# Contents

Foreword ......................................................................................................................... iii  
Preface ........................................................................................................................... v  
Explanatory notes ........................................................................................................... xi  
Summary ........................................................................................................................ xiii  

Chapter

I. Introduction .................................................................................................................... 1

II. Action taken by Governments and the International Narcotics Control Board ........... 1  
   A. Scope of control ........................................................................................................ 1  
   B. Adherence to the 1988 Convention ....................................................................... 2  
   C. Reporting to the Board pursuant to article 12 of the 1988 Convention ............... 2  
   D. Legislation and control measures ......................................................................... 3  
   E. Submission of data on licit trade in, uses of and requirements for precursors ....... 5  
   F. Annual legitimate requirements for imports of precursors of amphetamine-type stimulants . 6  
   G. Pre-export notifications and utilization of the Pre-Export Notification Online system .... 7  
   H. Other activities and achievements in international precursor control ............... 10

III. Extent of licit trade and latest trends in trafficking in precursors ............................. 13  
   A. Substances used in the illicit manufacture of amphetamine-type stimulants ........ 14  
   B. Substances used in the illicit manufacture of cocaine ............................................. 26  
   C. Substances used in the illicit manufacture of heroin ............................................. 29  
   D. Substances used in the illicit manufacture of other narcotic drugs and psychotropic substances ........................................................................................................... 32  
   E. Substances not listed in Table I or Table II of the 1988 Convention that are used in the illicit manufacture of other narcotic drugs and psychotropic substances or substances of abuse not under international control .................................................................................. 34

IV. Facilitation of precursor trafficking through the Internet: a thematic study ............... 36

V. Conclusions and recommendations ........................................................................... 40

Glossary .......................................................................................................................... 42

Annexes*  

I  Parties and non-parties to the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, by region, as at 1 November 2022 ................................................................. 43

II  Submission of information by Governments, pursuant to article 12 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, on form D for the years 2017–2021 ......................................................................................................................... 48

III  Seizures of substances in Tables I and II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, as reported to the International Narcotics Control Board, 2017–2021 ........................................................................................................... 54

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

vii
IV Submission of information by Governments on licit trade in, legitimate 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 for the years 2017–2021 .............................................. 55

V 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 ......................................................... 62

VI Governments that have requested pre-export notifications pursuant to article 12, paragraph 10 (a), of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 .................................................................................. 63

VII Substances in Tables I and II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 ................................................................. 68

VIII Use of scheduled substances in the illicit manufacture of narcotic drugs and psychotropic substances ................................................................. 69

IX Licit uses of the substances in Tables I and II of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 ........................................................................ 74

X Treaty provisions for the control of substances frequently used in the illicit manufacture of narcotic drugs and psychotropic substances ................................................................. 76

XI Regional groupings ........................................................................ 77

Figures

1. Number of Governments providing estimates of annual legitimate requirements, 2011–2022 ........ 6
2. Level of utilization of the PEN Online system, by region, 2021 ....................................................... 9
3. Main differences between the PEN Online system and the PEN Online Light system .................. 10
4. Categories of industries that might be involved in the manufacture, trade or distribution of chemicals used for illicit drug manufacture .................................................................................. 12
5. Seizures of ephedrine and pseudoephedrine, as reported by Governments on form D, and of methamphetamine, as reported on the United Nations Office on Drugs and Crime annual report questionnaire, 2012–2021 ......................................................... 15
6. Seizures of pseudoephedrine preparations, as reported by Governments on form D, 2017–2021 ... 15
7. Seizures of ephedrine and pseudoephedrine, as reported by Governments in Europe on form D, 2017–2021 ......................................................................................................................... 17
8. Alternative chemicals used in the illicit manufacture of amphetamine or methamphetamine .... 20
9. Alternative chemicals used in the illicit manufacture of MDMA and related “ecstasy”-type substances .... 23
10. Incidents communicated through PICS involving 3,4-MDP-2-P methyl glycidic acid derivatives under international control and non-scheduled alternatives, 2013–2022 ........................................ 24
11. Thefts of hydrogen gas, as reported on form D by Germany, 2015–2021 .............................................. 25
12. Seizures of potassium permanganate, as reported by Governments on form D, 2012–2021 .......... 27
13. Seizures of sodium metabisulfite, as reported by Governments in South America on form D, 2012–2021 ......................................................................................................................... 28
14. Proportion of seizures of acetate solvents, expressed in kilograms and litres, as reported by Governments on form D, 2017–2021 .......................................................... 28
15. Seizures of acetic anhydride, as reported by Governments on form D, 2001–2021 .................. 30
16. Seizures of acetic anhydride, as reported by the Government of Afghanistan on form D, 2008–2020 ................................................................................. 30
17. Proposed exports of two fentanyl precursors, pre-notified by exporting Governments through the PEN Online system, 2018–2021 ............................................................ 33
18. Seizures of fentanyl precursors (expressed in fentanyl equivalents), as reported by Governments on form D, 2016–2021 ........................................................................ 33
19. Schematic overview of the evolution of fentanyl precursors, 2017–2022 ............................ 33
20. Seizures of GBL, as reported by Governments on form D for 2021 ........................................ 35
21. Seizures of ketamine precursors, as reported by Governments on form D, 2010–2021 ............ 35
22. Examples of Internet postings advertising the intent to purchase precursors in the period 2008–2009 ............................................................. 36
23. Number of Internet search records for 3,4-MDP-2-P methyl glycidate and 3,4-MDP-2-P ethyl glycidate per year since 2017 .............................................................. 37
24. Incidents involving 3,4-MDP-2-P methyl glycidate and 3,4-MDP-2-P ethyl glycidate communicated through PICS, 2017–2022 .................................................. 37

Boxes

1. Commission on Narcotic Drugs resolution 65/3 and groups of chemically related precursors ...... 5
2. Responsibility of transit countries to prevent the diversion of internationally controlled precursor chemicals .................................................................................................. 8
3. Precursors Incident Communication System ........................................................................ 11
4. Acetyl chloride and the international precursor control system .............................................. 31
5. Approaches to addressing suspicious Internet postings ............................................................ 39

Maps

1. Status of submissions by Governments of form D for 2021 containing information concerning seizures of substances listed in Table I or Table II of the 1988 Convention and seizures of substances not listed in Table I or Table II, as at 1 November 2022 ....................................... 3
2. Governments reporting seizures of substances not listed in Table I or Table II of the 1988 Convention on form D and through PICS, 2018–2022 .................................... 4

Tables

1. States parties failing to report as required under article 12, paragraph 12, of the 1988 Convention, 2021 ................................................................. 2
2. The 10 countries with the largest proposed imports of ephedrine and pseudoephedrine, by volume, 1 November 2021–1 November 2022 ..................................................... 14