500	0	0	0
<i>Macao SAR of China</i>	1	10	1	159	0	0
<i>Christmas Island</i>	0	0	0	1	0	0
<i>Cocos (Keeling) Islands</i>	0	0	0	0	0	0
Colombia	4 <sup>d</sup>	3 <sup>e</sup>	5 000 <sup>f</sup>	P	0	0
Cook Islands	0	0	0	1	0	0
Costa Rica	0	0	728	27	0	0
Côte d'Ivoire	40	20	25	30	0	0
Croatia	2		1		0	1
Cuba	200			6		
<i>Curaçao</i>	0		0		0	0
Cyprus		0	500			
Czech Republic	600	10	1 600	800	0	1

<i>Country or territory</i>	<i>Ephedrine</i>	<i>Ephedrine preparations</i>	<i>Pseudoephedrine</i>	<i>Pseudoephedrine preparations</i>	<i>3,4-MDP-2-P<sup>a</sup></i>	<i>P-2-P<sup>b</sup></i>
Democratic People's Republic of Korea	1 500	0	0	0	5	0
Democratic Republic of the Congo	250		900			
Denmark					0	0
Dominican Republic	75	5	230	250	0	0
Ecuador	50	30	1 500	5 000	0	0
Egypt	6 000	0	60 000	2 500	0	0
El Salvador	P(6) <sup>g</sup>	P(2) <sup>g</sup>	P	P	0	0
Eritrea	0	0	0	0	0	0
Estonia	3	1		350		
<i>Falkland Islands (Malvinas)</i>		1		1		
<i>Faroe Islands</i>	0	0	0	0	0	0
France	5 000	10	20 000	500	0	0
Finland	6	100		1 000		1
Gambia	0	0	0	0	0	0
Georgia	50	30	50	200		
Germany	1 000		8 000		1	8
Ghana	4 500	300	3 000	200	0	
Greece	25		1 450		0	0
<i>Greenland</i>	0	0	0	0	0	0
Guatemala	0		P	P	0	0
Guinea	36					
Guinea-Bissau	0	0	0	0	0	0
Guyana	120	50	120	30	0	0
Haiti	200	1	350		0	0
Honduras	P	P(1) <sup>e</sup>	P	P	0	0
Hungary	600		1		1	2 120
Iceland	1		1			
India	1 023	87 467	300 507	383	0	0
Indonesia	7 032		38 293	692		
Iran (Islamic Republic of)	50	1	55 000	10	6	51
Iraq	3 000	100	14 000	10 000	0	P <sup>h</sup>
Ireland	1	3	1	1 173	0	0
Israel	1	4	3 000	21		
Italy	1 000	0	6 000	0	0	300
Jamaica			300	300	0	0
Japan	400		18 000			
Jordan	300		20 000			P
Kazakhstan	0		0		0	0
Kenya	2 500		3 000			
Kyrgyzstan	0		20	32	0	0
Lao People's Democratic Republic	0	0	220	50	0	0
Latvia	25	27	41	383	0	0

PRECURSORS

<i>Country or territory</i>	<i>Ephedrine</i>	<i>Ephedrine preparations</i>	<i>Pseudoephedrine</i>	<i>Pseudoephedrine preparations</i>	<i>3,4-MDP-2-P<sup>a</sup></i>	<i>P-2-P<sup>b</sup></i>
Lebanon	0	4	220	300	0	0
Lithuania	1	2	1	600	1	1
Luxembourg	1	0	0	0	0	0
Madagascar	702	180	150			
Malawi	1 000					
Malaysia	211	21	6 039	4 500	0	0
Maldives	0	0	0	0	0	0
Malta		220	220		0	0
Mauritius	0	0	0	0	0	0
Mexico	P(193) <sup>g</sup>	P(80) <sup>g</sup>	P	P	0	0
Monaco	0	0	0	0	0	0
Mongolia	3					
Montenegro	0	2	0	38	0	0
<i>Montserrat</i>		1		1		
Morocco	42	0	2 392	0	0	0
Mozambique	3					
Myanmar	2	0	0	0	0	0
Namibia	0	0	0	0	0	0
Netherlands		0		0	0	0
New Zealand	50		700		0	3
Nicaragua	P <sup>i</sup>	P <sup>i</sup>	P	P		
Nigeria	9 650	2 000	5 823	15 000	0	
<i>Norfolk Island</i>	0	0	0	0	0	0
Norway	400	0	0	0	0	0
Pakistan	22 000		48 000			
Panama	25	30	1 000	1 000		
Papua New Guinea	1		200		0	0
Paraguay	0	0	2 500	0	0	0
Peru	54		2 409	1 192		
Philippines	120	0	120	0	0	0
Poland	130	0	4 200	0	0	2
Portugal			15			
Qatar	0	0	0	80	0	0
Republic of Korea	23 316		62 901		1	1
Republic of Moldova		60		250		
Romania	200		6 500		0	0
Russian Federation	1 500					
<i>Saint Helena</i>	0	1	0	1	0	0
Sao Tome and Principe	0	0	0	0	0	0
Senegal	0	0	0	0	0	0
Serbia	25		718			1
Singapore	12 000	4 000	53 000	8 000	1	1

<i>Country or territory</i>	<i>Ephedrine</i>	<i>Ephedrine preparations</i>	<i>Pseudoephedrine</i>	<i>Pseudoephedrine preparations</i>	<i>3,4-MDP-2-P<sup>a</sup></i>	<i>P-2-P<sup>b</sup></i>
Slovakia	8	1	1	0	0	0
Slovenia	22		250		0	0
Solomon Islands	0	1	0	1	0	0
South Africa	15 000	0	10 444	0	0	0
Spain	307		6 427		0	1
Sri Lanka				0	0	0
Sweden	188	215	1	30	1	14
Switzerland	2 600		70 000		100	100
Syrian Arab Republic	1 000		50 000			
Tajikistan	38					
Thailand	53		12 000	0		
Trinidad and Tobago						0
<i>Tristan da Cunha</i>	0	0	0	0	0	0
Tunisia	1	13	3 000	0	0	0
Turkey	250		27 000		1	1
Uganda	150	35	2 500	400	0	0
Ukraine	0	101	46	940	0	0
United Arab Emirates	200	41	3 050	2 499	0	0
United Kingdom	64 448	1 011	12 680	1 683	8	1
United Republic of Tanzania	500	500	3 000	1 000		
United States of America	22 800		299 000		0	36 735
Uruguay	10	0	100	0	0	0
Uzbekistan	1		15			
Venezuela (Bolivarian Republic of)	1 000		3 000			
Yemen			5 000			
Zambia	5		10			
Zimbabwe	100	1	150	0	0	0

*Notes:* The names of territories, special administrative regions etc. 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.

<sup>a</sup> 3,4-Methylenedioxyphenyl-2-propanone.

<sup>b</sup> 1-Phenyl-2-propanone.

<sup>c</sup> Including the licit requirements for pharmaceutical preparations containing the substance.

<sup>d</sup> The required amount of ephedrine is to be used for the manufacture of injectable ephedrine sulphate solution.

<sup>e</sup> In the form of injectable ephedrine sulfate solution.

<sup>f</sup> The required amount of pseudoephedrine is to be used exclusively for the manufacture of medicines for export.

<sup>g</sup> 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.

<sup>h</sup> Including products containing P-2-P.

<sup>i</sup> 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 1988 Convention

*Table I*

Acetic anhydride  
 N-Acetylthranilic acid  
 Ephedrine  
 Ergometrine  
 Ergotamine  
 Isosafrole  
 Lysergic acid  
 3,4-Methylenedioxyphenyl-2-propanone  
 Norephedrine  
 Phenylacetic acid<sup>b</sup>  
 1-Phenyl-2-propanone  
 Piperonal  
 Potassium permanganate  
 Pseudoephedrine  
 Safrole

*Table II*

Acetone  
 Anthranilic acid  
 Ethyl ether  
 Hydrochloric acid<sup>a</sup>  
 Methyl ethyl ketone  
 Piperidine  
 Sulphuric acid<sup>a</sup>  
 Toluene

The salts of the substances in this Table whenever the existence of such salts is possible.

The salts of the substances in this Table whenever the existence of such salts is possible.

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<sup>a</sup> The salts of hydrochloric acid and sulphuric acid are specifically excluded from Table II.

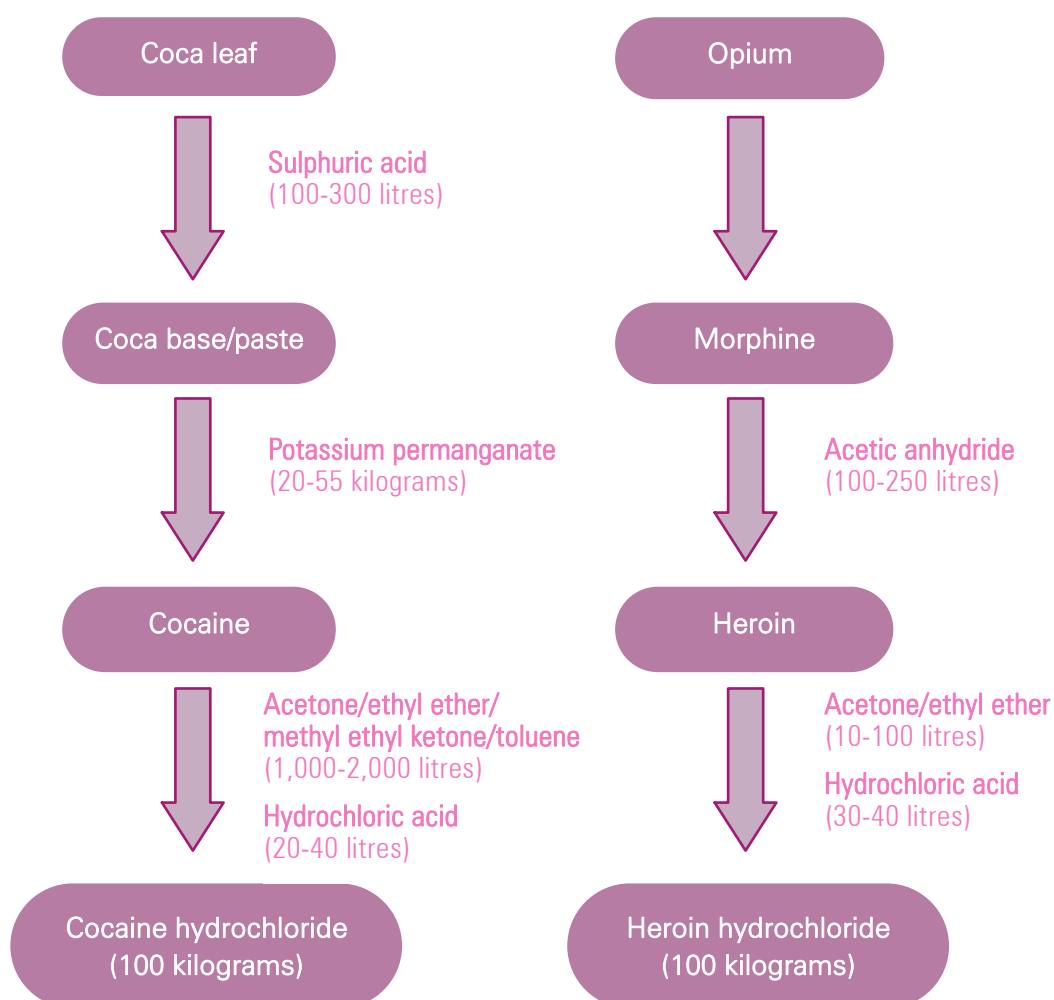
<sup>b</sup> Transferred from Table II to Table I, effective 17 January 2011.

## Annex IV

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

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

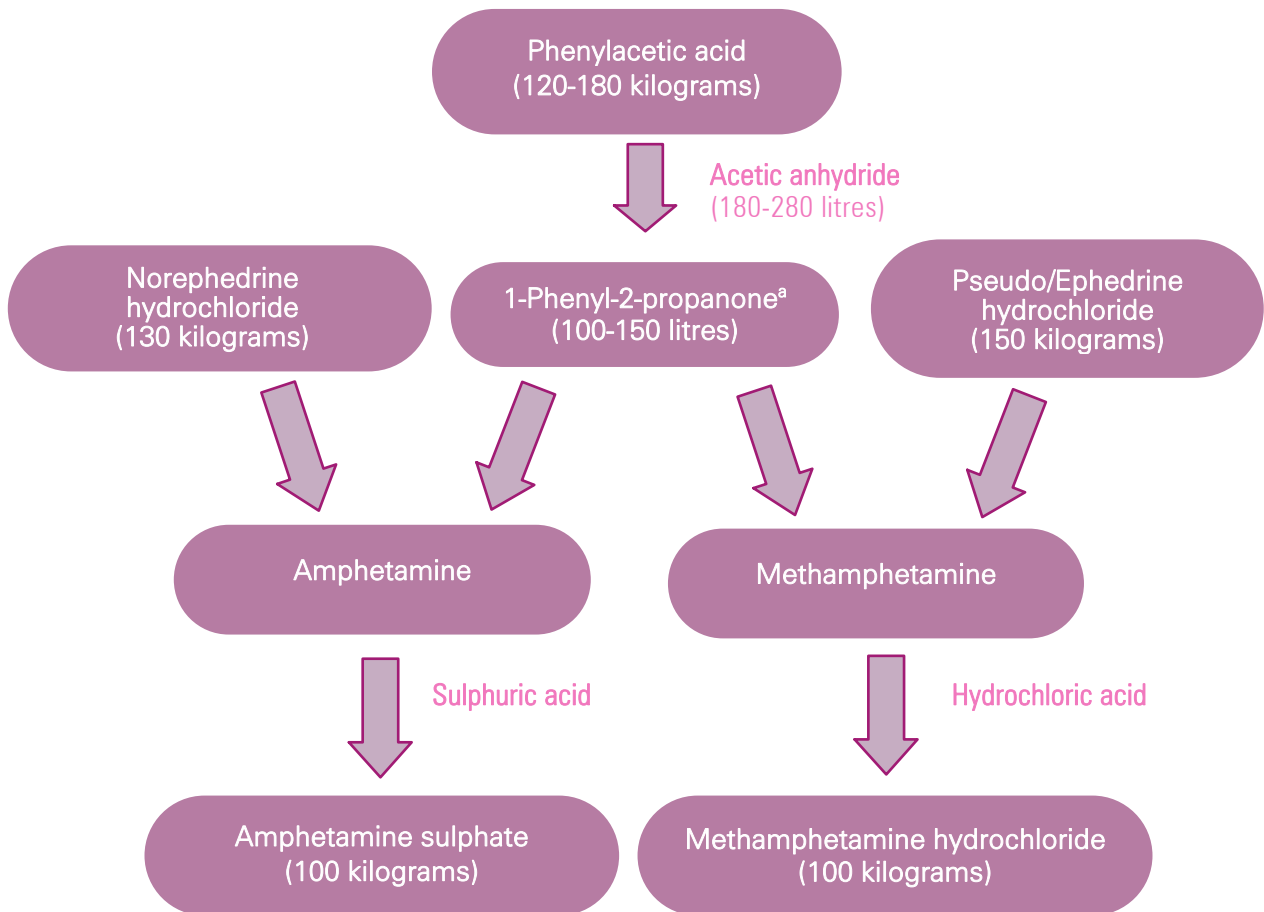
**Figure A.I. Illicit manufacture of cocaine and heroin: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 100 kilograms of cocaine or heroin hydrochloride**  
(Revised in 2012)



*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 have been used at all stages of drug manufacture.



**Figure A.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**  
(Revised in 2012)

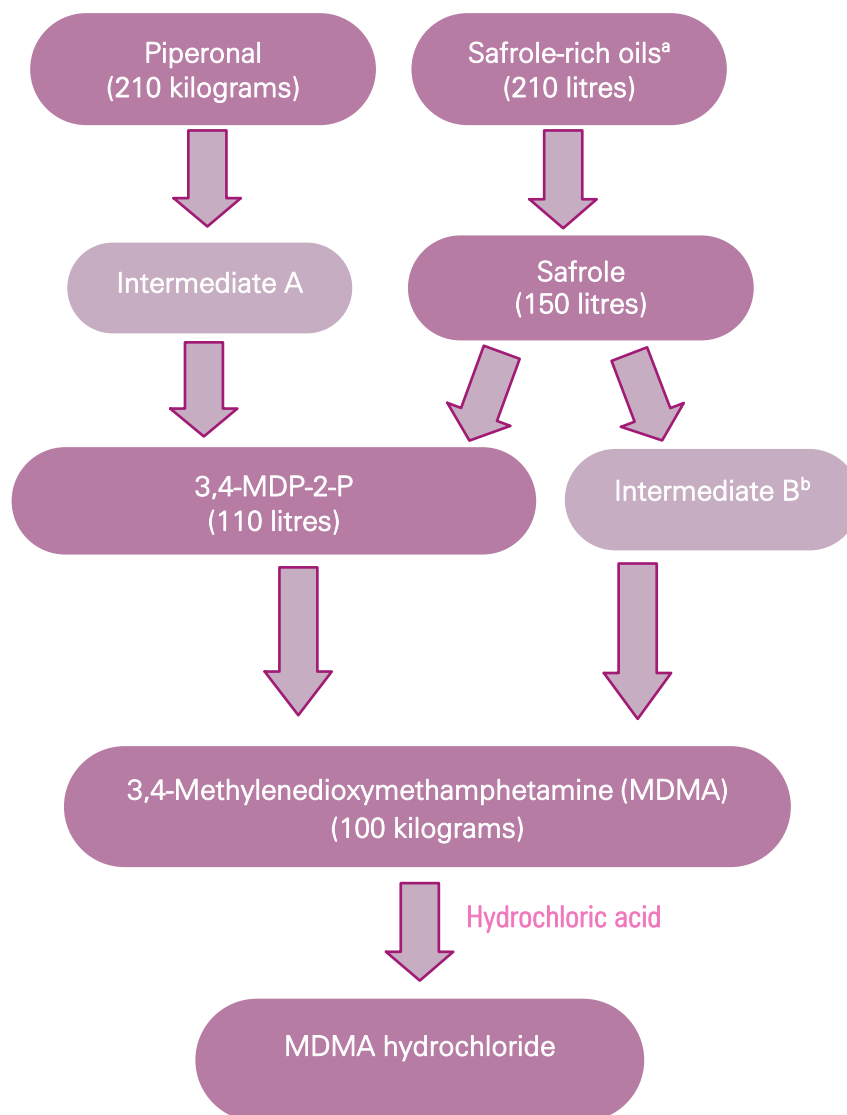


*Note:* Methcathinone, a less commonly encountered amphetamine-type stimulant, can be manufactured from pseudo/ephedrine hydrochloride, requiring the same approximate quantities as methamphetamine to yield 100 kilograms of hydrochloride salt.

<sup>a</sup> 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 A.III. Illicit manufacture of 3,4-methylenedioxymethamphetamine and related drugs: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 100 kilograms of MDMA**

(Revised in 2012)

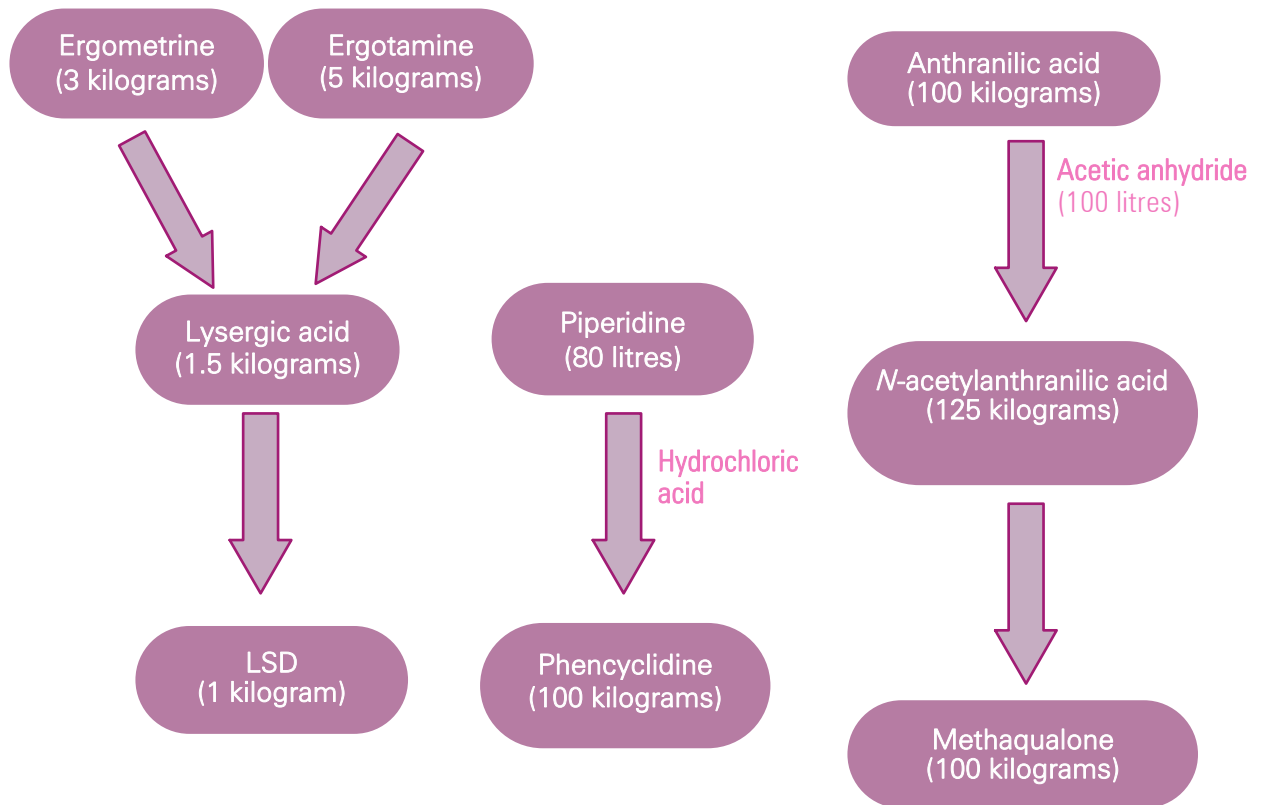


*Note:* Isosafrole, another precursor of 3,4-methylenedioxymethamphetamine (MDMA) under international control, is not included in this scheme, as it is not commonly encountered as a starting material; it is an intermediate in a modification of methods for manufacturing MDMA from safrole, requiring approximately 300 litres of safrole to manufacture 100 kilograms of MDMA.

<sup>a</sup> Assuming a safrole content in safrole-rich oils of 75 per cent or higher.

<sup>b</sup> The manufacture of 100 kilograms of MDMA via intermediate B would require 200 litres of safrole.

**Figure A.IV. Illicit manufacture of lysergic acid diethylamide (LSD), methaqualone and phencyclidine: scheduled substances and the approximate quantities thereof required for the illicit manufacture of 1 kilogram of LSD and 100 kilograms of methaqualone and phencyclidine**  
 (Revised in 2012)



## 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<sup>a</sup> provides as follows:

The Parties shall use their best endeavours to apply to substances which do not fall under this Convention, but which 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<sup>b</sup> provides as follows:

The Parties shall use their best endeavours to apply to substances which do not fall under this Convention, but which 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<sup>c</sup> 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 1988 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 such operations and prevent accumulation of substances in Tables I and II (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).

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<sup>a</sup> United Nations, *Treaty Series*, vol. 976, No. 14152.

<sup>b</sup> *Ibid.*, vol. 1019, No. 14956.

<sup>c</sup> *Ibid.*, vol. 1582, No. 27627.

## 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, Cameroon, Cape Verde, 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,<sup>a</sup> Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan,<sup>b</sup> 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, Syrian Arab Republic, Tajikistan, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan and Yemen;

**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, Czech Republic, 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.

<sup>a</sup> Since 16 September 2011, "Libya" has replaced "Libyan Arab Jamahiriya" as the short name used in the United Nations.

<sup>b</sup> By its resolution 65/308 of 14 July 2011, the General Assembly decided to admit South Sudan to membership in the United Nations.

## Annex VII

## Submission of information by Governments pursuant to article 12 of the 1988 Convention (form D) for the years 2007-2011

*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 nil returns.

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

<i>Country or territory</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Afghanistan		X	X	X	X
Albania	X	X	X	X	X
Algeria	X	X	X	X	X
Andorra	X	X	X	X	X
Angola		X			
<i>Anguilla<sup>a</sup></i>					
Antigua and Barbuda					
Argentina	X	X	X	X	X
Armenia	X	X	X	X	X
<i>Aruba<sup>a</sup></i>					
<i>Ascension Island</i>	X	X	X	X	X
Australia	X	X	X	X	X
Austria <sup>b</sup>	X	X	X	X	X
Azerbaijan	X	X	X	X	X
Bahamas					
Bahrain			X	X	
Bangladesh	X	X	X	X	X
Barbados					
Belarus	X	X	X	X	X
Belgium <sup>b</sup>	X	X	X	X	X
Belize		X	X		
Benin	X	X	X	X	X
<i>Bermuda<sup>a</sup></i>	X	X			
Bhutan	X			X	X
Bolivia (Plurinational State of)		X	X	X	X
Bosnia and Herzegovina	X	X	X	X	X
Botswana		X			
Brazil	X	X	X	X	X
<i>British Virgin Islands<sup>a</sup></i>					
Brunei Darussalam	X	X	X	X	X
Bulgaria	X	X	X	X	X
Burkina Faso					X
Burundi					
Cambodia	X		X	X	X
Cameroon	X	X	X	X	X
Canada	X	X	X	X	X
Cape Verde		X			
<i>Cayman Islands<sup>a</sup></i>					
Central African Republic		X	X		
Chad			X		

PRECURSORS

<i>Country or territory</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Chile	X	X	X	X	X
China	X	X	X	X	X
<i>Hong Kong SAR of China</i>	X	X	X	X	
<i>Macao SAR of China</i>	X	X	X	X	
<i>Christmas Island<sup>a</sup></i>	X	X	X	X	X
<i>Cocos (Keeling) Islands<sup>a</sup></i>	X	X	X	X	X
Colombia	X	X	X	X	X
Comoros					
Congo		X			
Cook Islands	X	X		X	X
Costa Rica	X	X	X	X	X
Côte d'Ivoire	X	X	X	X	X
Croatia	X	X	X	X	X
Cuba	X	X	X	X	X
<i>Curaçao<sup>c</sup></i>				X	X
Cyprus <sup>b</sup>	X	X	X	X	X
Czech Republic <sup>b</sup>	X	X	X	X	X
Democratic People's Republic of Korea	X	X	X	X	X
Democratic Republic of the Congo	X	X	X	X	X
Denmark <sup>b</sup>	X	X	X	X	X
Djibouti					
Dominica	X				
Dominican Republic	X	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	X	X
Estonia <sup>b</sup>	X	X	X	X	X
Ethiopia	X	X	X		X
<i>Falkland Islands (Malvinas)</i>	X	X			
Fiji					X
Finland <sup>b</sup>	X	X	X	X	X
France <sup>b</sup>	X	X	X	X	X
<i>French Polynesia<sup>a</sup></i>					
Gabon					
Gambia				X	X
Georgia	X	X	X	X	X
Germany <sup>b</sup>	X	X	X	X	X
Ghana			X	X	X
<i>Gibraltar</i>					
Greece <sup>b</sup>	X	X	X	X	X
Grenada					
Guatemala		X	X	X	X
Guinea					
Guinea-Bissau	X	X			
Guyana	X	X	X	X	
Haiti	X	X	X	X	X
Holy See					
Honduras	X				X

<i>Country or territory</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Hungary <sup>b</sup>	X	X	X	X	X
Iceland	X	X	X	X	X
India	X	X	X	X	X
Indonesia	X	X		X	X
Iran (Islamic Republic of)	X	X	X	X	
Iraq	X	X	X	X	X
Ireland <sup>b</sup>	X	X	X	X	X
Israel		X	X	X	
Italy <sup>b</sup>	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
Kenya		X	X	X	
Kiribati					
Kuwait					
Kyrgyzstan	X	X	X	X	X
Lao People's Democratic Republic	X		X	X	X
Latvia <sup>b</sup>	X	X	X	X	X
Lebanon	X	X	X	X	X
Lesotho					
Liberia					
Libya <sup>d</sup>					
Liechtenstein					
Lithuania <sup>b</sup>	X	X	X	X	X
Luxembourg <sup>b</sup>		X	X	X	X
Madagascar		X	X	X	
Malawi	X	X	X		
Malaysia		X	X	X	X
Maldives		X	X	X	X
Mali					
Malta <sup>b</sup>	X	X	X	X	X
Marshall Islands					
Mauritania		X	X		
Mauritius	X	X		X	X
Mexico	X	X	X	X	X
Micronesia (Federated States of)					
Monaco	X				
Mongolia					
Montenegro	X	X	X	X	X
Montserrat <sup>a</sup>	X			X	
Morocco	X	X	X	X	X
Mozambique	X	X		X	
Myanmar	X	X	X	X	X
Namibia				X	
Nauru	X				
Nepal					
Netherlands <sup>b</sup>	X	X	X	X	X
New Caledonia <sup>a</sup>			X	X	X
New Zealand	X	X	X	X	X



PRECURSORS

<i>Country or territory</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Nicaragua	X	X	X	X	X
Niger	X				
Nigeria					X
<i>Norfolk Island<sup>a,e</sup></i>	X	X	X	X	X
Norway	X	X	X	X	
Oman		X	X		
Pakistan	X	X	X	X	
Palau					
Panama	X	X	X	X	X
Papua New Guinea	X				
Paraguay	X	X	X	X	X
Peru	X	X	X	X	X
Philippines	X	X	X	X	X
Poland <sup>b</sup>	X	X	X	X	X
Portugal <sup>b</sup>	X	X	X	X	X
Qatar					X
Republic of Korea	X	X	X	X	X
Republic of Moldova <sup>f</sup>	X	X	X	X	X
Romania <sup>b</sup>	X	X	X	X	X
Russian Federation	X	X	X	X	X
Rwanda	X	X			
<i>Saint Helena</i>	X	X	X		X
Saint Kitts and Nevis					
Saint Lucia	X	X	X	X	X
Saint Vincent and the Grenadines					
Samoa					
San Marino					
Sao Tome and Principe	X	X	X		X
Saudi Arabia	X	X	X	X	X
Senegal		X	X	X	
Serbia	X	X	X	X	X
Seychelles		X			X
Sierra Leone					
Singapore	X	X	X	X	X
<i>Sint Maarten<sup>c</sup></i>					
Slovakia <sup>b</sup>	X	X	X	X	X
Slovenia <sup>b</sup>	X	X	X	X	X
Solomon Islands					
Somalia					
South Africa	X	X	X		
South Sudan					
Spain <sup>b</sup>	X	X	X	X	X
Sri Lanka	X	X	X	X	X
Sudan					
Suriname					
Swaziland					
Sweden <sup>b</sup>	X	X	X	X	X
Switzerland	X	X	X	X	X
Syrian Arab Republic	X	X	X	X	
Tajikistan	X		X	X	X

<i>Country or territory</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Thailand	X	X	X	X	X
The former Yugoslav Republic of Macedonia				X	
Timor-Leste					
Togo					
Tonga	X				
Trinidad and Tobago	X	X	X	X	X
<i>Tristan da Cunha</i>	X	X			
Tunisia	X	X	X	X	X
Turkey	X	X	X	X	X
Turkmenistan	X	X	X		X
<i>Turks and Caicos Islands<sup>a</sup></i>					
Tuvalu					
Uganda	X	X	X	X	X
Ukraine	X	X	X	X	X
United Arab Emirates	X	X	X	X	X
United Kingdom <sup>b</sup>	X	X	X	X	X
United Republic of Tanzania			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	X				X
Venezuela (Bolivarian Republic of)	X	X	X	X	X
Viet Nam	X	X	X	X	X
<i>Wallis and Futuna Islands<sup>a</sup></i>					
Yemen	X	X	X	X	X
Zambia	X				
Zimbabwe			X	X	
<b>Total number of governments that submitted form D<sup>g</sup></b>	<b>136</b>	<b>141</b>	<b>138</b>	<b>137</b>	<b>129</b>
<b>Total number of governments requested to provide form D</b>	<b>212</b>	<b>213</b>	<b>213</b>	<b>213</b>	<b>213</b>

<sup>a</sup> Territorial application of the 1988 Convention has been confirmed by the authorities concerned.

<sup>b</sup> State member of the European Union.

<sup>c</sup> The Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent entities, Curaçao and Sint Maarten. The authorities of Curaçao submitted form D for 2010 for the former Netherlands Antilles.

<sup>d</sup> Since 16 September 2011, “Libya” has replaced “Libyan Arab Jamahiriya” as the short name used in the United Nations.

<sup>e</sup> Information was provided by Australia.

<sup>f</sup> Since 9 September 2008, “Republic of Moldova” has replaced “Moldova” as the short name used in the United Nations.

<sup>g</sup> In addition, the European Commission submitted form D for the years 1993-2011.

## Annex VIII

### Seizures of substances in Table I and Table II of the 1988 Convention, as reported to the International Narcotics Control Board, 2007-2011

1. Tables VIII.1 and VIII.2 below show information on seizures of the substances included in Tables I and 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:

<i>Substance</i>	<i>Conversion factor (kilograms to litres)<sup>a</sup></i>
Acetic anhydride	0.926
Acetone	1.269
Ethyl ether	1.408
Hydrochloric acid (39.1% solution)	0.833
Isosafrole	0.892
3,4-Methylenedioxyphenyl-2-propanone	0.833
Methyl ethyl ketone	1.242

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1-Phenyl-2-propanone	0.985
Piperidine	1.160
Safrole	0.912
Sulphuric acid (concentrated solution)	0.543
Toluene	1.155

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<sup>a</sup> Derived from density (*The Merck Index* (Rahway, New Jersey, Merck, 1989)).

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

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

12. Two dots (..) signify 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 of rounding to whole numbers of the actual quantities seized.

Table VIII.1. Seizures of substances in Table I of the 1988 Convention, as reported to the International Narcotics Control Board, 2007-2011

Country or territory, by region Year	Acetic anhydride (litres)	N-Acetylanthrannilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
<b>Africa</b>																	
Côte d'Ivoire																	
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	a	..
Nigeria																	
2011	..	..	56	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa																	
2007	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Regional total</b>																	
2007	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	a	0
<b>Americas</b>																	
<b>Central America and the Caribbean</b>																	
Belize																	
2008	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	601	..
Costa Rica																	
2007	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..
2008	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..
2009	..	..	..	..	..	..	..	..	..	..	30	..	..	..	..	..	..
2010	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..	..

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphephenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
<b>Dominican Republic</b>																	
2008	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	49 <sup>a</sup>	..
2009	..	..	..	..	..	..	..	..	..	..	..	250	..	..	4	238 <sup>a</sup>	..
<b>El Salvador</b>																	
2008	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	15	..
2010	..	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Guatemala</b>																	
2009	..	..	7	..	..	..	..	..	..	..	..	..	..	..	12 946	<sup>a</sup>	..
2010	..	..	15	..	..	..	..	..	..	..	..	..	..	..	989	<sup>a</sup>	..
2011	512	..	100	..	..	..	..	..	..	..	..	1	..	..	95	..	..
<b>Honduras</b>																	
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	41	..
<b>Panama</b>																	
2007	..	..	10 000	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	..	..	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Regional total</b>																	
2007	0	0	10 000	0	0	0	0	0	0	0	0	0	0	0	3	0	0
2008	0	0	3	0	0	0	0	0	0	0	0	0	0	0	17	665	0
2009	0	0	7	0	0	0	0	0	0	0	30	250	0	0	12 950	238	0
2010	0	0	25	0	0	0	0	0	0	0	0	0	0	0	1 003	0	0
2011	512	0	100	0	0	0	0	0	0	0	0	1	0	0	95	42	0
<b>North America</b>																	
<b>Canada</b>																	
2007	..	..	246	..	..	..	..	..	370	59	..	3	..	..	..	..	..

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
2008	..	..	110	2	°	300	..	3	2 823	..	230	..	..	..	14	41	21
2009	..	..	357	..	..	..	..	..	..	..	..	..	..	..	154	..	80
2010	..	..	676	..	..	..	..	..	..	5 924	..	..	..	16	°	..	..
2011	..	..	13	..	..	..	..	7	122	..	..	..	..	1	11	..	65
<b>Mexico</b>																	
2007	10	..	3 696	..	..	..	..	..	..	..	..	..	2 000	10	12 216	..	..
2008	4	..	3 293	..	..	..	..	..	..	..	..	..	..	..	2 874	..	..
2009	440	..	879	..	..	..	..	..	..	119	..	30 654	4 289	..	2 681	..	..
2010	4 821	..	5 337	..	2 000	..	..	..	..	14 203	25	56 080	..	..	3 912	..	..
2011	76 625	..	2	..	..	..	..	..	..	2 184	..	14 370	°	..	313	..	2 371
<b>United States of America</b>																	
2007	4	..	3 319	..	..	10 000	..	..	°	2	°	1	..	3	1 920	b	°
2008	39	5	5 163	..	..	..	..	..	..	3	°	1	..	20	3 033	b	°
2009	5	..	14 107	..	..	..	..	110	°	38	1	°	..	13	6 209	b	20
2010	61 647	..	6 450	..	..	620	°	..	..	114	23	173 578	..	24	11 011	b	1
2011	24 713	..	17 520 <sup>c</sup>	33 566 <sup>c</sup>	..	820	..	3	..	200	°	997 330	..	224	2 502	b	2 281
<b>Regional total</b>																	
2007	14	0	7 261	0	0	10 000	0	0	370	61	0	4	2 000	13	14 136	0	0
2008	43	5	8 566	2	0	300	0	3	2 823	3	230	1	0	20	5 921	41	21
2009	445	0	15 342	0	0	0	0	110	0	157	1	30 654	4 289	13	9 044	0	100
2010	66 468	0	12 464	0	2 000	620	0	0	0	20 241	48	229 658	0	40	14 923	0	1
2011	101 339	0	17 535	33 566	0	820	0	9	122	2 384	0	1 011 700	0	225	2 827	0	4 717
<b>South America</b>																	
<b>Argentina</b>																	
2007	..	..	382	..	..	..	..	..	..	..	..	..	..	1	..	..	..
2008	..	..	4 316	26	..	..	..	..	..	..	..	..	..	132	..	..	..

Country or territory, by region	Year	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphephenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)	
	2009	..	..	10 440	..	..	..	..	..	..	..	..	..	..	52	..	..	..	
	2011	..	..	..	..	..	..	..	..	..	..	..	..	..	12	250	..	..	
Bolivia (Plurinational State of)																			
	2007	..	..	..	..	..	..	..	..	..	..	..	..	..	156 <sup>d</sup>	..	..	..	
	2008	..	..	..	..	..	..	..	..	..	..	..	..	..	1 228 <sup>d</sup>	..	..	..	
	2009	..	..	..	..	..	..	..	..	..	..	..	..	..	2 097 <sup>d</sup>	..	..	..	
	2011	..	..	°	..	..	..	..	..	..	..	..	..	..	9 914	°	°	..	
Brazil																			
	2007	3	..	..	..	..	..	..	..	..	..	..	..	..	700	..	..	..	
	2008	..	..	..	..	..	..	..	..	..	..	..	..	..	206	..	..	..	
	2009	..	..	..	..	..	..	..	..	..	..	..	..	..	4	47	..	..	
	2010	..	..	..	..	..	..	..	..	..	..	..	..	..	217	..	..	..	
	2011	53	..	..	..	..	..	..	..	..	..	..	..	..	232	..	41	..	
Chile																			
	2008	..	..	..	..	..	..	..	..	..	..	..	..	..	12	..	..	..	
	2009	..	..	1 187	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Colombia																			
	2007	4 672	..	..	..	..	..	..	..	..	..	..	..	..	144 401	..	..	..	
	2008	30	..	..	..	..	..	..	..	..	..	..	..	..	41 630	..	..	..	
	2009	8	..	1	..	..	..	..	..	..	..	..	..	..	22 793	220	..	..	
	2010	1 006	..	..	..	..	..	..	..	..	..	..	..	..	26 442	..	..	..	
	2011	..	..	..	..	..	..	..	..	..	..	..	..	..	24 044	..	..	..	
Ecuador																			
	2008	..	..	..	..	..	..	..	..	..	..	..	..	..	775	..	..	..	
	2009	..	..	..	..	..	..	..	..	..	..	..	..	..	480	..	..	..	



Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
2010	..	..	..	..	..	..	..	..	..	..	..	..	..	589	..	..	..
2011	..	..	..	..	..	..	..	..	..	220	..	..	..	233	..	..	..
<b>Peru</b>																	
2007	..	..	..	..	..	..	..	..	..	..	..	..	..	1 502	..	..	..
2008	..	..	..	..	..	..	..	..	..	..	..	..	..	516	..	..	..
2009	..	..	..	..	..	..	..	..	..	..	..	..	..	1 774	..	..	..
2010	..	..	..	..	..	..	..	..	..	..	..	..	..	517	..	..	..
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	1 997	..	..	..
<b>Venezuela (Bolivarian Republic of)</b>																	
2009	..	..	336	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	..	..	..	..	..	78 360	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	..	16	..	..	..	..	..	..	..	..	..	100	..	3	..
<b>Regional total</b>																	
2007	4 674	0	382	0	0	0	0	0	0	0	0	0	0	146 760	0	0	0
2008	30	0	4 316	26	0	0	0	0	0	0	0	0	0	44 499	0	0	0
2009	8	0	11 963	0	0	0	0	0	0	0	0	0	0	27 199	267	0	0
2010	1 006	0	0	0	0	78 360	0	0	0	0	0	0	0	27 766	0	0	0
2011	53	0	0	16	0	0	0	0	0	220	0	0	0	36 562	250	44	0
<b>Asia</b>																	
<b>East and South-East Asia</b>																	
<b>Cambodia</b>																	
2011	..	..	3	..	..	..	..	..	..	..	..	..	..	..	6	..	2 058
<b>China<sup>e</sup></b>																	
2007	5 297	..	5 860	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2008	5 186	..	6 700	..	..	..	..	..	..	2 857	..	..	..	..	1 100	..	..
2009	926	..	28 120	..	..	..	..	..	..	2 275	..	8 570	10	55	380	..	..

Country or territory, by region	Year	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)	
	2010	16 346	..	4 310	..	..	..	..	..	..	..	..	4 670	..	..	1 270	..	..	
	2011	16 946	..	4 210	..	..	..	..	..	..	..	..	4 520	..	..	1 170	..	..	
<i>Hong Kong SAR of China</i>																			
	2009	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	7	..	
	2010	..	..	..	..	..	..	..	..	..	660	..	..	..	..	°	..	..	
<i>Macao SAR of China</i>																			
	2007	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..	
Indonesia																			
	2008	..	..	111	°	..	..	..	..	..	..	..	..	..	2	..	..	..	
	2011	..	..	..	<sup>a</sup>	..	..	..	..	..	..	..	..	..	..	..	40	..	
Japan																			
	2007	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	131	..	
	2009	8 424	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	2010	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	
Lao People's Democratic Republic																			
	2009	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4 665 <sup>a</sup>	..	
Malaysia																			
	2010	..	13	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	
	2011	..	..	109	..	..	..	..	..	..	..	..	..	..	..	903	..	7 675	
Myanmar																			
	2007	959	..	530	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	2008	1 142	..	751	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	2009	700	..	..	1 646	..	..	..	..	..	..	..	..	..	..	3 272	..	..	
	2010	14	..	..	33	..	..	..	..	..	..	..	..	..	..	..	766	..	

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
<b>Philippines</b>																	
2007	..	..	35	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2008	..	..	204	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	..	..	9	..	..	..	..	..	..	1	..	..	..	8	°	..	..
2010	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	106	..	..	..	..	..	..	..	..	..	..	..	°	..	..
<b>Republic of Korea</b>																	
2008	14 800	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	13	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
<b>Singapore</b>																	
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	155	..
<b>Thailand</b>																	
2007	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	45 965
2008	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	192 <sup>a</sup>	..
2009	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	<sup>a</sup>	..
2011	..	..	3	°	..	..	..	..	..	..	..	..	..	..	..	1 <sup>a</sup>	..
<b>Regional total</b>																	
2007	6 256	0	6 425	2	0	0	0	0	0	0	0	0	0	5	0	131	45 965
2008	21 128	0	7 770	0	0	0	0	0	0	2 857	0	0	0	2	1 100	192	0
2009	10 062	0	28 129	1 646	0	0	0	0	0	2 277	0	8 570	10	63	3 655	4 672	0
2010	16 360	13	4 313	33	0	0	0	0	0	660	2	4 670	0	0	1 275	766	0
2011	16 946	0	4 431	0	0	0	0	0	0	0	0	4 520	0	0	2 079	196	9 734
<b>South Asia</b>																	
<b>India</b>																	
2007	236	..	105	..	..	..	..	..	..	..	..	..	..	..	290	..	..

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxypseudoephedrine (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
2008	2 754	1	1 284	°	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	1 038	..	1 064	1 244	..	..	..	..	..	..	..	..	..	..	180	..	..
2010	81	..	1 848	..	..	..	..	..	..	..	..	..	..	..	359	..	..
2011	..	..	6 308	104	..	..	..	62	..	..	..	..	..	..	118	676	..
<b>Regional total</b>																	
<b>2007</b>	<b>236</b>	<b>0</b>	<b>105</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>290</b>	<b>0</b>	<b>0</b>
<b>2008</b>	<b>2 754</b>	<b>1</b>	<b>1 284</b>	<b>°</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2009</b>	<b>1 038</b>	<b>0</b>	<b>1 064</b>	<b>1 244</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>0</b>	<b>0</b>
<b>2010</b>	<b>81</b>	<b>0</b>	<b>1 848</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>359</b>	<b>0</b>	<b>0</b>
<b>2011</b>	<b>0</b>	<b>0</b>	<b>6 308</b>	<b>104</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>118</b>	<b>676</b>	<b>0</b>
<b>West Asia</b>																	
<b>Afghanistan</b>																	
2008	12 275	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	36 618	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	23 260	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	68 245	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Armenia</b>																	
2008	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	17	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Iran (Islamic Republic of)</b>																	
2010	..	..	2 738 <sup>f</sup>	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	3 809 <sup>f</sup>	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Country or territory, by region	Year	Acetic anhydride (litres)	N-Acetylvanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Kazakhstan																		
	2009	2	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..
	2010	1	..	..	..	..	..	..	..	..	..	..	..	..	3 285	..	..	..
	2011	..	..	..	..	..	..	..	..	..	..	..	..	..	°	..	..	..
Kyrgyzstan																		
	2007	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lebanon																		
	2009	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..
	2010	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan																		
	2008	15 239	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2009	4 405	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2010	16 178	..	265	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic																		
	2008	390	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkey																		
	2007	13 303	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2008	10 553	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2009	13 000 <sup>g</sup>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2010	11 104 <sup>g</sup>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2011	3 706	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
United Arab Emirates																		
	2009	4 000	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxypiperonyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
<b>Uzbekistan</b>																	
2007	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	..	..
2009	..	..	..	..	..	..	..	..	..	..	..	..	..	°	..	..	..
2010	..	..	..	..	..	..	..	..	..	..	..	..	..	626	..	..	..
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
<b>Regional total</b>																	
2007	13 312	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
2008	38 458	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	58 028	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
2010	50 560	0	3 003	0	0	0	0	0	0	0	0	0	0	3 911	0	0	0
2011	71 952	0	3 809	0	0	0	0	0	0	0	0	0	0	3	0	0	0
<b>Europe</b>																	
<b>States not members of the European Union</b>																	
<b>Belarus</b>																	
2008	°	..	..	..	..	..	..	..	..	..	..	..	..	..	..	118	..
2009	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	2	..
2010	..	..	..	°	..	..	..	..	2	..	1	..	..	..	16	°	..
2011	°	..	..	°	..	..	..	..	..	..	..	..	..	..	..	°	..
<b>Croatia</b>																	
2009	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	°	°	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Norway</b>																	
2007	..	..	°	4	..	..	..	..	..	..	..	..	..	..	..	..	..
2008	..	..	°	3	..	..	..	..	..	..	..	..	..	..	..	1	..
2009	..	..	°	2	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
<b>Russian Federation</b>																	
2007	24 984	..	6	4	..	..	..	52	..	191	°	..	..	195	1	°	..
2008	25	..	3	..	..	..	..	120	..	2 128	..	..	..	10	°	..	..
2009	32	..	2	..	..	..	..	1	..	1 731	..	..	..	4	°	..	..
2010	15	..	°	..	..	..	..	102	..	..	..	..	..	°	..	..	..
2011	820	..	°	..	..	..	..	..	..	1 060	..	..	..	..	3	..	..
<b>Serbia</b>																	
2009	..	..	..	..	..	..	..	..	..	..	..	1 900	..	..	..	..	..
<b>Ukraine</b>																	
2007	130	..	°	..	..	..	..	..	..	..	18	..	..	1 352	478	..	..
2008	400	..	°	1	..	..	..	..	..	..	..	..	..	846	..	74	..
2009	19	..	°	1	°	..	..	..	..	..	..	4	..	41	1	1	..
2010	43	..	8	°	..	..	..	..	..	°	..	..	..	386	17	3	..
2011	31	..	4	5	..	..	..	..	..	5	°	..	..	396	2	2	..
<b>States members of the European Union</b>																	
<b>Austria</b>																	
2007	°	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2008	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
2009	..	..	..	<sup>a</sup>	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
<b>Belgium</b>																	
2007	..	..	..	..	..	..	..	..	..	..	..	..	..	..	250	..	..
2008	..	..	..	810	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	..	..	..	..	..	..	..	..	..	120	..	..	..	..	..	..	..
2010	..	..	..	..	..	..	..	..	..	5 050	..	..	..	..	..	..	..
2011	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1

Country or territory, by region	Year	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Bulgaria																		
	2007	..	..	183	..	..	..	..	..	..	..	..	50	..	..	..	..	..
	2008	..	..	43	a	..	..	..	..	..	..	..	153	..	..	..	..	..
	2009	..	..	..	..	..	..	..	..	..	40	..	..	..	..	..	..	..
	2010	21 111	..	..	a	..	..	..	..	..	20	..	..	..	..	..	..	..
	2011	20	..	..	..	..	..	..	..	..	545	..	..	..	..	..	..	..
Czech Republic																		
	2007	..	..	1	°	..	..	..	..	..	..	..	..	..	..	°	1	..
	2008	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1	15	..
	2009	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	°	..
	2010	..	..	7	°	..	..	..	..	..	..	..	..	..	..	2	°	..
	2011	..	..	4	a	..	..	..	..	..	..	..	..	..	..	6	a	..
Estonia																		
	2007	°	..	7	..	..	..	..	..	..	98	..	..	..	..	..	..	..
	2008	..	..	..	°	..	..	..	..	..	22	..	..	..	..	..	..	1 841
	2009	..	..	..	..	..	..	..	..	..	49	..	..	..	..	°	..	..
	2010	..	..	..	°	..	..	..	..	..	29	..	..	..	..	..	..	..
	2011	..	..	..	..	..	..	..	..	..	10	..	..	..	..	..	..	..
Finland																		
	2007 <sup>b</sup>	..	..	..	°	..	..	..	..	..	°	..	..	..	..	..	°	..
	2008	..	..	°	°	..	..	..	..	..	..	..	..	..	2	..	°	..
	2009	..	..	..	..	..	..	..	..	..	..	..	..	°	..	..	..	..
	2010	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..
	2011	..	..	..	°	..	..	..	..	..	3	..	..	..	..	..	..	..
France																		
	2007	..	..	4	..	..	..	..	..	..	..	..	..	..	..	6 997	..	..
	2008	..	..	6	..	..	..	..	..	..	..	..	..	..	..	502	..	..



Country or territory, by region	Acetic anhydride (litres)	N-Acetyl-anthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
2009	..	..	263	..	..	..	..	..	..	..	..	250	..	..	40	..	..
2010	..	..	°	..	..	..	..	..	..	..	..	..	..	1	°	..	..
2011	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Germany																	
2007	°	..	1	..	..	..	..	..	..	243	..	..	..	..	..	..	4
2008	2	..	55	°	..	..	..	..	..	1	..	°	°	..	..	567	..
2009	56	..	212	..	..	..	..	..	..	100	..	26	..	1	..	78	..
2010	12	..	46	a	..	..	°	..	..	..	°	2	..	°	°	° <sup>a</sup>	°
2011	3	..	20	..	..	..	..	..	..	24	°	6 000	..	..	3	° <sup>a</sup>	..
Greece																	
2007	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
2008	..	..	..	a	..	..	..	..	..	..	..	..	..	..	..	..	°
2010	..	..	..	a	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	..	a	..	..	..	..	..	..	..	..	..	..	..	..	..
Hungary																	
2007	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..
2008	63 616	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	..	..	2	°	..	..	..	..	..	..	..	..	..	..	..	..	..
2010	..	..	°	1	..	..	..	..	..	..	..	..	..	°	..	7	..
2011	..	..	..	1	..	..	..	..	..	..	..	..	..	°	..	..	..
Ireland																	
2008	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..
2009	..	..	..	..	..	..	..	300	..	..	..	..	..	..	..	..	..
2010	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	..	3	..	..	..	449	..	..	..	..	..	..	..	..	..

Country or territory, by region	Year	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)	
Latvia																			
	2011	..	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania																			
	2007	..	..	..	..	..	..	..	..	..	..	..	106	..	..	..	..	..	1
	2008	°	..	..	..	..	..	..	..	..	567	..	..	..	..	..	..	..	..
	2009	..	..	..	..	..	..	..	..	..	116	..	..	..	..	..	..	..	929
	2011	..	..	..	..	..	..	..	..	1	600	..	..	°	..	..	..	..	..
Luxembourg																			
	2010	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	77	..	..
Netherlands																			
	2007	..	..	5	..	..	..	..	..	20	..	..	..	..	5 094	..	..	..	..
	2008	900	..	135	..	..	..	..	..	..	..	..	..	..	1 975	..	<sup>a</sup>	60	..
	2009	..	..	40	..	..	..	..	..	40	207	165	..	..	..	25	304	20	..
	2010	..	..	500	..	..	..	..	..	..	334	..	..	..	..	..	8	85	..
	2011	..	..	..	..	..	..	..	..	..	111	..	..	..	..	..	..	105	..
Poland																			
	2007	..	..	..	..	..	..	..	..	..	241	..	..	..	..	..	..	..	..
	2008	160	..	°	..	..	..	..	..	..	39	..	..	..	..	..	..	..	..
	2009	..	..	..	..	..	..	..	..	..	119	..	..	..	..	..	..	..	..
	2010	..	..	..	..	..	..	..	..	..	60	..	..	..	..	..	..	..	..
	2011	1	..	..	..	..	..	..	..	..	350	..	..	..	..	290	..	..	..
Portugal																			
	2007	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
	2009	..	..	..	<sup>a</sup>	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Country or territory, by region	Year	Acetic anhydride (litres)	N-Acetylvanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Romania																		
	2007	1 206	..	1	°	..	..	..	..	..	..	..	°	..	4	..	..	..
	2008	..	..	°	..	..	..	..	..	..	..	..	..	..	..	..	a	..
	2009	..	..	..	a	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovakia																		
	2007	..	..	°	a	..	..	..	..	..	..	..	..	..	..	°	a	..
	2008	..	..	..	a	..	..	..	..	..	..	..	..	..	..	..	°	..
	2009	800	..	°	..	..	..	..	..	..	..	..	..	..	..	1	a	..
	2010	..	..	°	..	..	..	..	..	..	..	..	..	..	..	°	a	..
	2011	6 020	..	°	..	..	..	..	..	..	..	..	..	..	..	°	a	..
Slovenia																		
	2007	6 472	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2008	86 118	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Spain																		
	2007	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	..	..
	2008	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
	2009	5	..	..	..	..	..	..	..	..	..	..	1	..	°	..	..	..
	2010	..	..	°	..	..	..	..	..	..	..	..	..	..	2	..	..	..
	2011	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Sweden																		
	2007	..	..	300	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2009	..	..	°	9	..	..	..	..	..	..	..	..	..	..	..	..	..
	2010	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
	2011	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
Year																	
<b>United Kingdom</b>																	
2007	..	..	50	a	..	..	..	..	..	..	..	..	..	..	..	°	..
2009	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	54	5
2010	..	..	1	a	..	..	..	..	..	..	..	..	..	..	..	..	..
2011	..	..	500	°	..	..	..	..	..	..	..	..	10	..	..	..	..
<b>Regional total</b>																	
2007	32 794	0	560	8	0	0	0	52	20	774	18	156	0	6 653	7 727	1	8
2008	151 223	0	245	815	0	0	0	120	0	2 757	0	153	0	2 835	503	775	1 901
2009	912	0	527	12	0	0	0	301	40	2 483	165	2 181	0	46	67	439	954
2010	21 181	0	563	2	0	0	0	102	2	5 493	1	2	0	390	36	94	85
2011	6 894	0	530	11	0	0	0	449	1	2 708	1	6 000	10	396	304	2	106
<b>Oceania</b>																	
<b>Australia</b>																	
2007	12	..	167	9	..	32	255	113	1 907	°	°	..	°	1	159	108	7
2008	..	..	1 103	28	59	..	1	..	..	3	°	1	..	..	37	1 528	..
2009	1	..	77	6	..	..	5	°	°	6	..	°	..	..	417	388	14
2011	6	..	261	5	..	4	°	..	1	..	1	10	°	..	724	723	2 565
<b>New Zealand</b>																	
2007	2	..	..	°	..	..	..	..	..	..	..	..	..	..	..	155	..
2008	2	..	15	°	..	..	..	..	..	..	..	..	..	°	..	° <sup>a</sup>	..
2009	7	..	..	43	..	..	..	..	..	..	..	..	..	..	..	3	..
2010	°	..	..	24	..	..	..	..	..	..	..	..	..	1	..	925	35
2011	°	..	..	96 <sup>a</sup>	..	..	..	..	..	..	..	..	..	°	..	608 <sup>a</sup>	..
<b>Regional total</b>																	
2007	14	0	167	9	0	32	255	113	1 907	0	0	0	0	1	159	263	7
2008	2	0	1 117	28	59	0	1	0	0	3	0	1	0	0	37	1 528	0

Country or territory, by region	Acetic anhydride (litres)	N-Acetylanthranilic acid (kilograms)	Ephedrine (kilograms)	Ephedrine preparations <sup>a</sup> (kilograms)	Ergometrine (grams)	Ergotamine (grams)	Isosafrole (litres)	Lysergic acid (grams)	3,4-Methylenedioxyphenyl-2-propanone (litres)	1-Phenyl-2-propanone (litres)	Norephedrine (Phenylpropanolamine) (kilograms)	Phenylacetic acid <sup>b</sup> (kilograms)	Piperonal (kilograms)	Potassium permanganate (kilograms)	Pseudoephedrine (kilograms)	Pseudoephedrine preparations <sup>a</sup> (kilograms)	Safrole (litres)
2009	8	0	77	49	0	0	5	0	0	6	0	0	0	0	417	391	14
2010	0	0		24	0	0	0	0	0	0	0	0	0	1	0	925	35
2011	6	0	261	101	0	4	0	0	1	0	1	10	0	0	724	1 332	2 565
<b>World total</b>																	
2007	57 308	0	25 312	19	0	10 032	255	165	2 297	836	19	160	2 000	153 439	22 322	395	45 980
2008	213 638	6	23 368	872	59	300	1	124	2 823	5 619	230	155	0	47 355	8 067	3 201	1 922
2009	70 501	0	57 186	2 951	0	0	5	411	40	4 923	197	41 655	4 299	27 325	26 651	5 741	1 068
2010	155 656	13	22 353	59	2 000	78 980	0	102	2	26 394	51	234 329	0	32 107	17 837	1 785	121
2011	197 701	0	33 118	33 798	0	824	0	521	124	5 312	293	1 022	10	37 156	6 728	2 291	17 122
												231					

<sup>a</sup> Seizures of ephedrine and pseudoephedrine reported to the International Narcotics Control Board in units have not been converted into kilograms, as the actual quantity of ephedrine and pseudoephedrine is not known. The following countries have reported seizures of preparations containing ephedrine and/or pseudoephedrine:

	Year	Ephedrine preparations (units)	Pseudoephedrine preparations (units)
Argentina	2008	150	..
Austria	2009	400	..
Bulgaria	2008	47 423	..
	2010	4 252	..
Canada	2008	20 056	..
Côte d'Ivoire	2011	23 962	..
Czech Republic	2009	..	42 444
	2010	15 000	326 941
	2011	2 570	872 703
Dominican Republic	2008	..	819 500
	2009	..	993 520
Finland	2007	4 903	8 821
	2008	33 405	..
	2009	4 058	..
	2010	10 075	..
	2011	6 107	..
Germany	2010	170	462
	2011	..	1 890

	Year	<i>Ephedrine preparations</i> (units)	<i>Pseudoephedrine preparations</i> (units)
Greece	2008	250	..
	2010	2	..
	2011	8	..
Guatemala	2009	..	409 215
	2010	..	1 470 015
Indonesia	2011	3 000	..
Ireland	2010	2 200	..
Mexico	2008	..	28 000 000
Netherlands	2008	..	5 000 000
New Zealand	2008	..	5 759
	2011	123 431	34 833
		(and 2,210 ml)	
Romania	2008	..	20
	2009	120	..
Slovakia	2007	20 596	792
	2008	2 520	..
	2009	..	1 207
	2010	..	336
	2011	..	1 734
Thailand	2008	..	707 450
	2010	..	33 376 072
	2011	..	10 240 820
United Kingdom	2007	2 133.5	1
	2010	432 300	..
	2011	288 000	..
United States of America	2007	1 268 788	713 245
	2008	2 039	9 442 951
	2009	33 748	147 136
	2010	2 573	2 309 242
	2011	..	4 003 371

<sup>b</sup> Transferred to Table I of the 1988 Convention in January 2011.

<sup>c</sup> Figures reported from the United States for 2011 may inadvertently include sizeable seizures of *Sida cordifolia* (see para. 63 in the present publication) and/or *Ephedra* plant extracts and are thus not comparable with figures for previous years.

<sup>d</sup> Organization of American States, Inter-American Drug Abuse Control Commission, *Bolivia: Evaluation of Progress in Drug Control 2007-2009* (Washington, D.C., 2010).

<sup>e</sup> For statistical purposes, the data for China do not include those for the Hong Kong Special Administrative Region (SAR) of China, the Macao SAR of China and Taiwan Province of China.

<sup>f</sup> Islamic Republic of Iran, Drug Control Headquarters, *Drug Control in Iran 2011* (Tehran, March 2012).

<sup>g</sup> Turkish National Police, Anti-Smuggling and Organized Crime Department, *Turkish Report of Anti-Smuggling and Organized Crime: 2011* (Ankara, 2012).

**Table VIII.2. Seizures of substances in Table II of the 1988 Convention, as reported to the International Narcotics Control Board, 2007-2011**

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Africa</b>									
Nigeria									
	2011	400	..	..	..	..	..	25	200
South Africa									
	2007	369	..	..	1 038	..	..	413	615
	2008	..	..	..	1 038	..	..	..	..
<b>Regional total</b>									
	<b>2007</b>	<b>369</b>	<b>0</b>	<b>0</b>	<b>1 038</b>	<b>0</b>	<b>0</b>	<b>413</b>	<b>615</b>
	<b>2008</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1 038</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2009</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2010</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2011</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>200</b>
<b>Americas</b>									
<b>Central America and the Caribbean</b>									
Dominican Republic									
	2009	..	..	..	..	..	..	..	..
Guatemala									
	2011	..	..	..	8 707	..	..	212	..
Honduras									
	2011	..	..	..	a	..	..	a	..
Panama									
	2007	..	..	..	1 041	..	..	..	..

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Regional total</b>									
	<b>2007</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1 041</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2008</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2009</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2010</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2011</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8 707</b>	<b>0</b>	<b>0</b>	<b>212</b>	<b>0</b>
<b>North America</b>									
<b>Canada</b>									
	2007	142	..	7	41	4	..	..	448
	2008	1 235	..	..	36	..	..	1	906
	2009	1 023	..	..	175	..	..	4	1 024
	2010	172	..	..	267	4	..	55	423
	2011	371	..	49	274	4	°	201	1 825
<b>Mexico</b>									
	2007	1 492	..	62	721	..	..	18	1 765
	2008	8 674	..	447	14 102	1 002	..	6 004	425
	2009	13 242	..	8	7 681	..	..	2 230	13 502
	2010	7 776	..	47	10 244	370	..	2 927	21 451
	2011	23 262	..	219	78 125	..	..	1 652	49 410
<b>United States of America</b>									
	2007	6 474	..	167	6 517	63	35	2 603	5 799
	2008	5 301	..	206	9 110	18	216	2 720	6 455
	2009	7 060	..	205	8 152	14	39	7 087	6 432
	2010	55 390	..	25 258	69 940	15	90	28 387	1 305
	2011	71 142	..	115	109 602	29	11	1 231 111	262



<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Regional total</b>									
	<b>2007</b>	<b>8 108</b>	<b>0</b>	<b>236</b>	<b>7 279</b>	<b>67</b>	<b>35</b>	<b>2 621</b>	<b>8 011</b>
	<b>2008</b>	<b>15 210</b>	<b>0</b>	<b>653</b>	<b>23 248</b>	<b>1 020</b>	<b>216</b>	<b>8 725</b>	<b>7 786</b>
	<b>2009</b>	<b>21 325</b>	<b>0</b>	<b>213</b>	<b>16 008</b>	<b>14</b>	<b>39</b>	<b>9 321</b>	<b>20 958</b>
	<b>2010</b>	<b>63 338</b>	<b>0</b>	<b>25 306</b>	<b>80 451</b>	<b>389</b>	<b>90</b>	<b>31 369</b>	<b>23 179</b>
	<b>2011</b>	<b>94 775</b>	<b>0</b>	<b>384</b>	<b>188 001</b>	<b>32</b>	<b>12</b>	<b>1 232 965</b>	<b>51 497</b>
<b>South America</b>									
<b>Argentina</b>									
	2007	1 086	..	108	401	35 802	..	28 957	..
	2008	719	..	290	204	..	..	659	..
	2009	504	..	271	589	12	..	442	..
	2010	214	..	237	163	..	..	17	1
	2011	245	..	182	96	2	..	16	..
<b>Bolivia (Plurinational State of)</b>									
	2007	13 525 <sup>b</sup>	..	..	1 666 <sup>b</sup>	1 548 <sup>b</sup>	..	116 924 <sup>b</sup>	18 707 <sup>b</sup>
	2008	5 472 <sup>b</sup>	..	..	1 533 <sup>b</sup>	684 <sup>b</sup>	..	23 651 <sup>b</sup>	1 105 <sup>b</sup>
	2009	67 199 <sup>b</sup>	..	..	11 008 <sup>b</sup>	221 <sup>b</sup>	..	62 276 <sup>b</sup>	349 <sup>b</sup>
	2011	51 663	..	87	9 307	176	..	201 621	5 590
<b>Brazil</b>									
	2007	1 040	..	32	1 195	6	..	5 315	14
	2008	44	..	17	1 357	225	..	220	66
	2009	84 520	..	1 336	17 797	30	4	1 947	185
	2010	956	..	..	22 381	6 714	..	1 834	6 748
	2011	954	..	128	7 211	96	..	4 747	49

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Chile</b>									
	2008	95	..	..	400	..	..	1 593	..
	2009	..	..	..	..	..	..	1 185	..
	2010	1 600	..	..	..	..	..	2 223	..
	2011	..	..	..	19	..	..	93	..
<b>Colombia</b>									
	2007	1 207 105	..	33 410	519 122	103 838	..	524 653	43 346
	2008	1 468 212	..	68 228	313 312	21 359	..	305 755	27
	2009	1 381 411	..	5 034	191 926	38 849	..	249 441	2 914
	2010	688 224	..	6 455	187 914	44 160	..	631 247	66 060
	2011	463 883	..	1 541	96 660	..	..	201 812	42 044
<b>Ecuador</b>									
	2007	..	..	..	443	500	..	200	..
	2008	..	..	60	423	6 927	..	143	449
	2009	2 285	..	..	3 984	15 356	..	1 378	..
	2010	4 320	..	..	2 286	10 774	..	1 473	..
	2011	..	..	..	931	2 400	..	3 954	..
<b>Paraguay</b>									
	2009	632	..	..	..	..	..	5 160	..
	2011	4 500	..	5	833	..	..	5 229	2 650
<b>Peru</b>									
	2007	84 549	..	12 800	33 432	..	..	33 107	220
	2008	29 864	..	150	75 963	..	..	30 776	3 318
	2009	18 580	..	..	72 601	..	..	77 257	..
	2010	31 139	..	..	172 807	..	..	31 367	..
	2011	32 456	..	45	145 850	310	..	28 505	1 919

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Venezuela (Bolivarian Republic of)</b>									
	2011	15 858	..	..	25 781	1 140	..	30 284	1 200
<b>Regional total</b>									
	2007	1 307 304	0	46 351	556 259	141 694	0	709 155	62 287
	2008	1 504 406	0	68 745	393 191	29 195	0	362 798	4 966
	2009	1 555 131	0	6 641	297 906	54 468	4	399 086	3 448
	2010	726 452	0	6 693	385 550	61 648	0	668 162	72 809
	2011	569 558	0	1 987	286 687	4 123	0	476 260	53 452
<b>Asia</b>									
<b>East and South-East Asia</b>									
<b>Cambodia</b>									
	2007	702	..	..	..	..	..	..	..
<b>China<sup>c</sup></b>									
	2007	51 737	..	90 013	126 716	..	..	93 619	69 335
	2008	82 232	..	11 687	405 671	..	..	238 215	11 781
	2009	31 522	..	25 147	151 298	871	..	89 448	18 099
	2010	31 966	..	16 572	141 918	1 403	..	219 388	..
	2011	21 474	..	17 980	150 165	1 391	..	23 024	..
<b>Hong Kong SAR of China</b>									
	2010	..	..	..	570	..	..	..	..
<b>Indonesia</b>									
	2008	183	..	..	110	5	..	5	105
	2011	2	..	..	10	..	..	1	3

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthraniic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Malaysia</b>									
	2010	130	..	..	120	..	..	5	725
	2011	800	..	45	800	..	..	..	950
<b>Myanmar</b>									
	2007	163	..	2 814	75	..	..	..	..
	2008	..	..	352	128	..	..	32	..
	2009	8 227	..	1 707	2 378	..	..	..	..
	2010	1 202	..	..	..	..	..	2 000	..
<b>Philippines</b>									
	2007	..	..	..	320	..	..	..	..
	2008	902	..	..	385	..	..	..	..
	2009	132	..	7	39	..	..	..	3
	2010	55	..	..	105	..	..	..	300
	2011	21	..	°	11	..	..	1	31 313
<b>Thailand</b>									
	2011	1	..	..	°	..	..	163	1
<b>Regional total</b>									
	<b>2007</b>	<b>52 602</b>	<b>0</b>	<b>92 827</b>	<b>127 110</b>	<b>0</b>	<b>0</b>	<b>93 619</b>	<b>69 335</b>
	<b>2008</b>	<b>83 317</b>	<b>0</b>	<b>12 039</b>	<b>406 294</b>	<b>5</b>	<b>0</b>	<b>238 252</b>	<b>11 886</b>
	<b>2009</b>	<b>39 881</b>	<b>0</b>	<b>26 860</b>	<b>153 714</b>	<b>871</b>	<b>0</b>	<b>89 448</b>	<b>18 102</b>
	<b>2010</b>	<b>33 353</b>	<b>0</b>	<b>16 572</b>	<b>142 713</b>	<b>1 403</b>	<b>0</b>	<b>221 394</b>	<b>1 025</b>
	<b>2011</b>	<b>22 298</b>	<b>0</b>	<b>18 025</b>	<b>150 986</b>	<b>1 391</b>	<b>0</b>	<b>23 188</b>	<b>32 267</b>
<b>South Asia</b>									
<b>Bangladesh</b>									
	2009	..	..	..	..	17 624	..	..	7
	2010	120	..	..	..	22 767	..	..	6

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthraniic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>India</b>									
	2008	..	188	..	..	..	..	..	..
<b>Maldives</b>									
	2008	..	..	..	..	..	..	10 860	..
	2009	..	..	..	..	3	..	..	..
	2010	..	..	..	..	..	..	7 331 <sup>d</sup>	..
	2011	..	..	..	14	..	..	5	..
<b>Regional total</b>									
	<b>2007</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>2008</b>	<b>0</b>	<b>188</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10 860</b>	<b>0</b>
	<b>2009</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17 627</b>	<b>0</b>	<b>0</b>	<b>7</b>
	<b>2010</b>	<b>120</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22 767</b>	<b>0</b>	<b>7 331</b>	<b>6</b>
	<b>2011</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>West Asia</b>									
<b>Afghanistan</b>									
	2008	..	..	..	718	..	..	..	..
	2009	..	..	..	6 150	..	..	..	..
	2010	..	..	..	5 286	..	..	..	..
	2011	..	..	..	120	..	..	..	..
<b>Armenia</b>									
	2009	°	..	..	°	..	..	°	..
	2011	°	..	..	°	..	..	°	..

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Kazakhstan</b>									
	2009	71	..	..	156	..	..	1 530	..
	2010	245	..	..	51 794	..	..	..	..
	2011	78	..	..	10 707	..	..	698	..
<b>Kyrgyzstan</b>									
	2007	..	..	..	..	..	..	346	..
	2008	..	..	..	..	..	..	2 983	..
	2010	..	..	..	..	..	..	94	..
<b>Lebanon</b>									
	2007	1	..	1	°	..	..	..	..
	2008	1	..	1	..	..	..	..	..
	2009	2	..	3	..	..	..	..	..
	2010	..	..	°	°	..	..	..	..
	2011	..	..	°	..	..	..	..	..
<b>Pakistan</b>									
	2008	15	..	..	..	..	..	..	..
	2009	..	..	..	8 220	..	..	..	..
	2010	..	..	..	7 110	..	..	..	..
<b>Tajikistan</b>									
	2007	..	..	..	..	..	..	1 007	..
	2011	..	..	..	..	..	..	6 803	..
<b>Turkey</b>									
	2007	280	..	530	..	..	..	..	..
	2008	1	..	..	..	..	..	..	..
	2011	3	..	..	..	..	..	°	..

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthraniic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Uzbekistan</b>									
	2007	°	..	..	60	..	..	3 132	..
	2009	..	..	..	..	..	..	300	..
	2011	274	..	..	40	..	..	2 540	..
<b>Regional total</b>									
	<b>2007</b>	<b>281</b>	<b>0</b>	<b>531</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>4 485</b>	<b>0</b>
	<b>2008</b>	<b>16</b>	<b>0</b>	<b>1</b>	<b>718</b>	<b>0</b>	<b>0</b>	<b>2 983</b>	<b>0</b>
	<b>2009</b>	<b>73</b>	<b>0</b>	<b>3</b>	<b>14 526</b>	<b>0</b>	<b>0</b>	<b>1 830</b>	<b>0</b>
	<b>2010</b>	<b>245</b>	<b>0</b>	<b>0</b>	<b>64 190</b>	<b>0</b>	<b>0</b>	<b>94</b>	<b>0</b>
	<b>2011</b>	<b>354</b>	<b>0</b>	<b>0</b>	<b>10 867</b>	<b>0</b>	<b>0</b>	<b>10 040</b>	<b>0</b>
<b>Europe</b>									
<b>States not members of the European Union</b>									
<b>Albania</b>									
	2007	13	..	10	5	..	..	..	..
<b>Belarus</b>									
	2007	4 020	..	..	..	..	..	..	558
	2008	3	..	..	..	..	..	..	..
	2009	17	..	3	1	1	..	5	1
	2010	..	..	..	2	2	..	..	..
<b>Bosnia and Herzegovina</b>									
	2010	..	..	..	..	..	..	550	..
<b>Russian Federation</b>									
	2007	31 067	..	1 314	168 133	5	2	132 406	5 165
	2008	5 214	°	477	4 296	..	..	1 598	725
	2009	1 252	..	109	1 088	..	..	247	239

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
	2010	555	..	7	846	..	..	54	118
	2011	..	..	..	48	..	..	66	..
Serbia	2009	..	..	..	..	..	..	..	..
Ukraine	2007	6 605	6	3	135 349	115	..	79 609	5 269
	2008	..	..	..	..	..	..	..	10 314
	2009	574	..	..	2 113	966	..	4 700	5 227
	2010	20 726	..	°	111 221	131	..	112 410	26 235
	2011	1 821	..	555	24 608	1 706	..	281 755	4 245
<b>States members of the European Union</b>									
Austria	2007	..	..	..	1	..	..	1	1
	2008	1	..	..	2	..	..	12	5
	2009	..	..	..	1	..	..	..	3
	2010	..	..	..	1	..	..	..	16
	2011	°	..	1	°	..	..	2	..
Belgium	2007	78	..	62	1 256	..	..	173	22
	2008	1 510	..	..	1 850	..	..	..	..
	2009	1 165	..	..	50	..	..	..	..
	2010	..	..	..	1 016	..	..	100	..
	2011	602	..	..	839	..	..	3 733	..
Bulgaria	2007	..	..	..	..	..	..	..	..
	2008	..	..	..	..	..	..	..	..



<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
	2010	..	..	..	8	..	..	..	..
	2011	..	..	3	34	..	..	20	..
<b>Czech Republic</b>									
	2007	..	..	..	4	..	..	..	10
	2008	..	..	..	..	..	..	..	17
	2009	..	..	..	..	..	..	..	17
<b>Estonia</b>									
	2007	..	..	..	..	..	..	15	2
	2008	..	..	..	°	..	..	0	..
	2009	°	..	2	..	..	..	7	..
	2010	8	..	..	°	..	..	7	8
	2011	..	..	..	..	..	..	3	10
<b>Finland</b>									
	2008	12	..	1	23	..	..	..	..
	2011	6	..	..	23	..	..	1	1
<b>France</b>									
	2007	987	..	..	..	..	..	..	..
	2009	..	..	..	..	..	..	..	4 656
<b>Germany</b>									
	2007	3	..	..	803	..	..	62	13
	2008	2	..	3	8	..	..	3	11
	2009	10	..	7	64	..	..	128	322
	2010	31	..	2	25	..	..	12	19
	2011	17	..	5	77	63	..	8	9

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Greece</b>									
	2007	..	..	..	..	..	..	3	..
<b>Hungary</b>									
	2007	°	..	..	2	..	..	1	..
	2009	°	..	..	..	..	..	1	..
	2010	15	..	2	..	..	..	1	20
	2011	37	..	7	11	..	..	4	6
<b>Lithuania</b>									
	2007	..	..	..	..	..	..	..	..
	2008	10	..	..	20	..	..	20	..
	2009	7	..	..	..	..	..	..	..
<b>Netherlands</b>									
	2007	15 211	..	1 400	5 546	..	..	1 375	29
	2008	6 631	..	30	3 971	9	..	770	400
	2009	720	..	5	701	..	..	182	..
	2010	1 434	..	..	6 178	375	..	522	942
	2011	6 485	..	..	8 429	..	..	12 404	..
<b>Poland</b>									
	2007	..	..	..	145	..	..	12	1
	2008	..	..	..	231	..	..	31	20
	2010	..	..	..	..	..	..	61	..
	2011	58	..	4	45	..	..	58	103
<b>Portugal</b>									
	2007	37	..	40	6	..	..	5	9
<b>Romania</b>									
	2007	..	..	6	500	..	..	1 591	1

<i>Country or territory, by region</i>	<i>Year</i>	<i>Acetone (litres)</i>	<i>Anthranilic acid (kilograms)</i>	<i>Ethyl ether (litres)</i>	<i>Hydrochloric acid (litres)</i>	<i>Methyl ethyl ketone (litres)</i>	<i>Piperidine (litres)</i>	<i>Sulphuric acid (litres)</i>	<i>Toluene (litres)</i>
<b>Slovakia</b>									
	2007	2	..	..	6	..	..	..	67
	2008	4	..	..	24	..	..	1	88
	2009	1	..	..	13	..	..	1	36
	2010	..	..	..	4	..	..	..	32
	2011	3	..	..	13	..	..	..	28
<b>Spain</b>									
	2007	567	..	72	57	872	..	259	1
	2008	862	..	104	77	2 083	..	106	1
	2009	3 705	..	74	207	256	..	93	42
	2010	442	..	66	55	43	..	35	4
	2011	1	..	°	1	1	..	1	°
<b>Sweden</b>									
	2011	..	°	..	..	..	..	..	..
<b>United Kingdom</b>									
	2007	..	..	..	2	..	..	2	5
	2010	..	..	..	1	..	..	..	..
<b>Regional total</b>									
	<b>2007</b>	<b>58 588</b>	<b>6</b>	<b>2 906</b>	<b>311 814</b>	<b>992</b>	<b>2</b>	<b>215 512</b>	<b>11 153</b>
	<b>2008</b>	<b>14 249</b>	<b>0</b>	<b>615</b>	<b>10 502</b>	<b>2 092</b>	<b>0</b>	<b>2 540</b>	<b>11 581</b>
	<b>2009</b>	<b>7 452</b>	<b>0</b>	<b>200</b>	<b>4 237</b>	<b>1 223</b>	<b>0</b>	<b>5 363</b>	<b>10 542</b>
	<b>2010</b>	<b>23 211</b>	<b>0</b>	<b>77</b>	<b>119 357</b>	<b>552</b>	<b>0</b>	<b>113 752</b>	<b>27 394</b>
	<b>2011</b>	<b>9 028</b>	<b>0</b>	<b>574</b>	<b>34 127</b>	<b>1 770</b>	<b>0</b>	<b>298 054</b>	<b>4 401</b>
<b>Oceania</b>									
<b>Australia</b>									
	2007	202	..	1 274	271	3	..	29	275
	2008	..	..	..	..	..	..	..	..

Country or territory, by region	Year	Acetone (litres)	Anthrannilic acid (kilograms)	Ethyl ether (litres)	Hydrochloric acid (litres)	Methyl ethyl ketone (litres)	Piperidine (litres)	Sulphuric acid (litres)	Toluene (litres)
	2009	2 027	..	..	40	..	..	43	..
	2011	51	..	1	88	..	..	9	14
<b>New Zealand</b>									
	2007	249	..	..	233	59	..	195	1 009
	2008	291	..	5	235	32	..	56	643
	2009	172	..	3	232	..	..	83	321
	2010	200	..	6	752	134	..	244	1 434
	2011	203	..	..	308	26	..	28	476
<b>Regional total</b>									
	2007	451	0	1 274	504	62	0	225	1 284
	2008	291	0	5	235	32	0	56	643
	2009	2 199	0	3	272	0	0	125	321
	2010	200	0	6	752	134	0	244	1 434
	2011	254	0	1	396	26	0	37	490
<b>World total</b>									
	2007	1 427 703	6	144 125	1 005 104	142 814	37	1 026 029	152 684
	2008	1 617 490	188	82 057	835 227	32 344	216	626 214	36 862
	2009	1 626 060	0	33 920	486 664	74 203	43	505 172	53 379
	2010	846 919	0	48 653	793 012	86 894	90	1 042 345	125 848
	2011	696 666	0	20 970	679 785	7 343	12	2 040 787	142 307

<sup>a</sup> The exact quantity of the seizures was not specified.

<sup>b</sup> Organization of American States, Inter-American Drug Abuse Control Commission, *Bolivia: Evaluation of Progress in Drug Control 2007-2009* (Washington, D.C., 2010).

<sup>c</sup> For statistical purposes, the data for China do not include those for the Hong Kong Special Administrative Region (SAR) of China, the Macao SAR of China and Taiwan Province of China.

<sup>d</sup> Reported on form B: Annual estimates of requirements of narcotic drugs, manufacture of synthetic drugs, opium production and cultivation of the opium poppy for purposes other than opium production.

## 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 1988 Convention for the years 2007-2011

Governments of the countries and territories indicated have provided information on licit trade in, uses of and requirements for substances in Tables I and II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 on form D for the years 2007-2011. That information was requested in accordance with Economic and Social Council resolution 1995/20 of 24 July 1995. 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.

X signifies that relevant information was submitted on form D.

Country or territory	2007		2008		2009		2010		2011	
	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements
Afghanistan			X	X	X	X				
Albania				X	X	X	X	X	X	X
Algeria	X	X	X	X	X	X	X	X	X	X
Andorra										
Angola			X	X						
<i>Anguilla</i>										
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
<i>Aruba</i>										
<i>Ascension Island</i>			X	X						
Australia	X	X	X	X	X	X	X	X	X	X
Austria <sup>a</sup>	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			
Bangladesh	X	X	X	X	X	X	X	X	X	X
Barbados										
Belarus	X	X	X	X	X	X	X	X	X	X
Belgium <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Belize					X					
Benin	X	X	X	X	X	X	X	X	X	X
<i>Bermuda</i>										
Bhutan	X	X					X	X	X	X
Bolivia (Plurinational State)			X	X	X	X	X	X	X	X

Country or territory of)	2007		2008		2009		2010		2011	
	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
Bosnia and Herzegovina	X	X	X	X	X	X			X	X
Botswana										
Brazil	X	X	X	X	X	X	X	X		
<i>British Virgin Islands</i>										
Brunei Darussalam	X	X	X	X	X	X	X	X	X	X
Bulgaria <sup>a</sup>	X	X	X	X	X	X	X	X	X	
Burkina Faso									X	X
Burundi										
Cambodia	X	X			X	X	X	X		
Cameroon				X					X	
Canada	X	X	X	X	X	X	X	X	X	X
Cape Verde			X	X						
<i>Cayman Islands</i>										
Central African Republic										
Chad										
Chile	X	X	X	X	X	X	X	X	X	X
China	X		X		X	X	X	X	X	X
<i>Hong Kong SAR of China</i>	X	X	X	X	X	X	X	X		
<i>Macao SAR of China</i>	X	X	X	X	X	X	X	X		
<i>Christmas Island</i>			X	X					X	X
<i>Cocos (Keeling) Islands</i>										
Colombia	X	X	X	X	X	X	X	X	X	X
Comoros										
Congo			X	X						
Cook Islands	X	X	X	X					X	X
Costa Rica	X	X	X	X	X	X	X	X	X	X
Côte d'Ivoire	X	X	X	X	X	X	X	X	X	X
Croatia	X	X	X	X	X		X		X	
Cuba	X	X	X	X	X	X	X	X	X	X
<i>Curaçao</i> <sup>b</sup>							X	X	X	X
Cyprus <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Czech Republic <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Democratic People's Republic of Korea	X	X	X	X	X	X		X		X
Democratic Republic of the Congo	X	X	X	X	X	X	X		X	X
Denmark <sup>a</sup>	X	X	X	X	X		X		X	
Djibouti										
Dominica										

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Country or territory	2007		2008		2009		2010		2011	
	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements
Dominican Republic	X	X	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	X	X	X	X
Estonia <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Ethiopia	X	X	X	X	X	X			X	X
Falkland Islands (Malvinas)	X	X	X	X						
Fiji									X	X
Finland <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
France <sup>a</sup>	X	X	X		X	X	X	X	X	X
French Polynesia										
Gabon										
Gambia										
Georgia	X	X	X	X	X	X	X	X	X	X
Germany <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Ghana					X	X	X	X	X	X
Gibraltar										
Greece <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Grenada										
Guatemala			X	X	X	X	X	X		
Guinea										
Guinea-Bissau										
Guyana	X	X	X	X	X	X		X		
Haiti	X	X	X	X	X	X	X	X	X	X
Holy See										
Honduras	X	X							X	X
Hungary <sup>a</sup>	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
Iran (Islamic Republic of)	X	X	X	X	X	X	X	X		
Iraq			X	X	X	X	X	X	X	X
Ireland <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Israel			X	X	X	X	X	X		
Italy <sup>a</sup>	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

Country or territory	2007		2008		2009		2010		2011	
	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements
Jordan	X	X	X	X	X	X	X	X	X	X
Kazakhstan	X	X			X	X	X	X	X	X
Kenya			X	X	X	X	X	X		
Kiribati										
Kuwait										
Kyrgyzstan	X	X	X	X	X	X	X	X	X	X
Lao People's Democratic Republic	X				X	X	X	X	X	X
Latvia <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Lebanon	X	X	X	X	X	X	X	X	X	X
Lesotho										
Liberia									X	
Libya										
Liechtenstein										
Lithuania <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Luxembourg <sup>a</sup>			X		X	X	X			
Madagascar			X	X	X	X	X	X		
Malawi	X	X								
Malaysia			X	X	X	X	X	X	X	X
Maldives							X	X	X	X
Mali										
Malta <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Marshall Islands										
Mauritania										
Mauritius	X	X	X	X			X	X	X	X
Mexico	X	X	X	X	X	X	X	X	X	X
Micronesia (Federated States of)										
Monaco	X	X								
Mongolia					X		X	X	X	
Montenegro	X	X	X	X	X	X	X	X	X	X
Montserrat		X						X		
Morocco	X	X	X	X	X	X	X	X	X	X
Mozambique							X	X		
Myanmar	X	X	X	X	X	X	X	X	X	X
Namibia										
Nauru										
Nepal										
Netherlands <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
New Caledonia										



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Country or territory	2007		2008		2009		2010		2011	
	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements	Trade	Uses and/or requirements
New Zealand	X	X	X	X	X	X	X	X	X	X
Nicaragua	X	X	X	X	X	X	X	X	X	X
Niger	X	X								
Nigeria									X	X
Norfolk Island	X	X								
Norway	X	X	X	X	X	X	X	X		
Oman			X		X					
Pakistan	X	X	X	X	X	X	X	X		
Palau										
Panama	X	X	X	X	X	X	X	X	X	X
Papua New Guinea	X	X								
Paraguay	X	X	X	X	X	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 <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Portugal <sup>a</sup>	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 <sup>c</sup>	X	X	X	X	X	X	X	X	X	X
Romania <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Russian Federation	X	X	X	X	X	X	X	X	X	X
Rwanda										
Saint Helena	X	X	X	X	X	X			X	X
Saint Kitts and Nevis										
Saint Lucia	X		X	X						
Saint Vincent and the Grenadines										
Samoa										
San Marino										
Sao Tome and Principe										
Saudi Arabia	X	X	X		X	X	X		X	
Senegal			X		X	X	X			
Serbia	X	X	X	X	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 <sup>b</sup>										
Slovakia <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Slovenia <sup>a</sup>	X	X	X	X	X	X	X	X	X	X

<i>Country or territory</i>	2007		2008		2009		2010		2011	
	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>
Solomon Islands										
Somalia										
South Africa	X	X	X	X	X	X				
South Sudan										
Spain <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Sri Lanka	X	X	X	X	X	X	X		X	X
Sudan										
Suriname										
Swaziland										
Sweden <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
Switzerland	X	X	X	X	X	X	X	X	X	X
Syrian Arab Republic	X	X	X	X	X	X	X	X		
Tajikistan	X		X		X	X	X	X	X	X
Thailand	X	X	X	X	X	X	X	X	X	X
The former Yugoslav Republic of Macedonia							X	X		
Timor-Leste										
Togo										
Tonga										
Trinidad and Tobago	X	X	X	X	X	X	X	X	X	X
<i>Tristan da Cunha</i>		X								
Tunisia	X	X	X	X	X	X	X	X	X	X
Turkey	X	X			X	X	X	X	X	X
Turkmenistan	X	X	X	X						
<i>Turks and Caicos Islands</i>										
Tuvalu										
Uganda	X	X	X	X	X	X	X	X	X	X
Ukraine	X	X	X	X	X	X	X	X	X	X
United Arab Emirates	X		X	X	X	X	X	X	X	X
United Kingdom <sup>a</sup>	X	X	X	X	X	X	X	X	X	X
United Republic of Tanzania					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
Uzbekistan	X	X	X	X	X	X	X	X	X	X
Vanuatu									X	X
Venezuela (Bolivarian Republic of)	X	X		X	X	X	X	X	X	X
Viet Nam	X	X	X	X	X	X	X	X	X	X
<i>Wallis and Futuna Islands</i>										

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<i>Country or territory</i>	2007		2008		2009		2010		2011	
	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>	<i>Trade</i>	<i>Uses and/or requirements</i>
Yemen	X	X	X	X	X		X		X	X
Zambia	X	X								
Zimbabwe					X	X	X	X		
<b>Total number of governments that submitted form D</b>	119	115	122	116	123	117	122	114	115	108
<b>Total number of governments requested to provide information</b>	212	212	212	212	213	213	213	213	213	213

<sup>a</sup> State member of the European Union.

<sup>b</sup> The Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent entities, Curaçao and Sint Maarten.

<sup>c</sup> Since 9 September 2008, "Republic of Moldova" has replaced "Moldova" as the short name used in the United Nations.

## Annex X

### Governments that have requested pre-export notifications pursuant to article 12, paragraph 10 (a), of the 1988 Convention

1. The 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 under the above provisions are listed in the table below in alphabetical order, followed by the substance (or substances) to which the provisions apply and the date of notification of the request transmitted by the Secretary-General to Governments.

3. Governments may wish to note the possibility of requesting that a pre-export notification for all substances listed in Table II of the 1988 Convention be sent as well.

<i>Notifying Government</i>	<i>Substances to which pre-export notification requirement applies</i>	<i>Date of communication to Governments by the Secretary-General</i>
Afghanistan <sup>a</sup>	All substances included in Tables I and II	13 July 2010
Antigua and Barbuda <sup>a</sup>	All substances included in Tables I and II	5 May 2000
Argentina	All substances included in Table I	19 November 1999
Australia	All substances included in Tables I and II	12 February 2010
Austria	All substances included in Table I	19 May 2000
Azerbaijan	All substances included in Tables I and II	21 January 2011
Belarus <sup>b</sup>	Acetic anhydride, ephedrine, potassium permanganate and pseudoephedrine	12 October 2000
Belgium	All substances included in Table I	19 May 2000
Benin <sup>a</sup>	All substances included in Tables I and II	4 February 2000
Bolivia (Plurinational State of) <sup>a</sup>	Acetic anhydride, acetone, ethyl ether, hydrochloric acid, potassium permanganate and sulphuric acid	12 November 2001
Brazil <sup>a</sup>	All substances included in Tables I and II	15 October 1999 and 15 December 1999

<i>Notifying Government</i>	<i>Substances to which pre-export notification requirement applies</i>	<i>Date of communication to Governments by the Secretary-General</i>
Bulgaria	All substances included in Table I	19 May 2000
Canada	All substances included in Tables I and II	31 October 2005
Cayman Islands <sup>a</sup>	All substances included in Tables I and II	7 September 1998
China	Acetic anhydride	20 October 2000
Macao SAR <sup>c</sup>	All substances included in Table I	
Chile <sup>c</sup>	All substances included in Tables I and II	12 September 2012
Colombia <sup>a</sup>	All substances included in Tables I and II	14 October 1998
Costa Rica <sup>a</sup>	All substances included in Table I All substances included in Table II	27 September 1999 31 January 2005
Cyprus	All substances included in Table I	19 May 2000
Czech Republic	All substances included in Table I	19 May 2000
Denmark	All substances included in Table I	19 May 2000
Dominican Republic <sup>a</sup>	All substances included in Tables I and II	11 September 2002
Ecuador <sup>a</sup>	All substances included in Tables I and II	1 August 1996
Egypt <sup>a</sup>	All substances included in Table I and acetone	3 December 2004
El Salvador <sup>a</sup>	All substances included in Tables I and II	29 July 2010
Estonia	All substances included in Table I	19 May 2000
Ethiopia <sup>a</sup>	All substances included in Tables I and II	17 December 1999
Finland	All substances included in Table I	19 May 2000
France	All substances included in Table I	19 May 2000
Germany	All substances included in Table I	19 May 2000
Ghana <sup>a</sup>	All substances included in Tables I and II	26 February 2010
Greece	All substances included in Table I	19 May 2000
Haiti <sup>a</sup>	All substances included in Tables I and II	20 June 2002
Hungary	All substances included in Table I	19 May 2000
India <sup>a</sup>	All substances included in Tables I and II	23 March 2000
Indonesia <sup>a</sup>	Acetic anhydride, <i>N</i> -acetylanthranilic acid, anthranilic acid, ephedrine, ergometrine, ergotamine, isosafrole, 3,4-methylenedioxyphenyl-2-propanone, norephedrine, phenylacetic acid, 1-phenyl-2-propanone, piperonal, potassium permanganate, pseudoephedrine and safrole	18 February 2000
Ireland	All substances included in Table I	19 May 2000
Italy	All substances included in Table I	19 May 2000
Japan	<i>N</i> -Acetylanthranilic acid, ephedrine, ergometrine, ergotamine, isosafrole, lysergic acid, 3,4-methylenedioxyphenyl-2-propanone, 1-phenyl-2-propanone, piperonal, pseudoephedrine and safrole	17 December 1999
Jordan <sup>a</sup>	All substances included in Tables I and II	15 December 1999
Kazakhstan <sup>a</sup>	All substances included in Tables I and II	15 August 2003
Latvia	All substances included in Table I	19 May 2000
Lebanon <sup>a</sup>	All substances included in Tables I and II	14 June 2002

<i>Notifying Government</i>	<i>Substances to which pre-export notification requirement applies</i>	<i>Date of communication to Governments by the Secretary-General</i>
Lithuania	All substances included in Table I	19 May 2000
Luxembourg	All substances included in Table I	19 May 2000
Madagascar <sup>a</sup>	All substances included in Tables I and II	31 March 2003
Malaysia <sup>a</sup>	All substances included in Table I, including pharmaceutical preparations containing ephedrine and pseudoephedrine, anthranilic acid, ethyl ether and piperidine	21 August 1998 and 8 March 2011
Maldives <sup>a</sup>	All substances included in Tables I and II	6 April 2005
Malta	All substances included in Table I	19 May 2000
Mexico <sup>a</sup>	All substances included in Tables I and II	6 April 2005
Netherlands	All substances included in Table I	19 May 2000
Nigeria <sup>a</sup>	All substances included in Tables I and II	28 February 2000
Oman <sup>a</sup>	All substances included in Tables I and II	16 April 2007
Pakistan <sup>a</sup>	Acetic anhydride, acetone, ephedrine, potassium permanganate and pseudoephedrine	12 November 2001
Paraguay <sup>a</sup>	All substances included in Tables I and II	3 February 2000
Peru <sup>a</sup>	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 <sup>a</sup>	All substances included in Tables I and II	16 April 1999
Poland	All substances included in Table I	19 May 2000
Portugal	All substances included in Table I	19 May 2000
Republic of Korea	All substances included in Table I and acetone	3 June 2008
Republic of Moldova <sup>a</sup>	All substances included in Tables I and II	29 December 1998
Romania <sup>a</sup>	All substances included in Tables I and II	19 May 2000
Russian Federation <sup>a</sup>	Acetic anhydride, ephedrine, ergometrine, ergotamine, 3,4-methylenedioxyphenyl-2-propanone, norephedrine, 1-phenyl-2-propanone, potassium permanganate, pseudoephedrine and all substances included in Table II	21 February 2000
Saudi Arabia <sup>a</sup>	All substances included in Tables I and II	18 October 1998
Singapore	All substances included in Table I	5 May 2000
Slovakia	All substances included in Table I	19 May 2000
Slovenia	All substances included in Table I	19 May 2000
South Africa <sup>a</sup>	All substances included in Table I and anthranilic acid	11 August 1999
Spain	All substances included in Table I	19 May 2000
Sri Lanka	All substances included in Table I	19 November 1999
Sweden	All substances included in Table I	19 May 2000
Tajikistan <sup>a</sup>	All substances included in Tables I and II	7 February 2000
Thailand	All substances included in Table I (except potassium permanganate) including pharmaceutical preparations containing ephedrine and pseudoephedrine, and	18 October 2010

<i>Notifying Government</i>	<i>Substances to which pre-export notification requirement applies</i>	<i>Date of communication to Governments by the Secretary-General</i>
	anthranilic acid	
Turkey <sup>a</sup>	All substances included in Tables I and II	2 November 1995
United Arab Emirates <sup>a</sup>	All substances included in Table I including pharmaceutical preparations containing ephedrine and pseudoephedrine, and Table II	26 September 1995 and 8 May 2011
United Kingdom	All substances included in Table I	19 May 2000
United Republic of Tanzania <sup>a</sup>	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
Venezuela (Bolivarian Republic of) <sup>a</sup>	All substances included in Tables I and II	27 March 2000
European Union (on behalf of all its States members) <sup>d</sup>	All substances included in Table I	19 May 2000

*Note:* The names of the territories are in italics.

<sup>a</sup> The Secretary-General has informed all Governments of the request of the notifying Government to receive a pre-export notification for substances listed in Table II of the 1988 Convention as well.

<sup>b</sup> 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 is established.

<sup>c</sup> Not yet notified by the Secretary-General.

<sup>d</sup> Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom of Great Britain and Northern Ireland.

## Annex XI

### Licit uses of the substances in Table I and Table II of the 1988 Convention

Knowledge of the most common licit uses of substances in Tables I and 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 to 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:

<i>Substance</i>	<i>Licit uses</i>
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	Common solvent in the chemical and pharmaceutical industries; used in the production of lubricating oils and as an intermediate in the manufacture of chloroform and in the manufacture of plastics, paints, varnishes and cosmetics
<i>N</i> -Acetylanthranilic acid	Used in the manufacture of pharmaceuticals, plastics and fine chemicals
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
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



<i>Substance</i>	<i>Licit uses</i>
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
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

## Glossary

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

diversion:	transfer of substances from licit to illicit channels
industrial-scale illicit laboratory:	laboratory manufacturing amphetamine-type stimulants that uses oversized equipment and/or glassware that is either custom-made or purchased from industrial processing sources; produces significant amounts of drugs 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 manpower to handle large amounts of drugs and chemicals; a typical manufacture cycle for amphetamine-type stimulants would yield 50 kg or more of the substance
pharmaceutical formulation:	mixture, typically a solid, prior to its formulation into a finished dosage form, that contains precursors present in such a way that they can be used or recovered by readily applicable means
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 substance in Table I or II of the 1988 Convention, which is being imported or exported or is transiting, is destined for the illicit manufacture of narcotic drugs or psychotropic substances



## 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: the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol; the Convention on Psychotropic Substances of 1971; and the 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.



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