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United Nations Office on Drugs and Crime



6

OTHER DRUG POLICY ISSUES

WORLD

2020

DRUG

REPORT

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PREFACE

This is a time for science and solidarity, as United Nations Secretary-General António Guterres has said, highlighting the importance of trust in science and of working together to respond to the global COVID-19 pandemic.

The same holds true for our responses to the world drug problem. To be effective, balanced solutions to drug demand and supply must be rooted in evidence and shared responsibility. This is more important than ever, as illicit drug challenges become increasingly complex, and the COVID-19 crisis and economic downturn threaten to worsen their impacts, on the poor, marginalized and vulnerable most of all.

Some 35.6 million people suffer from drug use disorders globally. While more people use drugs in developed countries than in developing countries, and wealthier segments of society have a higher prevalence of drug use, people who are socially and economically disadvantaged are more likely to develop drug use disorders.

Only one out of eight people who need drug-related treatment receive it. While one out of three drug users is a woman, only one out of five people in treatment is a woman. People in prison settings, minorities, immigrants and displaced people also face barriers to treatment due to discrimination and stigma. Of the 11 million people who inject drugs, half of them are living with hepatitis C, and 1.4 million with HIV.

Around 269 million people used drugs in 2018, up 30 per cent from 2009, with adolescents and young adults accounting for the largest share of users. More people are using drugs, and there are more drugs, and more types of drugs, than ever.

Seizures of amphetamines quadrupled between 2009 and 2018. Even as precursor control improves globally, traffickers and manufacturers are using designer chemicals, devised to circumvent international controls, to synthesize amphetamine, methamphetamine and ecstasy. Production of heroin and cocaine remain among the highest levels recorded in modern times.

The growth in global drug supply and demand poses challenges to law enforcement, compounds health risks and complicates efforts to prevent and treat drug use disorders.

At the same time, more than 80% of the world's population, mostly living in low- and middle-income

countries, are deprived of access to controlled drugs for pain relief and other essential medical uses.

Governments have repeatedly pledged to work together to address the many challenges posed by the world drug problem, as part of commitments to achieve the Sustainable Development Goals, and most recently in the 2019 Ministerial Declaration adopted by the Commission on Narcotic Drugs (CND). But data indicates that development assistance to address drug control has actually fallen over time.

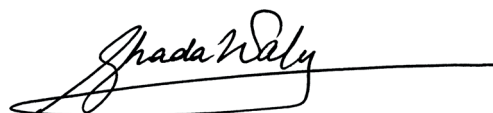
Balanced, comprehensive and effective responses to drugs depend on governments to live up to their promises, and provide support to leave no one behind.

Health-centred, rights-based and gender-responsive approaches to drug use and related diseases deliver better public health outcomes. We need to do more to share this learning and support implementation, most of all in developing countries, including by strengthening cooperation with civil society and youth organizations.

The international community has an agreed legal framework and the commitments outlined in the 2019 CND Ministerial Declaration. The United Nations Office on Drugs and Crime (UNODC) provides integrated support to build national capacities and strengthen international cooperation to turn pledges into effective action on the ground.

The theme for this year's International Day against Drug Abuse and Illicit Trafficking, "Better Knowledge for Better Care", highlights the importance of scientific evidence to strengthen responses to the world drug problem and support the people who need us. It also speaks to the ultimate goal of drug control, namely the health and welfare of humankind. Through learning and understanding we find compassion and seek solutions in solidarity.

It is in this spirit that I present the UNODC *World Drug Report 2020*, and I urge governments and all stakeholders to make the best use of this resource.



Ghada Waly
Executive Director
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EXPLANATORY NOTES

The designations employed and the presentation of the material in the *World Drug Report* 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.

Since there is some scientific and legal ambiguity about the distinctions between “drug use”, “drug misuse” and “drug abuse”, the neutral term “drug use” is used in the *World Drug Report*. The term “misuse” is used only to denote the non-medical use of prescription drugs.

All uses of the word “drug” and the term “drug use” in the *World Drug Report* refer to substances controlled under the international drug control conventions, and their non-medical use.

All analysis contained in the *World Drug Report* is based on the official data submitted by Member States to the UNODC through the annual report questionnaire unless indicated otherwise.

The data on population used in the *World Drug Report* are taken from: *World Population Prospects: The 2019 Revision* (United Nations, Department of Economic and Social Affairs, Population Division). References to dollars (\$) are to United States dollars, unless otherwise stated.

References to tons are to metric tons, unless otherwise stated.

The following abbreviations have been used in the present booklet:

- AIDS** acquired immunodeficiency syndrome
- ATS** amphetamine-type stimulants
- EMCDDA** European Monitoring Centre for Drugs and Drug Addiction
- FARC** Revolutionary Armed Forces of Colombia
- ha** hectares
- HIV** human immunodeficiency virus
- INCB** International Narcotics Control Board
- INTERPOL** International Criminal Police Organization
- OECD** Organisation for Economic Co-operation and Development
- S-DDD** defined daily doses for statistical purposes
- UNDP** United Nations Development Programme
- UNODC** United Nations Office on Drugs and Crime
- UNESCO** United Nations Educational, Scientific and Cultural Organization
- WHO** World Health Organization

SCOPE OF THE BOOKLET

This, the sixth booklet of the *World Drug Report 2020*, addresses a number of drug policy issues that all form part of the international debate on the drug problem and how to address it. Although comprehensive data and analysis may not be available for some of these issues, the following chapters represent a first attempt to consolidate available evidence aimed at supporting the international community in implementing several operational recommendations, including those contained in the outcome document of the special session of the General Assembly, held in 2016.

The booklet starts by considering the issue of ensuring the availability of and access to controlled substances exclusively for medical and scientific purposes while preventing their diversion. It thus reviews the latest data on and trends in the availability of controlled medicines, specifically opioids, for medical consumption at the global level and across regions. An overview is also provided of the latest survey findings on barriers to access to controlled medicines for medical purposes in Member States.

Continuing with the strengthening of international cooperation based on the principle of common and shared responsibility, the booklet presents selected data on international cooperation. The focus of this chapter is rather limited considering the potentially wide scope of the topic. It starts with an analysis of trends with respect to a selected number of interventions in the area of drug supply reduction, on which Member States are explicitly asked to report

annually to UNODC through the annual report questionnaire. The chapter subsequently reviews the financial means made available by donor countries for international cooperation on drug issues, before concluding with an analysis of interceptions trends, a possible indicator of the success of international cooperation.

The booklet then provides evidence to support the implementation of operational recommendations on alternative development and other development and socioeconomic issues. This chapter presents the findings of ongoing research aimed at assessing the impact of alternative development projects in a number of countries across different regions affected by the illicit cultivation of opium poppy or coca bush. It also provides an overview of the socioeconomic drivers of illicit crop cultivation while highlighting the specific vulnerabilities of the affected communities and providing a first-ever estimate of their potential size.

The booklet continues with a discussion of the nexus between drugs and violence, starting from a conceptual standpoint, and presenting research findings that illustrate the different mechanisms at play. The booklet then concludes with a short focus on drugs and the criminal justice system, including estimates of people arrested, convicted and held in prison for drug offences, and a brief overview of the long-lasting consequences of imprisonment for women incarcerated for drug law offences.

ACCESS TO CONTROLLED MEDICINES FOR PAIN MANAGEMENT

For nearly six decades, high-level declarations have been made that affirm the international community's collective goal of a balanced, integrated, comprehensive, multidisciplinary and scientific evidence-based approach to controlled medicines, especially with respect to access and availability for medical and scientific purposes. Despite recent growing global advocacy, high-level statements of intent and movements within international bodies and individual countries to address access to and availability of controlled medicines for pain management, progress has been extremely slow and significant challenges and barriers remain in improving the accessibility and availability of controlled medicines.^{1, 2, 3, 4}

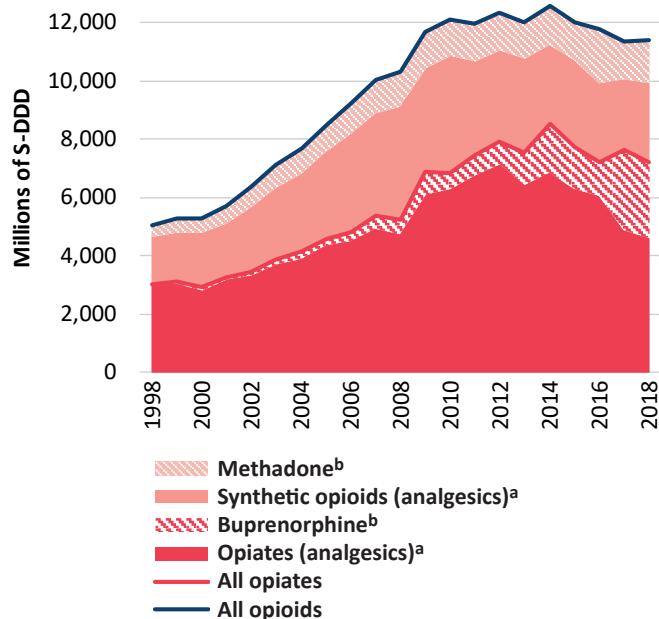
Global amounts of pharmaceutical opioids available for consumption

Access to and availability of controlled medicines for pain relief, i.e., opioids, are unequally distributed across the geographical regions and have had diverging trends in different regions. The amount of opioids (expressed in daily doses) available for consumption for medical purposes more than doubled globally over the period 1998–2010, followed by a period of stabilization and a decline over the period 2014–2018.

Most of the increase in the amount of pharmaceutical opioids available for medical consumption over the

- 1 James F. Cleary and Martha A. Maurer, "Pain and policy studies group: two decades of working to address regulatory barriers to improve opioid availability and accessibility around the world", *Journal of Pain Symptoms Management*, vol. 55, No. 2 (February 2018), pp. S121–S134.
- 2 Lilian De Lima and Lukas Radbruch, "Palliative care in the Global Health Agenda", *Journal of Pain and Palliative Care Pharmacotherapy*, vol. 28, No. 4 (October 2014), pp. 384–389.
- 3 Liiz Gwyther, Frank Brennan and Richard Harding, "Advancing palliative care as a human right", *Journal of Pain Symptom Management*, vol. 38, No. 5 (September 2009), pp. 767–774.
- 4 Human Rights Watch, "Please Do Not Make Us Suffer Any-more...": *Access to Pain Treatment as a Human Right* (March 2009).

FIG. 1 Global amounts available for medical consumption of pharmaceutical opioids under international control, 1998–2018



Source: *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2).

Note: S-DDD refers to "defined daily doses for statistical purposes" as defined by INCB. S-DDDs are "technical units of measurement" for the purposes of statistical analysis and are not recommended daily prescription doses; actual doses may differ based on treatments required and medical practices. The statistics exclude preparations of opioids listed in Schedule III of the 1961 Convention. Details of S-DDDs used for these calculations are provided in the methodological annex of the present report.

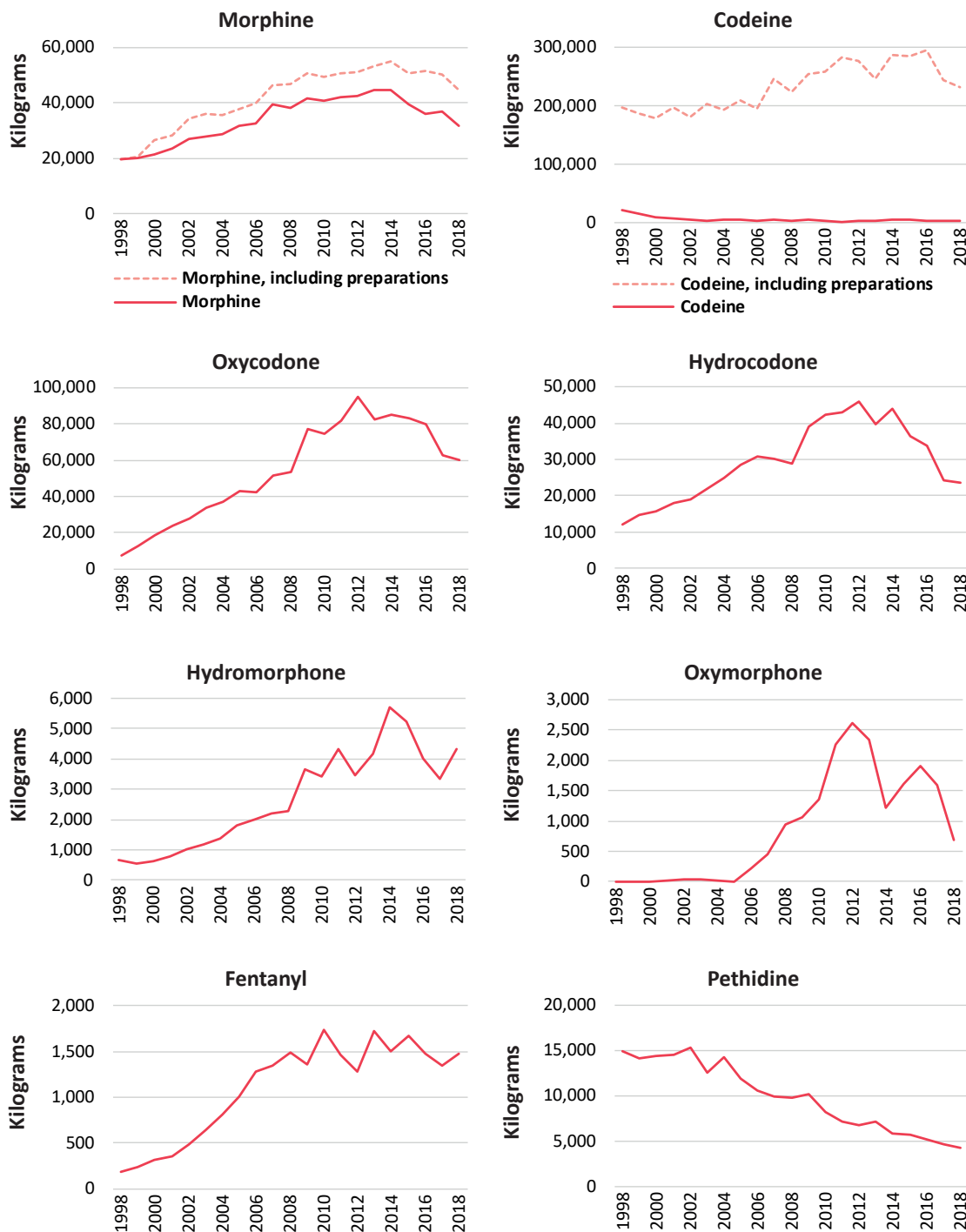
^a Substances used as analgesics, i.e., excluding substances used in opioid substitution treatment.

^b Substances used in opioid substitution treatment and as analgesics.

period 1998–2010 was of oxycodone (which experienced a tenfold growth over that period), hydromorphone (fivefold growth), hydrocodone (threefold growth) and oxymorphone (46,000-fold growth). Methadone and buprenorphine, the opioids used in medically assisted treatment of opioid use disorders, also saw marked increases in the amounts available for medical consumption at the global level. The amount of fentanyl available for medical consumption rose ninefold over the period 1998–2010.⁵ Moreover, since 2000, only about 10 per cent of globally available morphine was reported to have been used for palliative care,

- 5 *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2), and previous years.

FIG. 2 Global amounts available for medical consumption of selected opioids (including preparations), 1998–2018



Source: *Narcotic Drugs 2018: Estimated World Requirements for 2019 – Statistics for 2017* (E/INCB/2018/2), and previous years.
 Note: All these substances are controlled under the 1961 Convention.

while over 88 per cent was converted into codeine, the majority of which (89 per cent) was used to manufacture cough medicines.⁶

Since 2014, the decline in the amount of opioids available for medical consumption has been particularly pronounced for oxycodone, hydrocodone and hydromorphone, following stricter rules aimed at reducing diversion in North America. Prior to that, these substances were heavily diverted to markets for non-medical use, particularly in North America. Nonetheless, in 2018 that subregion continued to account for a major share of the global amounts available for medical consumption of hydromorphone (69 per cent), oxycodone (69 per cent) and hydrocodone (99 per cent).⁷

The amounts available for medical consumption of some of the other synthetic opioids used in pain management have been declining over the past two decades. Pethidine is one example, with a 70 per cent decline over the period 1998–2018, while amounts available for medical consumption of dextropropoxyphene, which was very popular in the 1990s, have decreased by more than 99 per cent over the past two decades as the substance was banned in a number of countries owing to concerns over serious side effects.⁸ The amount of fentanyl available for medical consumption increased until 2010 but remained largely stable thereafter.⁹

By contrast, the amounts of buprenorphine and methadone available for medical consumption and used in the medically assisted treatment of opioid use disorders, have increased since 2014, especially of buprenorphine, which rose by more than 50 per cent over the period 2014–2018.¹⁰ However, as with other pharmaceutical opioids, there are large differences from one country to another in the consumption patterns of buprenorphine and methadone for medical purposes, as seen in the coverage of opioid-agonist treatment for people with opioid use disorders.¹¹

6 *Progress in Ensuring Adequate Access to Internationally Controlled Substances for Medical and Scientific Purposes* (E/INCB/2018/Supp.1).

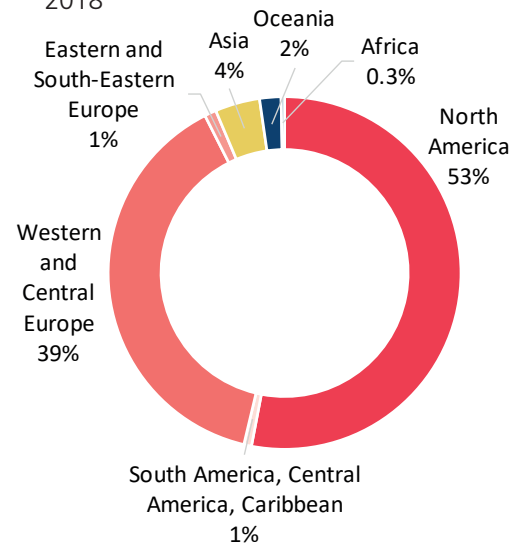
7 *Ibid.*

8 E/INCB/2019/2.

9 *Narcotic Drugs 2018: Estimated World Requirements for 2019 – Statistics for 2017* (E/INCB/2018/2), and previous years.

10 *Ibid.*

FIG. 3 Distribution of amounts available for medical consumption of codeine, fentanyl, morphine, pethidine and other opioids, expressed in standard defined daily doses (S-DDD), per subregion, 2018



Source: UNODC calculations based on *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2).

Note: S-DDD refers to “defined daily doses for statistical purposes” as defined by INCB. S-DDDs are “technical units of measurement” for the purposes of statistical analysis and are not recommended daily prescription doses; actual doses may differ based on treatments required and medical practices. Details of S-DDDs used for these calculations are provided in the methodological annex of the present report.

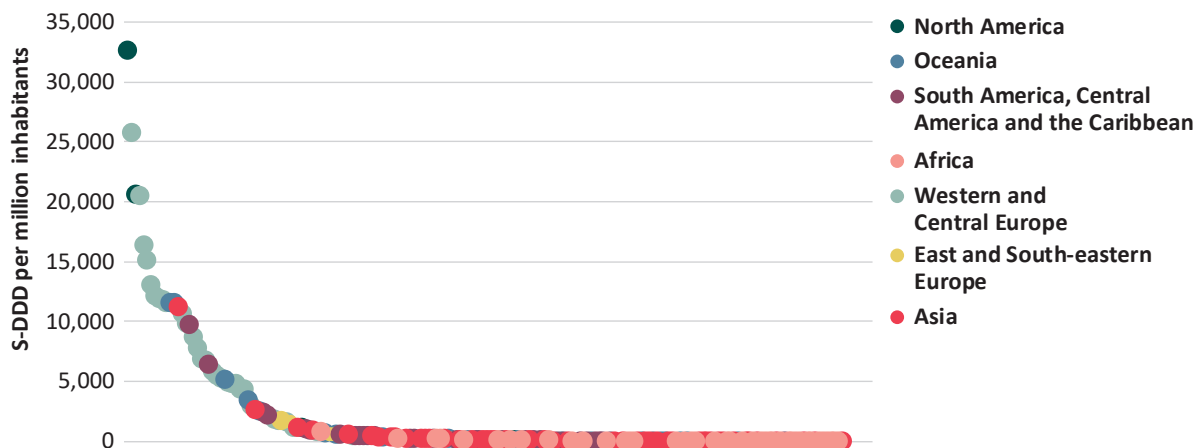
There is a gaping chasm between countries in the availability of opioids for medical purposes. On the basis of data on the amount of opioids available for medical purposes, there is a clear disparity between high-income countries versus low- and middle-income countries¹² for all opioids combined (i.e., codeine, fentanyl, hydromorphone, morphine, oxycodone, pethidine and methadone).

Data for 2018 show that more than 90 per cent of all pharmaceutical opioids that are available for medical consumption are in high-income countries: 50 per cent in North America, around 40 per cent in Europe, mostly in Western and Central Europe, and a further 2 per cent in Oceania, mostly Australia and New Zealand. Those high-income countries

11 See, for example, *World Drug Report 2018* (United Nations publication, Sales No. E.18.XI.9).

12 Based on the country classification 2014 of the World Bank Country and Lending Groups.

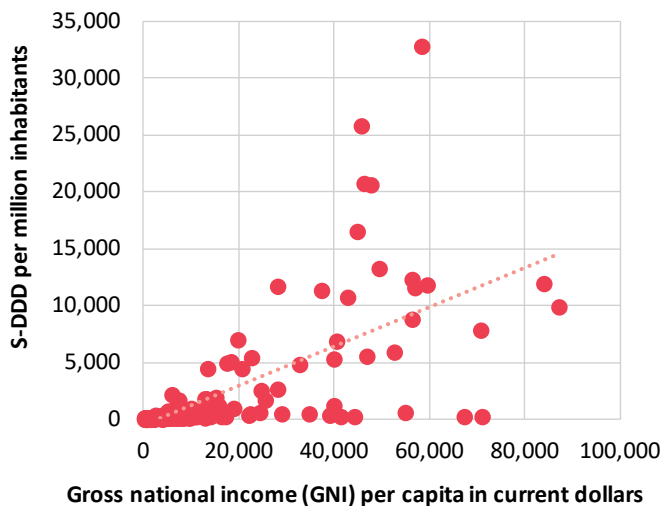
FIG. 4 Distribution of amounts available for medical consumption of codeine, fentanyl, morphine, pethidine and other opioids, per country, 2018



Source: UNODC calculations based on *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2).

Note: S-DDD refers to “defined daily doses for statistical purposes” as defined by INCB. S-DDDs are “technical units of measurement” for the purposes of statistical analysis and are not recommended daily prescription doses; actual doses may differ based on treatments required and medical practices. Details of S-DDDs used for these calculations are provided in the methodological annex of the present report.

FIG. 5 Amounts available for medical consumption of codeine, fentanyl, morphine, pethidine and other opioids in individual countries, and per capita income, average 2014–2018



Source: UNODC calculations based on *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2).

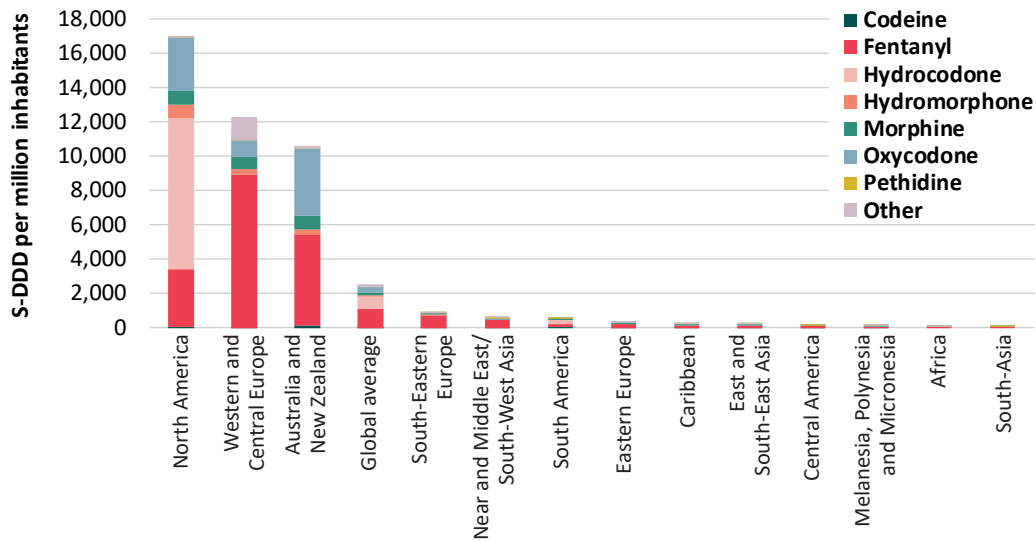
Note: S-DDD refers to “defined daily doses for statistical purposes” as defined by INCB. S-DDDs are “technical units of measurement” for the purposes of statistical analysis and are not recommended daily prescription doses; actual doses may differ based on treatments required and medical practices. Details of S-DDDs used for these calculations are provided in the methodological annex of the present report.

comprise around 12 per cent of the global population. Therefore, low- and middle-income countries, which are home to some 88 per cent of the global population, are estimated to consume less than 10 per cent of the global amount of opioids available for medical consumption.

Even within each region or subregion, there is a significant disparity in the consumption of opioids for medical purposes. Over the period 2014–2018, average consumption of opioids in countries in North America ranged from some 100 defined daily doses for statistical purposes (S-DDD) per million inhabitants in Mexico to 32,700 S-DDD per million inhabitants in the United States of America. Similarly, in Western and Central Europe, estimates ranged from close to 500 S-DDD per million inhabitants in Malta to 25,800 S-DDD per million inhabitants in Germany. In Oceania, estimates ranged from, on average, 15 S-DDD per million inhabitants in Vanuatu to close to 11,600 S-DDD per million inhabitants in Australia, and in Asia, from 0.1 S-DDD per million inhabitants in Yemen to close to 11,300 S-DDD per million inhabitants in Israel.

Data show that there is a generally positive correlation between gross national income and the

FIG. 6 Amounts available for medical consumption of codeine, fentanyl, morphine, pethidine and other opioids, by region and subregion,^a 2018



Source: UNODC calculations based on *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2).

Note: S-DDD refers to “defined daily doses for statistical purposes” as defined by INCB. S-DDDs are “technical units of measurement” for the purposes of statistical analysis and are not recommended daily prescription doses; actual doses may differ based on treatments required and medical practices. Details of S-DDDs used for these calculations are provided in the methodological annex of the present report

^a The regions and subregions are those designated by UNODC in the *World Drug Report*; they may partly differ from those used by INCB in its publications.

availability of pharmaceutical opioids for medical purposes (R=0.67 over the period 2014–2018), although a number of Asian countries and territories with high gross national income per capita (such as Macao, China, Hong Kong, China, Qatar, Singapore, Japan and Kuwait) have very low levels of opioid availability for medical purposes. This suggests that the level of national income is not the only factor that explains unequal availability across countries. A number of barriers to access to opioids for pain management are related to legislation, culture, health systems and prescribing practices.

Data also show discrepancies in the kind of pharmaceutical opioids available on the medical market. While data for North America show that hydrocodone is the most widely available pharmaceutical opioid (in terms of daily doses per inhabitant), fentanyl is the most widely available opioid in Western and Central Europe and in Australia and New Zealand. The availability for medical consumption of oxycodone is also relatively high in Australia and New Zealand and in North America. By contrast,

the availability of codeine for medical consumption appears to be quite limited, although this may be a statistical artefact as most codeine is sold in the form of preparations, the sale of which – falling under Schedule III of the 1961 Single Convention – is internationally less strictly controlled and thus less well documented than the sale of other pharmaceutical opioids.

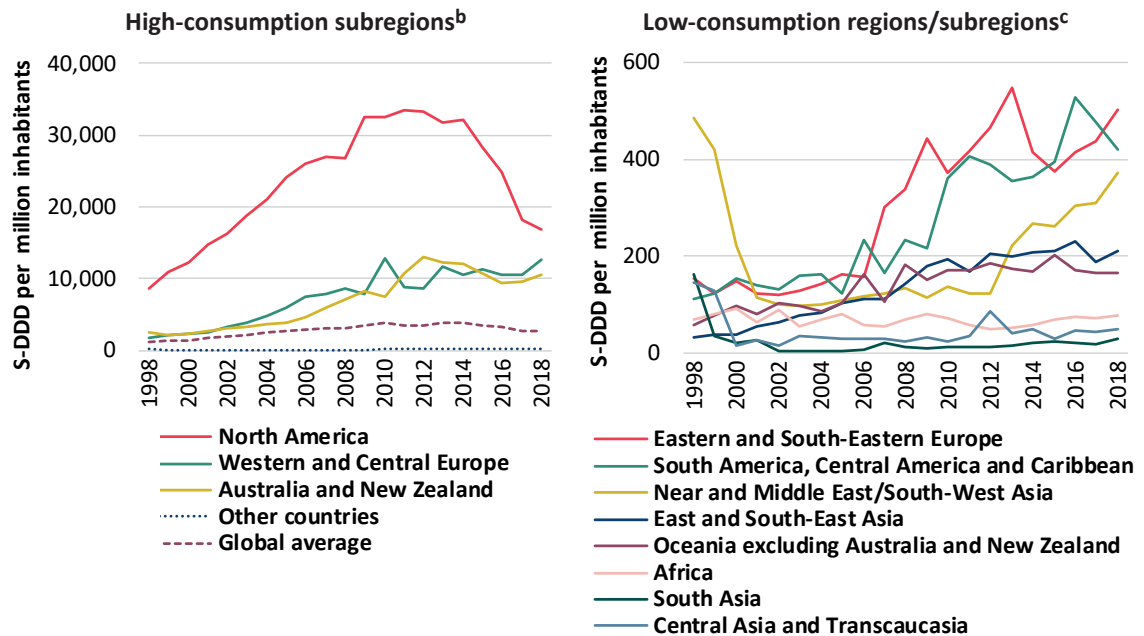
There have been concerted international and country-level efforts to address the inequity in the consumption of pharmaceutical opioids,¹³ particularly in the case of morphine, which has been on the WHO Model List of Essential Medicines for management of pain due to cancer, HIV/AIDS and other serious illnesses, and due to traumatic injuries, burns and surgery, for nearly two decades.^{14, 15} Despite this, morphine has not been accessible in

13 Cleary and Maurer, “Pain and policy studies group”.

14 De Lima and Radbruch, “Palliative care in the Global Health Agenda”.

15 WHO, *World Health Organization Model List of Essential Medicines: 21st List* (Geneva, 2019).

FIG. 7 Trends in availability of opioid analgesics for medical consumption, by region/subregion,^a 1998–2018



Source: UNODC calculations based on *Narcotic Drugs 2019: Estimated World Requirements for 2020 – Statistics for 2018* (E/INCB/2019/2) and previous years.

Note: S-DDD refers to “defined daily doses for statistical purposes” as defined by INCB. S-DDDs are “technical units of measurement” for the purposes of statistical analysis and are not recommended daily prescription doses; actual doses may differ based on treatments required and medical practices. Details of S-DDDs used for these calculations are provided in the methodological annex of the present report.

^a Subregions and regions according to the classification used by UNODC in the *World Drug Report*; subregions and regions as defined partly differ from those used by INCB in its publications; extrapolation techniques have been used in case of missing data.

^b Includes subregions above the global average, i.e., North America, Western and Central Europe, Australia and New Zealand.

^c Includes regions and or subregions below the global average, i.e., Africa, Asia, Eastern Europe, South-Eastern Europe, the Caribbean, Central America and South America, as well as Melanesia, Micronesia and Polynesia, i.e., all regions and subregions except those of North America, Western and Central Europe, and Australia and New Zealand.

adequate amounts, in the appropriate dosage forms, with assured quality and adequate information and at a price that an individual and the community can afford.^{16, 17}

In 2018, 87 per cent of the global amount of morphine available for medical consumption was estimated to have been consumed in high-income countries, which are home to 12 per cent of the global population. While the relative importance of

the amounts of morphine available for medical consumption in low- and middle-income countries has increased slightly since 2014 (from 9.5 to 13 per cent in 2018) the amount of morphine available per person per country is still infinitesimally small to non-existent in many developing countries, particularly in South Asia and in Africa.^{18, 19} Even though countries may have morphine available for medical use, many people still have limited access to it.^{20, 21} WHO estimates that globally, each year 5.5 million

16 WHO, *Integrating Palliative Care and Symptom Relief into Primary Health Care: A WHO Guide for Planners, Implementers and Managers* (Geneva, 2018).

17 Felicia Marie Knaul and others, “Alleviating the access abyss in palliative care and pain relief: an imperative of universal health coverage – the *Lancet* Commission report”, *Lancet*, vol. 391, No. 10128 (April 2018).

18 E/INCB/2018/Supp.1.

19 E/INCB/2019/2.

20 See section below on barriers to access to and availability of controlled medicines for pain management and palliative care.

21 E/INCB/2019/2.

The role of complementary and alternative medicine in the management of chronic non-cancer pain

The use of strong opioids, especially morphine, is generally considered the principal treatment for the management of pain in palliative care for cancer patients.^a The treatment of chronic non-cancer pain, which is among the most prevalent health conditions in many countries, is often considered more difficult to manage, and its treatment is sometimes more controversial.^b Chronic non-cancer pain is defined in scientific literature as pain lasting for more than three months that stems from injuries or illnesses other than cancer.^c It is also considered that chronic pain results from a combination of biological, psychological and social factors, and thus requires a multifactorial approach to pain assessment, patient monitoring and evaluation and long-term management. Some of the common conditions that cause chronic pain include neuropathic pain, fibromyalgia that may be caused by damage to the peripheral or central nervous system, low back pain and osteoarthritis. While opioids are used extensively in the management of non-cancer chronic pain in some countries and settings, in others, other drugs, as well as complementary and alternative medicines, are used effectively in the management of chronic pain whether related to cancer or not.^{d, e}

Other than opioids, non-steroidal anti-inflammatory drugs are used in patients with osteoarthritis and rheumatoid arthritis and low back pain. The efficacy of antidepressant drugs has been reported for the management of neuropathic pain, fibromyalgia, low back pain and headaches. Anti-convulsant drugs such as gabapentin, pregabalin and carbamazepine have proved effective in the treatment of chronic non-cancer pain.^f

As part of complementary and alternative medicine, spinal manipulation is the most commonly used therapy for low back pain.^g Massage is another modality com-

monly used as a supplemental treatment for patients with chronic non-cancer pain. Similarly, evidence supports the effectiveness of acupuncture for the treatment of chronic low back pain, while results on the effectiveness of acupuncture in the reduction of pain associated with fibromyalgia and neck pain are promising.^h

Psychological interventions such as cognitive behavioural therapy, relaxation training and hypnosis are the most commonly used techniques in the management of chronic pain.ⁱ The aim of such interventions is to help the patient cope with the symptoms of pain, learn skills for adaptation and self-management, and reduce disability associated with symptoms, rather than eliminate physical causes of pain per se.^j

a WHO, *Ensuring Balance in National Policies on Controlled Substances: Guidance on Availability and Accessibility of Controlled Medicines* (Geneva, 2011).

b Nora D. Volkow and A. Thomas McLellan, "Opioid abuse in chronic pain: misconceptions and mitigation strategies", *New England Journal of Medicine*, vol. 374, No. 13 (March 2016), pp. 1253–1263.

c Dennis C. Turk, Hilary D. Wilson and Alex Cahana, "Treatment of chronic non-cancer pain", *Lancet*, vol. 377, No. 9784 (June 2011), pp. 2226–2235.

d Ibid.

e Priyanka Singh and Aditi Chaturvedi, "Complementary and alternative medicine in cancer pain management: a systematic review", *Indian Journal of Palliative Care*, vol. 21, No. 1 (2015), pp. 105–115 (2015).

f Turk, Wilson and Cahana, "Treatment of chronic non-cancer pain".

g Ibid.

h Ibid.

i Singh and Chaturvedi, "Complementary and alternative medicine in cancer pain management".

j Turk, Wilson and Cahana, "Treatment of chronic non-cancer pain".

terminal cancer patients and 1 million end-stage HIV/AIDS patients do not have adequate treatment for moderate to severe pain.²²

In recent years the huge disparity between countries in the accessibility of opioids for medical purposes has been reduced slightly: declines in opioids

available for medical consumption are reported in North America, while overall increases are reported in several other subregions, most notably South America and the Near and Middle East/South-West Asia, where availability has been low. This suggests an overall increase in the availability of opioids in developing countries, although that availability was starting from, and remains at, a low level. Daily per capita availability of pharmaceutical opioids more

22 WHO, *Integrating Palliative Care and Symptom Relief into Primary Health Care*.

than doubled in the regions and subregions where availability was below the global average (i.e., Africa, Asia, South America, Central America, the Caribbean, Eastern and South-Eastern Europe, Melanesia, Micronesia and Polynesia); taken together, availability in these regions and subregions increased from an average of 70 S-DDD per million inhabitants in 2010 to 180 S-DDD in 2018 (7 per cent of the global per capita average).²³

By contrast, the availability of pharmaceutical opioids for medical purposes declined by almost 50 per cent in North America, from 32,550 S-DDD per day per million inhabitants in 2010 to 16,910 S-DDD in 2018, thus approaching the levels reported in Western and Central Europe (12,660 S-DDD) and in Australia and New Zealand (10,530 S-DDD) in 2018. Nevertheless, per capita availability of pharmaceutical opioids for medical purposes in North America remains comparatively high (almost eight times the global average), in particular when compared with the extremely low levels in Africa and South Asia, as well as in Central Asia and Transcaucasia, where there are no signs of increases.²⁴

INCB notes that the increase in the use of expensive synthetic opioids over the past two decades, which has contributed to overconsumption and an “overdose epidemic” in some developed countries, has not been matched by an increase in the use of affordable morphine, especially in low- and middle-income countries.²⁵

Barriers to access to and availability of controlled medicines for pain management and palliative care

The reasons for inequities in access to and availability of opioids for pain management are extraordinarily complex and include historical vestiges across multiple systems, i.e., government, health care and society, as well as modern-day challenges, including the concerns arising out of the opioid overdose crisis.

There are several challenges and barriers to access to controlled medicines for pain management, all of which are complex, multitiered and interrelated. These include, but are not limited to, trade systems, education, justice, foreign affairs, workforce and development, but perhaps the most recognized and salient among them are legislation and regulatory systems, national supply management systems and health systems. Each of these directly and indirectly influences the barriers to both access to and availability of controlled medicines for pain management and palliative care.²⁶ These challenges and barriers, including the progress that has been made globally to address them, are discussed below.

Legislation and regulatory systems

In 2018, INCB conducted a survey²⁷ of competent national authorities in order to assess the barriers and evaluate progress made at the national level in improving access to and availability of controlled substances for pain management since the previous surveys in 1995, 2010 and 2014. Of the 130 countries (representing 78 per cent of the global population) that responded, 40 per cent indicated that over the previous five years, legislation and/or regulatory systems had been reviewed or changed to affect the availability of controlled medicines. Some countries reported unspecified “general changes,” others indicated that changes were made to the status of controlled substances, while some introduced electronic measures to facilitate prescriptions and/or procurement.

Although regulations that have limited the availability of controlled medicine have been reduced in many countries since 1995, challenges remain. In 2018, 26 per cent of the countries that responded to the survey mentioned the existence of legal sanctions for unintentional errors in handling opioid analgesics. The legal threat was reported to be a major factor in the decisions of some doctors not to procure, stock or prescribe opioids, thus limiting their access. Similar challenges affect the number of pharmacies that are willing to dispense opioids.²⁸ In 2018, the three major impediments to the

23 E/INCB/2019/2.

24 Ibid.

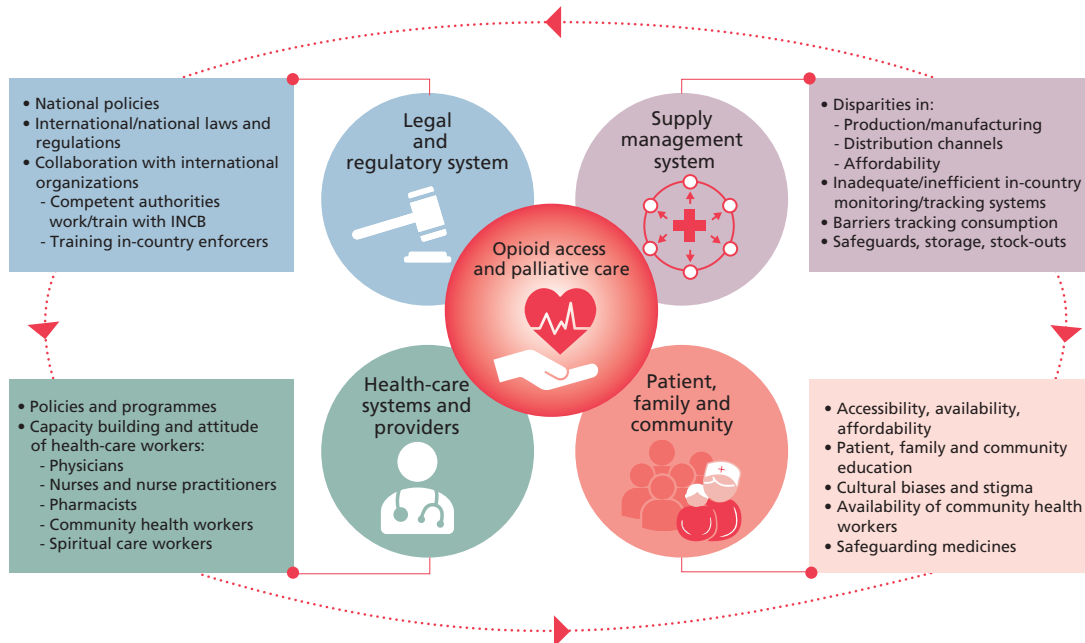
25 E/INCB/2018/Supp. 1.

26 E/INCB/2018/Supp.1.

27 Ibid.

28 Ibid.

Systems and influences affecting access to and availability of controlled medicines



availability of opioids, as reported by the countries responding to the survey, were lack of training and awareness of health-care professionals, fear of addiction, and problems in sourcing opioid medications.²⁹

Some evidence of progress in improving access to and availability of controlled medicines for pain management is suggested in a small proportion (16 per cent) of countries that reported that legislation and regulations had been modified to broaden the range of health-care professionals who are allowed to prescribe controlled substances. Overall, 123 countries reported that they allow medical specialists to prescribe controlled substances for pain management and palliative care, while 98 countries also allow general practitioners. Challenges continue to limit the range of health-care providers who can prescribe opioid analgesics, as only nine countries surveyed reported that their legislation allowed nurses, including nurse practitioners, to prescribe those drugs.³⁰ This legislative and regulatory limitations on who can prescribe controlled substances perpetuates a barrier to access, particularly in low- and middle-income countries without decentralized

29 Ibid.

30 Ibid.

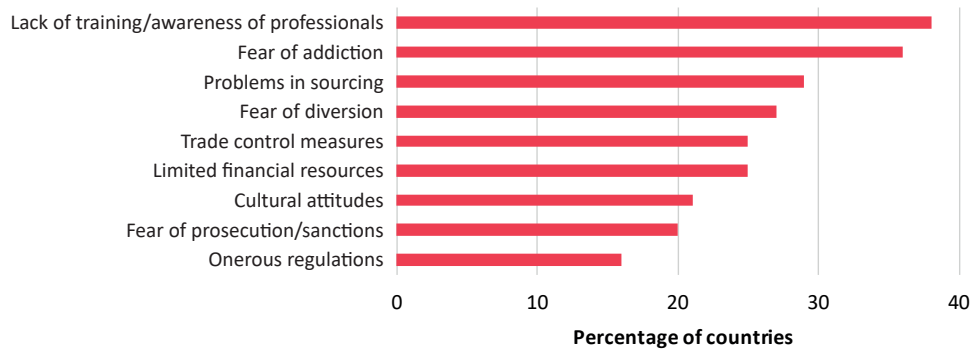
health-care services and/or where the number of physicians or doctors is limited.

In 2018, INCB also surveyed civil society organizations and received responses from 30 organizations based in 23 countries in Asia, Africa, Europe and the Americas.³¹ More than half of the organizations that responded to the questionnaire reported changes to, or reviews of, legislation or regulations aimed at simplifying and streamlining processes and removing unduly restrictive regulations in order to ensure accessibility of controlled substances and maintain adequate control systems in their respective countries. Although this is a limited sample of civil society organizations, it demonstrates a relatively positive perception of some of the actions that countries have taken to change or streamline the laws and regulations that limit access to and availability of controlled medicines.

National supply management systems

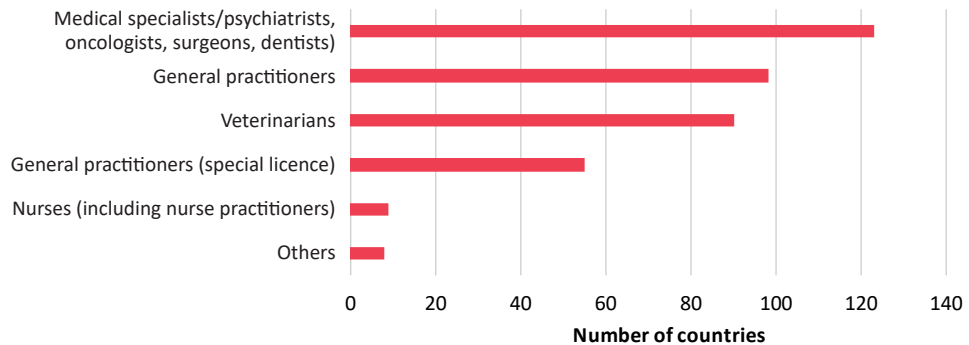
Functional, effective and efficient national supply chain management systems that are guided by the international drug control conventions are critically important to achieving the balance between preventing diversion and ensuring adequate access to and

31 Ibid.

FIG. 8 Reported impediments to the availability of controlled medicines for pain management, 2018

Source: *Progress in Ensuring Adequate Access to Internationally Controlled Substances for Medical and Scientific Purposes* (E/INCB/2018/Supp.1).

Note: The percentage represents the proportion of responding countries that mentioned each of the factors as an impediment to the availability of pain medications. Multiple responses were possible.

FIG. 9 Health-care providers allowed to prescribe controlled substances, 2018

Source: *Progress in Ensuring Adequate Access to Internationally Controlled Substances for Medical and Scientific Purposes* (E/INCB/2018/Supp.1).

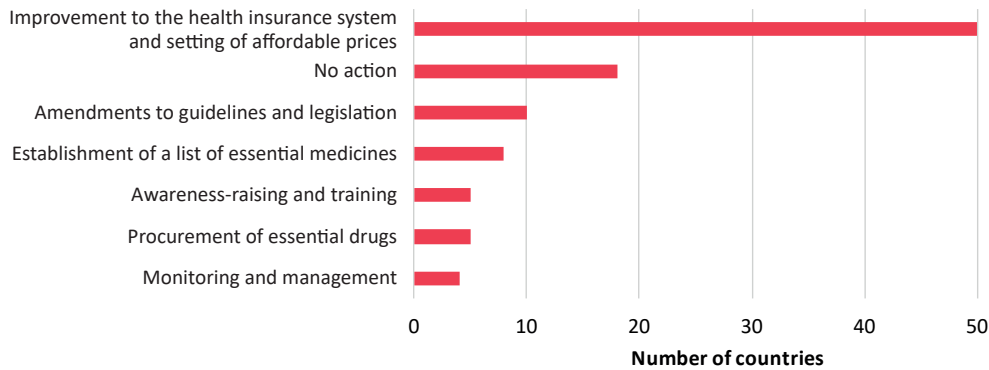
Note: The data represent the number of countries who responded to the survey and indicated the kind of health-care providers who can prescribe controlled substances, including opioids for pain management and palliative care. Multiple responses were possible.

availability of controlled medicines for pain management and palliative care. Within national supply chains and management systems, diverse domains affect export, import, procurement and monitoring of access to and availability of controlled medicines, to name but a few. Within this chain, primary areas that affect the accessibility of controlled substances in a country are: (1) processes to produce national estimates of controlled medicines for pain management and palliative care; (2) assessment of the availability of controlled substances; and (3) developing benchmarks (compared to thresholds for high and low use of controlled substances).

Countries report that import and export control measures or restrictions are among the main

impediments to ensuring the availability of controlled substances. To address this, INCB has introduced a number of online and electronic systems to streamline and simplify import and export processes within countries.³² One improvement over the years has been the gradual establishment of electronic tools for processing import and export authorizations, with competent national authorities in 50 countries reporting the use of such tools in 2018. In addition, with a view to facilitating the production of reliable estimates of the quantities of controlled substances needed nationally, guidelines

³² These include the National Drug Control System and the International Import and Export Authorization System (I2ES).

FIG. 10 Steps taken by countries to improve the accessibility of controlled substances, 2018

Source: *Progress in Ensuring Adequate Access to Internationally Controlled Substances for Medical and Scientific Purposes* (E/INCB/2018/Supp.1).

Note: The data represent the number of countries that responded to the survey and indicated the steps taken to improve the accessibility of controlled substances, including opioids for pain management and palliative care. Multiple responses were possible.

for estimating the national requirements of controlled substances have also been made available in recent years.³³ Nevertheless, many countries, for a myriad of reasons, continue to report to INCB that they are unable to properly estimate or to monitor consumption of controlled substances and continue to inadequately or insufficiently estimate opioid requirements.

Health systems

Improving the accessibility and availability of controlled substances, including opioids for pain management and palliative care, also requires improving health systems to ensure controlled substances are prescribed and administered in a rational and efficient manner.³⁴ Overall, the major steps taken by countries that responded to the INCB survey in 2018 included improvements to the health insurance system and the setting of affordable prices to improve the accessibility and availability of controlled substances, including opioids for pain management and palliative care.

Training and capacity-building

The training and capacity-building of health-care professionals in all domains is key to ensuring access to and availability of opioids for pain management. In this regard, 71 countries (or 62 per cent of those that responded to the INCB survey) reported that

palliative care was included in the educational curricula in medical schools. Similarly, 76 countries reported that continuing education, training and information on palliative care, including on the rational use and the importance of reducing the misuse of prescription drugs, was provided to health-care professionals. However, 11 countries reported that education on palliative care was provided for only a limited number of medical specialities, such as oncology, and a further 43 countries reported that palliative care was not included as a discipline in their medical education programme. While nine countries reported that they did not have a medical school, four countries noted that they would build palliative care into the medical curriculum from the onset. This demonstrates an awareness, and a concerted effort, on the part of the medical profession of the importance of palliative care training across the life course of wider medical training.

In addition, 41 countries noted that national competent authorities did not have training programmes on the rational use of controlled substances and that this was either due to a lack of resources or because it was “not a priority” for the Government.

Regarding other fields of specialty with interaction with patients and which are an important resource in health-care delivery, especially in low- and middle-income countries where the availability of doctors is limited, the nursing profession has made significant strides in incorporating palliative care and end-of-life care training, not only in the curriculum for

33 INCB and WHO, *Guide on Estimating Requirements for Substances under International Control* (Vienna, 2012).

34 E/INCB/2018/Supp. 1.

nurses but also for them to train other health-care providers within the larger health-care community.³⁵ For example, many non-governmental organizations in Africa have initiated programmes for training community health-care workers in palliative care, who do not necessarily require licensure and do not undergo extensive formal training in medicine, pharmacy or nursing.³⁸ In resource-constrained settings, community health-care workers are considered quite instrumental in providing care outside urban areas, in villages and other community settings with limited access to formal health-care services and facilities.³⁹

Pharmacy training is gaining attention given the frontline role of pharmacies in making opioids accessible for patients. Palliative care training is not mandatory but many programmes, including by non-governmental organizations and other advocacy organizations, are targeting pharmacy professionals.⁴⁰

Education and awareness-raising

Lack of awareness and “fear of addiction”, i.e., the concern that patients who are prescribed strong opioids are likely to develop dependence or iatrogenic addiction,⁴¹ were reported to be among the top impediments to access to controlled substances

reported by 130 countries.⁴² Fear of addiction seems to be related to a lack of awareness and training, and to cultural attitudes.⁴³ These barriers influence all systems and the people in them, including national and international policymakers, regulators, health-care professionals, community advocates, patients and the public at large.

Moreover, at the global level, concerns over the non-medical use of pharmaceutical opioids, triggered by the opioid crisis in North America, North Africa, and West and Central Africa has created a challenge for increasing the availability of opioids for pain management and palliative care due to the concomitance of the two opposing needs. As a result, low- and middle-income countries, not only in Africa but also in other regions, some of which have extremely limited access to opioids, are now facing diminished access and have to counter increased fear of addiction – that may result from a lack of knowledge about substance use disorders and the science of prevention and treatment – among policymakers, national authorities, health-care providers and even among the public.^{44, 45, 46, 47}

Countries that reported to the 2018 INCB survey mentioned specific initiatives undertaken by national competent authorities to enhance the understanding of, awareness of and education about, and address cultural resistance to and the stigma associated with, the use of opioids and other controlled substances: education for representatives of the pharmaceutical community, professionals and consumer groups; and the promotion of ethical attitudes among medical doctors and pharmaceutical companies, in particular to reduce the excessive marketing of opioids.⁴⁸

35 A leading programme is the End-of-Life Nursing Education Consortium, which is based on a train-the-trainer model and has been implemented in over 100 countries worldwide.

36 Betty Ferrel, Pam Malloy and Rose Virani, “The end of life nursing education nursing consortium project”, *Annals of Palliative Medicine*, vol. 4, No. 2 (April 2015), pp. 61–69.

37 Henry Ddungu, “Palliative care: what approaches are suitable in developing countries?”, *British Journal of Haematology*, vol. 154, No. 6 (September 2011), pp. 728–735.

38 The African Palliative Care Association is one leading organization working in this area. See, for instance, *Annual Report: Building Bridges 2017-18* (Kampala, 2019).

39 Katherine Pettus and others, “Ensuring and restoring balance on access to controlled substances for medical and scientific purposes: joint statement from palliative care organizations”, *Journal of Pain Palliative Care and Pharmacotherapy*, vol. 32, No. 2–3 (September 2018), pp. 124–128.

40 African Palliative Care Association, *Annual Report: Building Bridges 2017-18*.

41 A structured review of 67 studies found that 3 per cent of chronic non-cancer patients regularly taking opioids developed opioid use disorders. See David A. Fishbain and others, “What percentage of chronic non-malignant pain patients exposed to chronic opioid analgesic therapy develop abuse/addiction and/or aberrant drug related behaviours? A structured evidence-based review”, *Pain Medicine*, vol. 9, No. 4 (May 2008), pp. 444–459.

42 E/INCB/2018/Supp.1.

43 *Availability of Internationally Controlled Drugs: Ensuring Adequate Access for Medical and Scientific Purposes – Indispensable, Adequately Available and not Unduly Restricted* (E/INCB/2015/1/Supp.1).

44 Knaul and others, “Alleviating the access abyss in palliative care and pain relief”.

45 African Palliative Care Association, *Guidelines for Ensuring Patient Access to, and Safe Management of, Controlled Medicines* (Kampala, 2013).

46 De Lima and Radbruch, “Palliative care in the Global Health Agenda”.

47 Pettus and others, “Ensuring and restoring balance on access to controlled substances for medical and scientific purposes”.

48 E/INCB/2018/Supp.1.

FIG. 11 Education and awareness-raising initiatives, 2018

Source: *Progress in Ensuring Adequate Access to Internationally Controlled Substances for Medical and Scientific Purposes* (E/INCB/2018/Supp.1).

Note: The data represent the number of countries that responded to the survey and indicated the initiatives taken by the competent national authorities for education and awareness to improve the accessibility of controlled substances, including opioids for pain management and palliative care. Multiple responses were possible.

Affordability

The availability of pain medications is determined by factors that include their physical availability and practical accessibility. These in turn depend on the extent to which pain medications are procured and the existence of an appropriate and viable health system. Furthermore, the affordability of those medications is central to all of the elements, especially in the context of universal health coverage. Affordability is addressed, among other ways, by ensuring funding for the purchase of opioid medications as well as developing and improving health insurance and reimbursement schemes that guarantee access to pain medication.⁴⁹ In 2018, 50 countries reported to INCB that steps had been taken towards improving their health insurance systems and setting affordable prices for essential medicines, including opioids. However, limited resources can impair even a well-intended Government from procurement or preclude it from providing or subsidizing controlled medicines for pain management. Other issues that may affect the affordability of pain medications include licensing, taxation, poor or inefficient distribution systems, lack of reimbursement and lack of availability of inexpensive formulations. Even in the case of Governments that are strongly committed to addressing challenges and barriers to access, financial resources may not be available to make systemic changes. Moreover, because of the high cost of pain medications, in many high-income countries

⁴⁹ Ibid.

and in most low- and middle-income countries, where a large number of people are not covered by either health insurance or a national health-care system, many people can encounter difficulties in accessing the pain medications that they need.⁵⁰

International cooperation and coordination

For many years, Governments, academic institutions and non-governmental organizations⁵¹ have worked across and within systems nationally and internationally on the central principle of balance between access to controlled substances for medical and scientific purposes and prevention of their diversion. Over the past 20 years, demonstrable progress has been made in over 30 countries in this regard.⁵² Similarly, collaboration between international stakeholders that aim to improve the legislative framework, build capacity of health-care professionals, and work with patients, families and the public in order to improve access to and availability of controlled substances has shown the importance of working across these major domains. Each of them could act as an impediment or serve to enable access to opioids for pain management and palliative care at the country level.

⁵⁰ Ibid.

⁵¹ Two examples of these are World Hospice and Palliative Care Alliance and African Palliative Care Association among others that have worked in making pain medication available and accessible for palliative care.

⁵² Cleary and Maurer, "Pain and policy studies group".

INTERNATIONAL COOPERATION

It is generally acknowledged that the drug problem is not restricted to just one country, but that it affects most countries in an intertwined manner. Responses to the drug problem at the national level are necessary, but they are not sufficient to cope with the global drug problem unless they are also well coordinated across countries. For example, interventions in one country, leading to a reduction in the drug supply, may prompt a replacement effect, with supply increasingly originating in other countries. Similarly, successful demand reduction efforts in just one country may prompt organized crime groups to devise strategies for targeting other countries and trigger increasing demand for drugs at the regional or global level. In short, global drug markets tend to be extremely resilient to attempts to solve the drug problem exclusively at the national level.

One of the key approaches to addressing the transnational nature of the drug problem has been the strengthening of international cooperation, both with a view to improving coordination of policies and interventions and assisting countries with limited resources and capacities in undertaking the necessary interventions. International cooperation can take many forms, including intergovernmental cooperation frameworks and mechanisms, the development of standards and guidelines that promote best practices in the fields of drug demand reduction⁵³ or drug supply reduction, and capacity-building initiatives that strengthen the ability of countries to counter the drug problem.

A comprehensive analysis of international cooperation on drug-related issues, which may be implemented at different levels, whether geographically or thematically, involving a plurality of mechanisms and actors – even if only done conceptually – would go far beyond the scope of this edition of the *World Drug Report*. Nonetheless, this broad range of international cooperation activities

should be kept in mind, even though it is not discussed further in this chapter.

The purpose of this chapter is to present and examine the information that countries have regularly submitted to UNODC on the topic of international cooperation. Its scope is relatively limited and it does not pretend to cover the complex nature of factors that influence the implementation of international cooperation measures and their outcomes.

Extent of implementation of international cooperation is mainly quantified in terms of specific supply-side measures taken by law enforcement

Reporting on the implementation of international cooperation globally is challenging because international cooperation can take different forms, which are difficult to measure. For example, the sharing of intelligence information, probably the most common form of cooperation to address drug-related matters, happens in day-to-day work within and across law enforcement agencies; and, it is hardly recorded in any systematic way at the national level in most countries. Records exist of some forms of intelligence-sharing at the international level, but information on such sharing is not necessarily reported by individual countries.

On an annual basis, countries report to UNODC on key activities related to international cooperation in the field of drug supply, including on joint operations with other countries, controlled deliveries, exchanges of liaison officers and the exchange of information. The reporting includes information on whether such activities took place during the reference year. In most countries and at the international level, no information is collected to assess the actual quality or the effectiveness of such cooperation activities.

While the proportion of countries that at least partially complete the section on international cooperation in their annual data submissions is quite high (close to 100 per cent of all countries reporting information to UNODC), a significant number of countries do not submit any information on international cooperation to UNODC; for example, out

⁵³ See, for example, UNODC and WHO, *International Standards on Drug Use Prevention*, second updated edition (Vienna, 2018); UNESCO, UNODC and WHO, *Good Policy and Practice in Health Education: Booklet 10 – Education Sector Responses to the Use of Alcohol, Tobacco and Drugs* (Paris, 2017).

Interpreting reported data on international cooperation by Member States

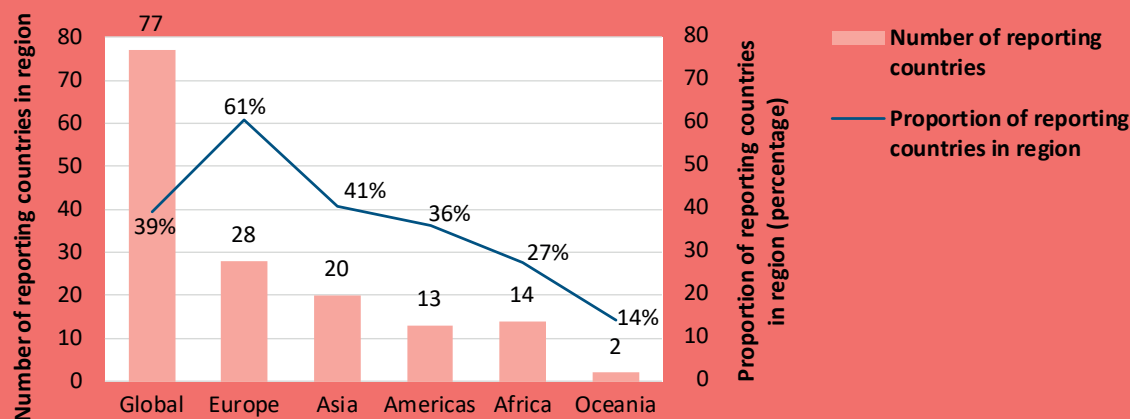
Member States report to UNODC on international cooperation through the annual report questionnaire. However, replies to the questions on international cooperation were only received by around 40 per cent of the countries that were invited to complete the annual report questionnaire over the period 2017–2018. European countries, which usually report high levels of cross-border cooperation, are overrepresented in this sample (61 per cent of all European countries reported on international cooperation), while other regions (notably Africa and Oceania) are underrepresented. This limits the interpretation of the global data received, as they may be skewed by a reporting bias towards regions with a high capacity to engage in international cooperation.

The main unknown is whether and to what extent non-reporting countries, if they had reported, would have provided similar answers to questions on international cooperation as those reporting. While this cannot be known unless a specific study of non-respondents is carried out, it is most likely that the actual proportion of countries involved in cross-border cooperation falls within a range between (a) the number of countries reporting specific cross-border cooperation activities, expressed as the proportion of all countries that received the annual report questionnaire (constituting the absolute

minimum); and (b) the number of countries reporting specific cross-border cooperation activities, expressed as the proportion of the countries responding either affirmatively or negatively to questions on whether or not they had carried out such specific cross-border operation activities. The latter is based on the hypothesis that non-reporting countries would show similar patterns of international cooperation as those reporting, which probably constitutes the maximum. In fact, it seems highly unlikely that non-reporting countries would, on average, be more involved in international cooperation than reporting countries, as the latter are more often located in regions, such as Europe, where the capacity to engage in international cooperation is likely bigger and the framework for such cooperation is more institutionalized.

For these reasons, the analyses of responses to the annual report questionnaire in this chapter are presented in ranges based on proportion (a) and proportion (b) mentioned above. While these ranges may sometimes be wide, one should refrain from calculating mid-points, as they would be misleading, in particular because in most cases it is likely that the actual proportions would still be closer to proportion (b) than to the absolute minimum, proportion.

Number of countries providing data on international cooperation in the annual report questionnaire and their proportion among countries that received the annual report questionnaire, by region, 2017–2018



Source: UNODC, responses to the annual report questionnaire.

Note: For the purposes of these calculations, a country was considered to have reported on international cooperation if it had provided information on whether it had engaged or not engaged in at least one of the following activities: joint operations, controlled deliveries, the exchange of liaison officers, the exchange of information or the extradition of drug traffickers, in either 2017 or 2018.

International cooperation has been at the heart of international drug control for more than a century

The strengthening of international cooperation has been at the heart of international drug control since the convening of the Shanghai Opium Commission in 1909. That was followed by the first International Opium Convention, signed at the Hague in 1912, the three drug conventions of the League of Nations (1925, 1931, 1936) and the three drug conventions adopted by the United Nations (1961, 1971 and 1988).

International cooperation continued to play a key role in more recent policy documents. The Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem, adopted during the high-level segment of the fifty-second session of the Commission on Narcotic Drugs, in 2009,^a makes multiple mentions, 32 in all, of the need for more and better international cooperation, putting it on par with other strategies referred to in the Political Declaration, such as demand and supply reduction.^b

^a See, for example, paragraph 1 of the Political Declaration: “We, the States Members of the United Nations ... 1. *Reaffirm* our unwavering commitment to ensure that all aspects of demand reduction, supply reduction and international cooperation are addressed...” (E/2009/28, chap. I, sect. C (Political Declaration, para. 1)).

Similarly, in the outcome document of the special session of the General Assembly held in 2016, entitled “Our joint commitment to effectively addressing and countering the world drug problem”, the need to enhance and increase cooperation to face the various challenges linked to the drug problem, including the need to increase and strengthen international cooperation, is explicitly mentioned multiple times.^c

Lastly, the 2019 Ministerial Declaration on “Strengthening Our Actions at the National, Regional and International Levels to Accelerate the Implementation of Our Joint Commitments to Address and Counter the World Drug Problem” committed to further strengthening cooperation and coordination among national authorities, particularly in the health, education, social, justice and law enforcement sectors, and between governmental agencies and other relevant stakeholders, including the private sector, at all levels, including through technical assistance; as well as to strengthening bilateral, regional and international cooperation and promoting information-sharing.

^b See *Official Records of the Economic and Social Council, 2009, Supplement No. 8 (E/2009/28)*, chap. I, sect. C.

^c General Assembly resolution S-30/1, annex.

of an average of 196 annual report questionnaires sent out every year, 72 countries provided replies on the issue in 2018, while 124 countries and territories did not. This reporting rate limits interpretation of the information reported to UNODC for any specific year, and also limits the ability to make comparisons over time, since the countries that provide replies change from year to year.

Joint cross-border drug operations

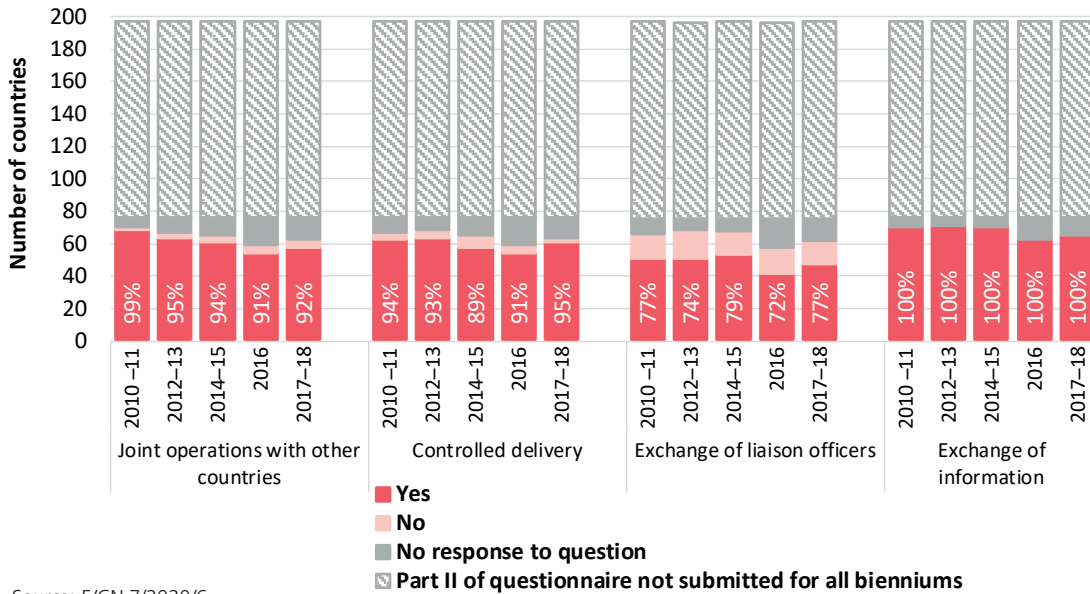
Data show that an average of 67 countries, i.e., 35 per cent of all countries to which the questionnaires were sent (196 countries), or 90 per cent of countries that actually reported, were involved in joint cross-border drug operations over the period

2010–2018. This is quite a broad range, leaving the door wide open to interpretations as to the importance of joint operations between law enforcement across countries.

In 2018, seven countries, mostly located in Africa and, to a lesser extent, in South and Central America, reported no joint operations, while 59 countries, mostly located in Europe (24 countries), followed by Asia (15), the Americas (10), Africa (8) and Oceania (2), were involved in joint cross-border operations.

The involvement of law enforcement in joint operations among countries providing such information throughout the period 2010–2018 appears to have declined slightly in recent years, falling – if only

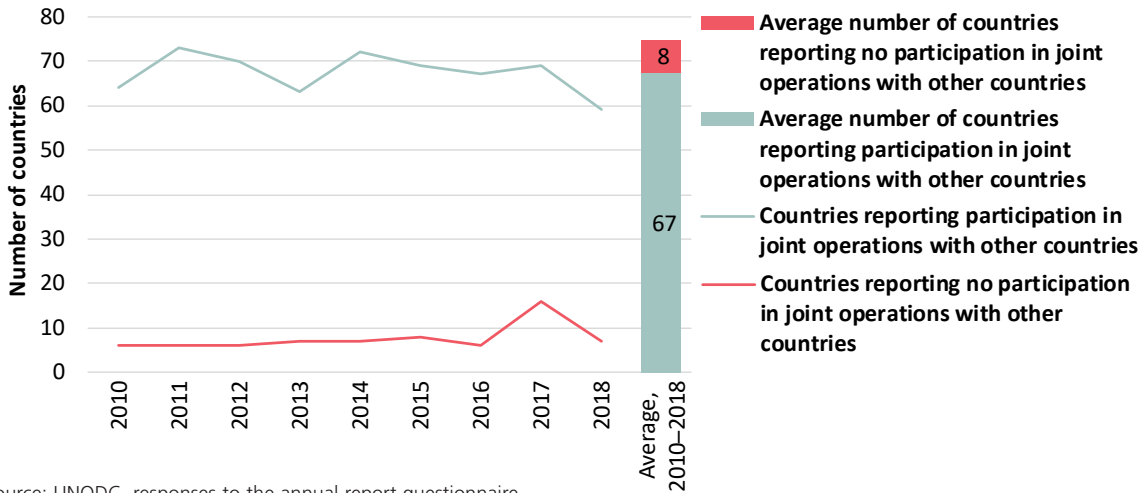
FIG. 12 International cross-border cooperation, 2010–2018



Source: E/CN.7/2020/6.

Note: This analysis is based on 196 countries to which the annual report questionnaire is sent every year and on information provided by 75 countries that reported throughout the period 2010–2018 (by either providing an answer to each question or leaving the answer blank). The percentages represent the proportion of countries reporting their involvement in each activity for each biennium out of all countries providing such information (i.e. countries reporting either “yes” or “no” to the respective question asked).

FIG. 13 Countries reporting joint cross-border operations, 2010–2018



Source: UNODC, responses to the annual report questionnaire.

countries reporting throughout the period 2010–2018 are considered – from 68 countries in the period 2010–2011 to 57 in the period 2017–2018.

The reasons for this downward trend in joint operations in recent years are unknown. It can be speculated that among the multiple causes, the

budgetary problems following the 2008 financial crisis may have played a role. Moreover, over the years, Member States have reported that they have faced a number of challenges in joint operations, which may also have contributed to the decrease. These challenges include “slow formal procedures”

Controlled deliveries

Article 1 of the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances defines controlled delivery as a “technique of allowing illicit or suspect consignments of narcotic drugs, psychotropic substances, substances in Table I and Table II annexed to this Convention, or substances substituted for them, to pass out of, through or into the territory of one or more countries, with the knowledge and under the supervision of their competent authorities, with a view

to identifying persons involved in the commission of offences established in accordance with article 3, paragraph 1, of the Convention”. Article 11 is then fully dedicated to this technique, asking all parties to the Convention to take all the necessary measures “to allow for the appropriate use of controlled delivery at the international level”. The technique of controlled delivery was also advocated in subsequent international drug policy instruments, including the 2009 Political Declaration and Plan of Action.

(37 countries over the period 2017–2018), “lack of agreements enabling operational cooperation” (15 countries), “inability to identify appropriate counterparts” (14 countries) and problems related to the “lack of a common language” practiced and understood by law enforcement officials from different countries (11 countries). Paradoxically, however, reported data also suggest that such obstacles to successful international cooperation decreased slightly in importance between the periods 2010–2011 and 2017–2018.⁵⁴

Controlled deliveries of drugs

The active participation of national law enforcement agencies in controlled deliveries of drugs is another important area of international cooperation. Such measures typically target complex and long-lasting operations and are aimed at dismantling transnational drug trafficking networks operating across countries. They do not focus on couriers who handle small quantities of drugs and the seizing of small quantities of drugs, but rather attempt to dismantle whole networks operating across countries.

On average, 69 countries per year acknowledged their involvement in controlled deliveries of drug shipments over the period 2010–2018, representing 36 per cent of all countries receiving the annual report questionnaire and 86 per cent of all countries

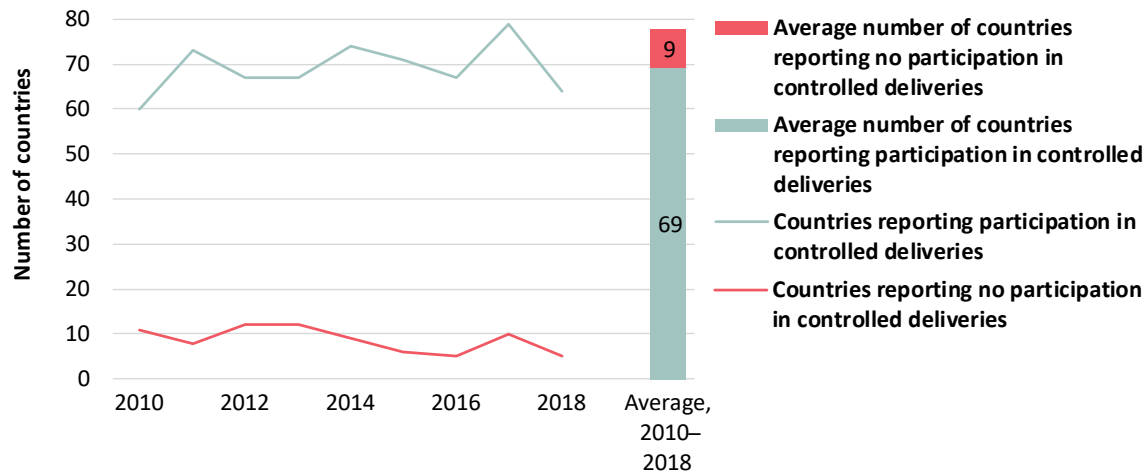
providing a reply to the question on controlled delivery over the period 2010–2018. Some fluctuations but no clear trend in the number of countries reporting controlled deliveries can be identified over the period 2010–2018. In 2018, a total of 64 countries reported having been involved in at least one controlled delivery, including 26 countries located in Europe (mostly in Western and Central Europe), 16 in Asia, 11 in the Americas (mostly in Latin America and the Caribbean), 9 in Africa and 2 in Oceania. The five countries reporting no participation in controlled deliveries were all located outside Europe: three in Africa and one each in the Caribbean and South-East Asia.

While few law enforcement specialists would be likely to question the inherent merits of controlled deliveries of drugs, information provided by countries to UNODC suggests that they do not necessarily form part of the tasks expected of law enforcement authorities in several countries. Controlled deliveries require long-lasting partnerships among national agencies, connections that can easily be activated when cooperation on ongoing operations is needed quickly. They can also be resource-intensive; and where they are not included among the success indicators of national law enforcement agencies, the incentive for national agencies to engage in controlled delivery operations may be limited.

Exchange of liaison officers

Another example of cross-border cooperation is the exchange of liaison officers, which facilitates the informal exchange of information between

⁵⁴ Report of the Executive Director on action taken by Member States to implement the Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem (E/CN.7/2020/6).

FIG. 14 Countries reporting controlled deliveries of drugs, 2010–2018

Source: UNODC, responses to the annual report questionnaire.

countries and thus creates an environment of more timely and effective cooperation. There are cases in which liaison officers, with the help of their networks, were able to prevent drug shipments from leaving the countries where they were stationed, instead of having to wait until the drugs arrived in the countries of final destination, which could increase the risk of some of the drugs being diverted to other destinations before being seized in the countries of final destination.

However, it remains difficult to evaluate to what extent improved international cooperation, including the exchange of liaison officers, may have contributed to the increase in the last two decades of the quantities of drugs intercepted in source and transit countries.⁵⁵

No clear trend in the number of countries reporting the exchange of liaison officers can be identified over the period 2010–2018, when an average of 57 countries reported the exchange of liaison officers. It is likely that the proportion of countries exchanging liaison officers falls within a broad range of between 29 per cent of all countries to which the questionnaire was sent and 74 per cent of all reporting countries over the period 2010–2018.

In 2018, 52 countries reported the exchange of liaison officers, most of which were located in Europe (20), followed by Asia (12), the Americas (9), Africa

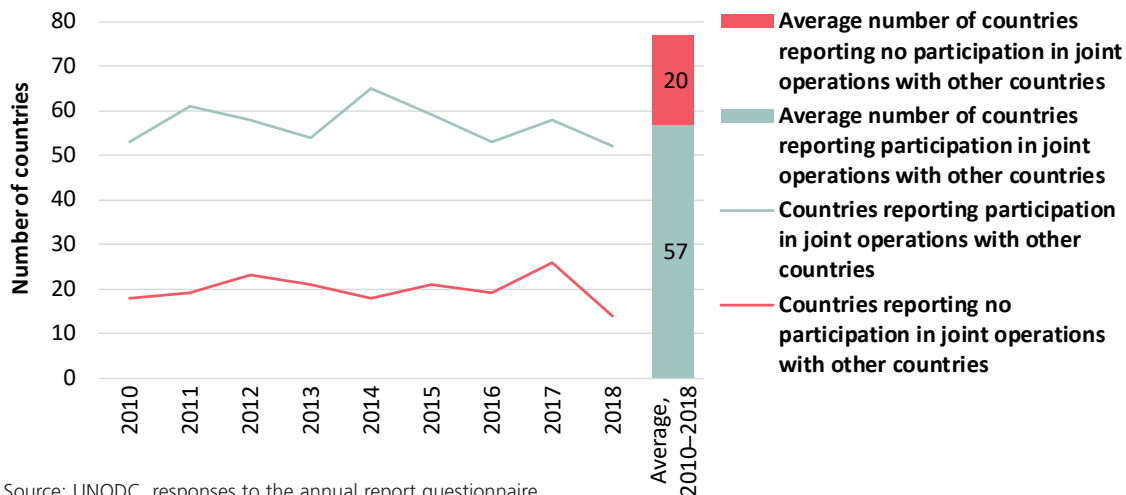
(9) and Oceania (2). By comparison, 14 countries, located across all regions, reported having had no exchange of liaison officers in 2018.

However, the number of countries reporting on an “information exchange via liaison officers” was actually larger (62 countries over the period 2010–2018, or 66 countries in 2018), suggesting that not all countries where foreign liaison officers were actually stationed reported having been involved in the exchange of liaison officers, even though they may have made use of foreign liaison officers stationed in their respective countries. Combining the responses to the two questions on involvement in the exchange of liaison officers and information exchange with liaison officers actually reveals that a total of 68 countries (35 per cent of all the countries to which the annual report questionnaire was sent) appear to have had links with liaison officers in 2018. This includes 27 countries in Europe, 16 in Asia, 13 in the Americas, 10 in Africa and 2 in Oceania.

Exchange of information

All reporting countries seem to engage in the exchange of information with appropriate counterparts in other countries and/or with international organizations. On average, 82 countries reported having exchanged information on drug-related issues with other countries over the period 2010–2018 (42 per cent of all countries to which the questionnaires were sent, or more than 99 per cent

⁵⁵ UNODC, responses to the annual report questionnaire.

FIG. 15 Countries reporting exchange of liaison officers, 2010–2018

Source: UNODC, responses to the annual report questionnaire.

of all reporting countries).⁵⁶ In 2018, only two countries reported no information exchange (one in sub-Saharan Africa and one in Latin America), while 70 countries reported having exchanged information on drug-related issues, most notably countries in Europe (26), followed by countries in Asia (17), Africa (13), the Americas (12) and Oceania (2).⁵⁷

The exchange of information was mostly undertaken in the context of international meetings (64 countries on average over the period 2010–2018), direct communication (64 countries) and information exchange through INTERPOL (64 countries), followed by information exchange through liaison officers (62 countries), information exchange through regional organizations (58 countries), diplomatic channels (52 countries) and information exchange through the World Customs Organization (48 countries).⁵⁸

Extradition of drug law offenders

One of the specific results of international judicial cooperation is the extradition of drug law offenders. This measure was originally agreed in the Single Convention on Narcotic Drugs of 1961⁵⁹ and has been high on the international agenda ever since the adoption of the United Nations Convention against

Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988,⁶⁰ as well as the 2009 Political Declaration and Plan of Action.⁶¹

The number of countries reporting the extradition of drug law offenders has fluctuated over the past decade. On average, 34 countries per year reported such extraditions over the period 2010–2018, which is equivalent to 18 per cent of all countries that received the questionnaire or 49 per cent of all reporting countries. Extraditions of drug law offenders thus seem to be less widespread globally than other forms of international cooperation. Most of the countries that reported the extradition of drug law offenders over the period 2010–2018 were located in Europe (an average of 17 countries per year), followed by the Americas (10 countries, mostly in Latin America and the Caribbean), Africa and the Middle East (4 countries) and Asia and Oceania (3 countries). By comparison, most of the countries that had not extradited drug law offenders (an average of 35 countries per year over the period 2010–2018) were located in Asia and Oceania (12 countries) and in Africa and the Middle East (10 countries).

The reasons why some countries extradite more than others are not clear. There are, of course, differences in the numbers of foreign drug traffickers arrested

⁵⁶ E/CN.7/2020/6.

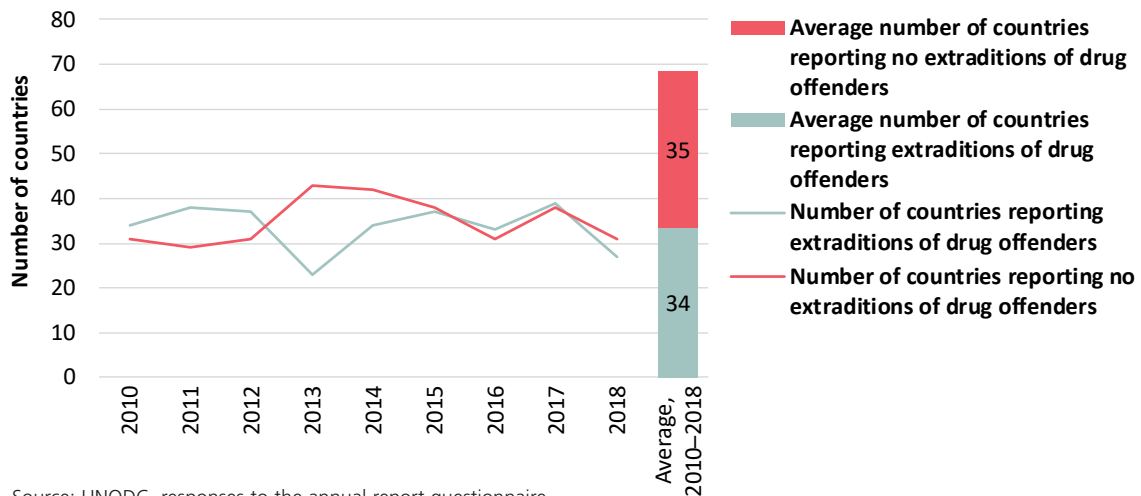
⁵⁷ UNODC, responses to the annual report questionnaire.

⁵⁸ E/CN.7/2020/6.

⁵⁹ See article 36.

⁶⁰ See article 6.

⁶¹ See E/2009/28.

FIG. 16 Countries reporting extraditions of drug law offenders, 2010–2018

Source: UNODC, responses to the annual report questionnaire.

who are potentially subject to extradition. Moreover, extradition treaties between countries provide the basis for extraditions and play a key role. In addition, differences in extradition policies may have an impact on the readiness of countries to extradite drug law offenders. In this regard, the application of the death penalty for drug law offences may also limit extraditions.

International technical cooperation

International technical cooperation in drug supply reduction efforts encompasses the receipt of assistance in such efforts from another country or from an international organization in the form of training, the provision of software (e.g., for processing border control information), financial assistance or assistance in data sharing, as well as the provision of such assistance to other countries.

The number of countries receiving such technical assistance appears to have increased slightly over the period 2010–2018, while the number of countries providing such assistance, although fluctuating, appears to have remained rather stable. Overall, 56 countries reported having obtained technical assistance in the area of drug supply reduction in 2018, up from 50 countries in 2010. By comparison, the number of countries that provided technical assistance to other countries in the area of drug supply reduction amounted to 37 countries in 2018, almost unchanged since 2010.

Most of the technical assistance provided to other countries in the area of drug supply reduction in 2018 appears to have been in the form of training (30 countries), financial assistance (12 countries), equipment (10 countries) and software (10 countries).⁶² This mirrors the most common forms of assistance reported to have been received – training and assistance in data sharing, followed by the provision of equipment and software.⁶³

The assistance received was judged sufficient for their needs by most reporting countries in Europe (88 per cent in the period 2017–2018) and in Asia and Oceania (58 per cent). By contrast, in Africa and the Americas, only a minority of reporting countries regarded the assistance received as meeting their needs (40 and 43 per cent, respectively).⁶⁴

Development assistance dedicated to drug control has declined

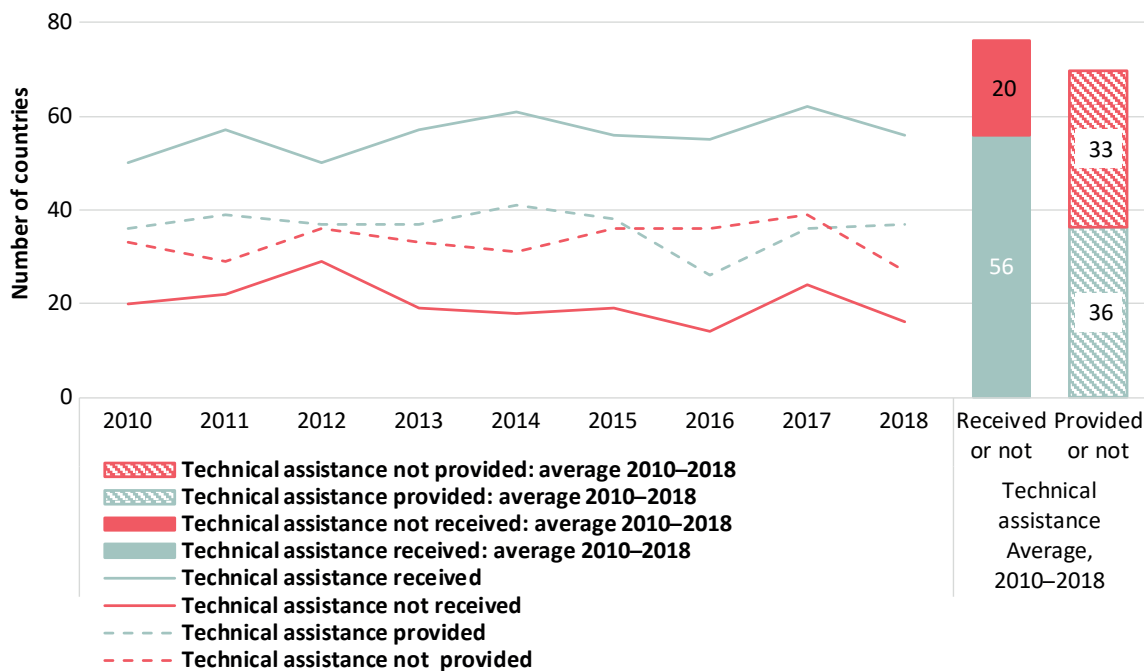
Donor countries report to the Development Assistance Committee (DAC) of OECD on areas in which they have committed themselves to providing funds for development assistance or have actually disbursed such funds to support developing countries. The reported statistics primarily include

⁶² UNODC, responses to the annual response questionnaire.

⁶³ E/CN.7/2020/6.

⁶⁴ Ibid.

FIG. 17 Countries reporting having received or provided technical assistance in the area of drug supply reduction during the reporting year, 2010–2018



Source: UNODC, responses to the annual report questionnaire.

information on funds provided by the 30 members of DAC, all of which are OECD members. Moreover, they include information provided by a number of European OECD member countries that are not DAC members (mostly countries in South-Eastern Europe and the Baltic area), as well as a number of other non-DAC-member donor countries (mostly oil- and gas-producing countries, such as most of the Gulf countries, the Russian Federation, Kazakhstan and Azerbaijan, as well as a few other countries in Asia, such as Israel and Thailand). Funds provided to developing countries by multilateral bodies, such as the United Nations, the European Union, the International Monetary Fund, the World Bank and the various regional development banks, are also included. Funds provided by other emerging donor countries, such as China, seem not to be included in these statistics.⁶⁵

The statistics are provided both in terms of commitments made by donor countries and in terms of

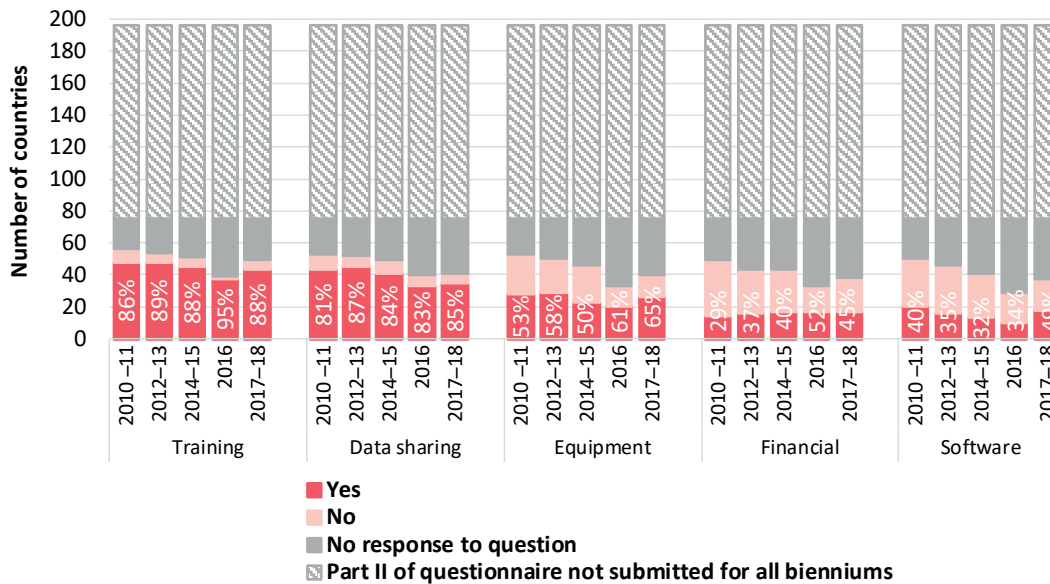
actual gross disbursements related to drug control. In most years, the former has tended to be higher than the latter. In any case, DAC statistics show a two-and-a-half-fold increase in development assistance by donor countries over the period 2000–2017, expressed in constant United States dollars, both in terms of overall commitments made and gross disbursements of development aid.

By contrast, commitments and disbursements dedicated explicitly to drug control fell by 98 and 89 per cent, respectively, over that period. Most of the decline was reported over the period 2006–2010, followed by a stabilization at low levels ever since. Expressed as a proportion of total development aid, drug control-related commitments fell from a proportion of 3 per cent of all development assistance in 2000 to 0.02 per cent in 2017. In parallel, gross disbursements related to drug control fell from 1.9 per cent of all such disbursements for development assistance in 2003 to 0.04 per cent in 2017.⁶⁶

65 OECD, “Query Wizard for International Development Statistics”.

66 OECD, OECD.Stat, Development, Flows based on individual projects, “Creditor Reporting System (CRS)”.

FIG. 18 Member States that received technical assistance in the area of drug supply reduction, by type of assistance, 2010–2018



Source: E/CN.7/2020/6.

Note: This analysis is based on 196 countries to which the annual report questionnaire is sent every year and on information provided by 75 countries that reported throughout the period 2010–2018 (by either providing an answer to each question or leaving the answer blank). The percentages represent the proportion of countries reporting their involvement in each activity for each biennium out of all countries providing such information (i.e. countries reporting either “yes” or “no” to the respective question asked).

Without more detailed information, it is difficult to judge to what extent the massive declines shown in these data reflect real declines in funds provided for drug control purposes, or whether they only reflect some changes in accounting practices. Some countries such as Colombia and Peru have become less reliant on donor assistance for drug control, but it cannot be excluded that Member States may simply provide development assistance under other budget lines.

Most assistance for drug control is provided to the Americas and Asia

The primary recipients of overall development assistance over the period 2002–2017 were countries in Africa and in Asia, with little change between the periods 2002–2009 and 2010–2017.⁶⁷

By contrast, development assistance dedicated exclusively to drug control purposes was dominated by funds made available primarily to countries in the Americas, in particular over the period 2002–2009

(67 per cent of the global total), followed by Asia. The latter became the main receiving region over the period 2010–2017 period (48 per cent of the global total), followed by the Americas (23 per cent of the global total). Assistance to those regions likely reflects the concentration of cocaine production and trafficking in the Americas and opium and heroin production and trafficking in Asia. The funds made available to Africa increased from 0.3 per cent of the global total over the period 2002–2009 to 8 per cent of the global total over the period 2010–2017, reflecting the emerging importance of drug trafficking and use in Africa.⁶⁸

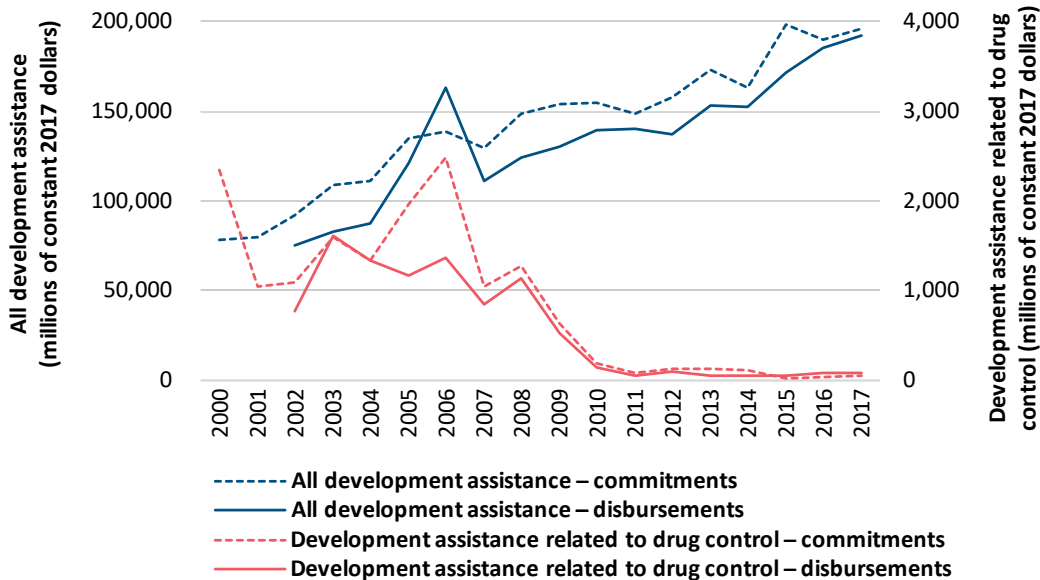
At the same time, OECD data point to a significant reduction in funds made available by donor countries for drug control purposes, from an average of \$1.1 billion per year over the period 2002–2009 to \$77 million per year over the period 2010–2017.⁶⁹ This contrasts with the continued calls for more international cooperation on drug control

67 Ibid.

68 Ibid.

69 Ibid.

FIG. 19 Commitments and disbursement of funds by donor countries reporting to the Development Assistance Committee on development assistance in general and development assistance dedicated to drug control, 2000–2017



Source: OECD, OECD.Stat, Development, Flows based on individual projects, “Creditor Reporting System (CRS)”.

Note: The statistics include information provided by observers of international institutions such as the United Nations Development Programme, the World Bank, the International Monetary Fund and various regional development banks, as well as by other OECD member countries and non-OECD-member DAC “participants”, including several oil-producing countries, such as Gulf States, the Russian Federation, Kazakhstan and Azerbaijan.

issues and more funding of such activities. Such marked declines affected all regions, in particular the Americas.

The net increase in overall development assistance over the past two decades (from \$112 billion to \$159 billion per year),⁷⁰ makes it difficult, however, to assess to what extent the reported declines in funds made available for drug control purposes were merely statistical artefacts, possibly offset by additional funds made available under different budget lines.

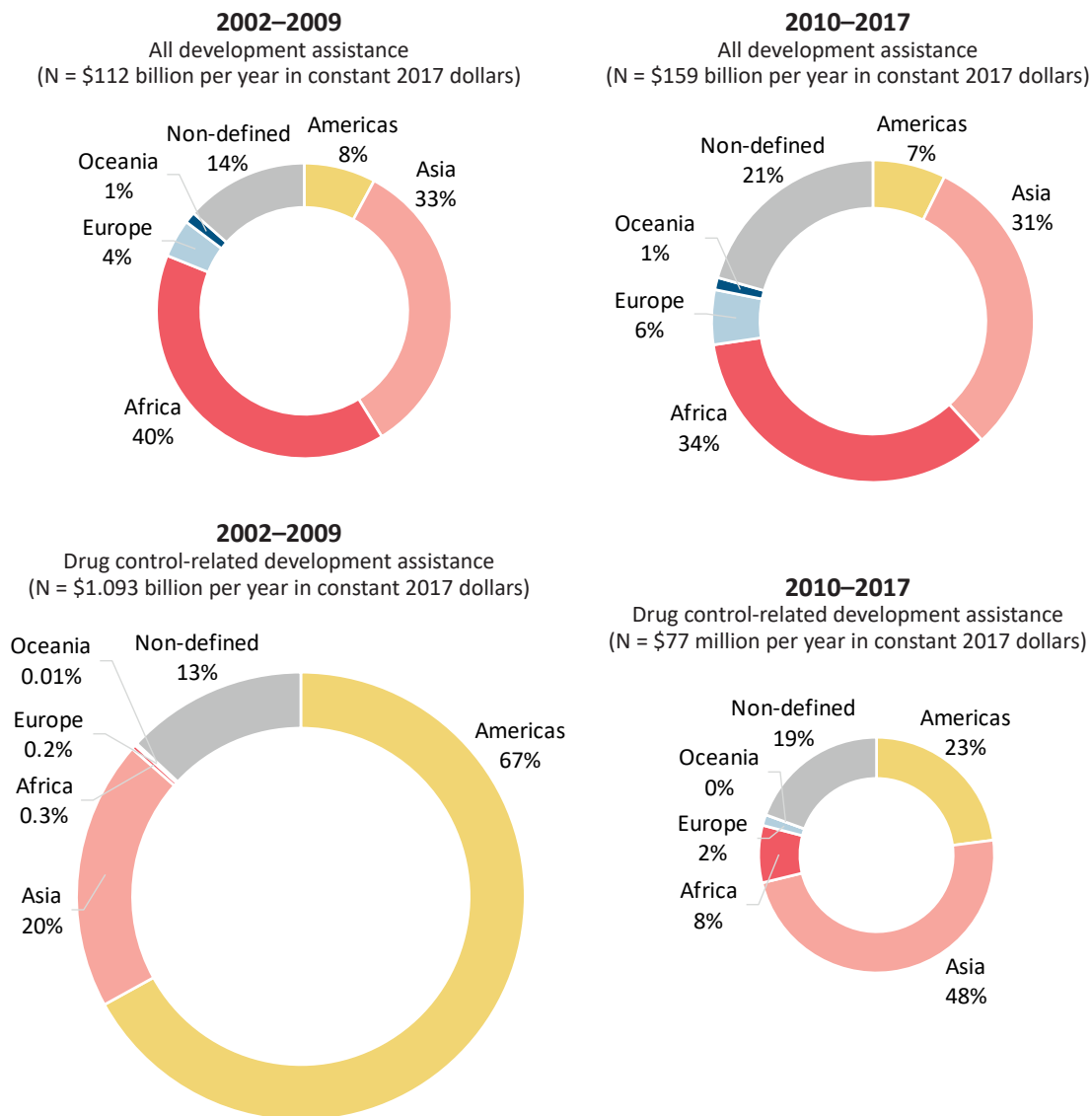
As reflected in the OECD statistics on gross disbursement of development assistance, the single largest recipient of development assistance related to drug control, excluding funds made available for alternative development, over the period 2002–2017 was Colombia (\$3.7 billion, expressed in 2017 United States dollars), followed by Afghanistan (\$1.3 billion), Peru (\$0.6 billion), the Plurinational State

of Bolivia (\$0.5 billion), Pakistan (\$0.3 billion), Ecuador (\$0.3 billion) and Mexico (\$0.2 billion), that is, all the countries affected by significant illicit drug production and/or drug trafficking activities. Most of those countries saw significant reductions in drug-related funding of development assistance between the periods 2002–2009 and 2010–2017. At the same time, several of those countries still benefited from an overall increase in development assistance over the two periods, including Colombia, Bolivia (Plurinational State of) and Mexico in the Americas and Afghanistan and Pakistan in Asia.⁷¹ However, UNODC is also aware that several countries mentioned above have integrated a number of drug control activities into their national budgets in recent years. Such activities were previously supported by the international community, thus often rendering direct comparisons difficult.

70 Ibid.

71 Ibid.

FIG. 20 Regional distribution of gross disbursements of all development assistance and of drug control-related assistance, 2002–2009 and 2010–2017



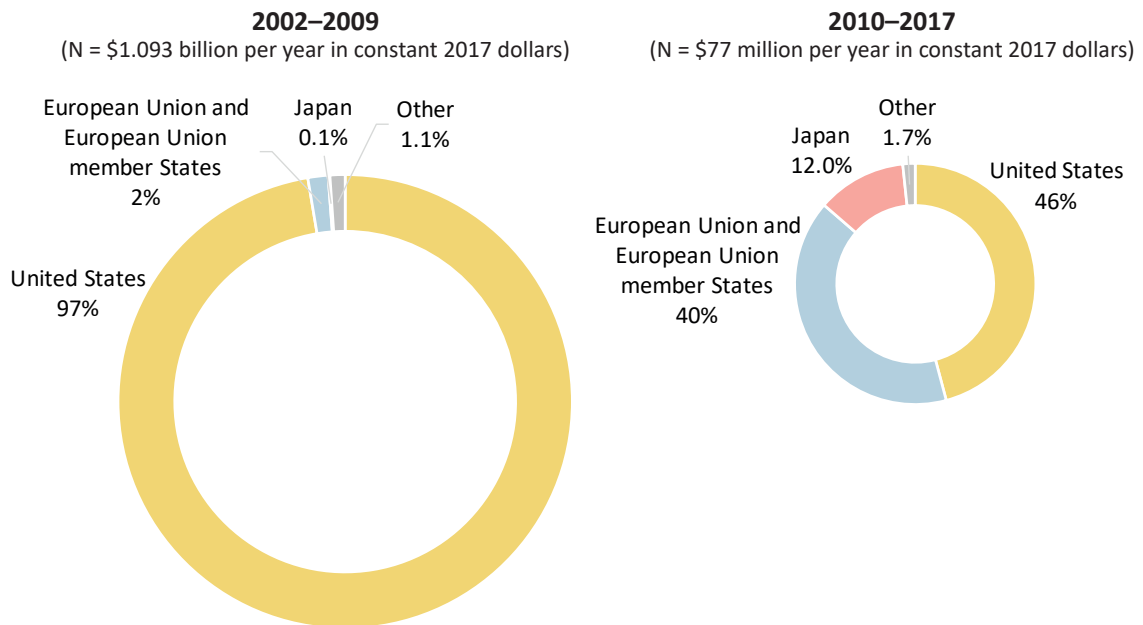
Source: OECD, OECD.Stat, Development, Flows based on individual projects, "Creditor Reporting System (CRS)".

Available data also suggest that the overall lesser funds available for drug control from development assistance are now shared between more beneficiary countries, rising from an average of 47 countries per year over the period 2002–2009 to 69 countries over the period 2010–2017 (82 countries in 2017).⁷²

⁷² Ibid.

Most funds are sourced from the United States and the European Union

Regarding the origin of development funds made available for the purposes of drug control, DAC statistics suggest that, over the period 2002–2017, most such funds were provided by the United States, followed by the European Union (including its

FIG. 21 Donors of development assistance funds dedicated to drug control, 2002–2017

Source: OECD, OECD.Stat, Development, Flows based on individual projects, “Creditor Reporting System (CRS)”.

member States) and Japan. Although the share provided by the United States continues to be the largest worldwide, the shares provided by both the European Union (and its member States) and Japan increased over the period 2010–2017, as compared with the period 2002–2009.

Development assistance dedicated to drug control has started to show an upward trend again in recent years

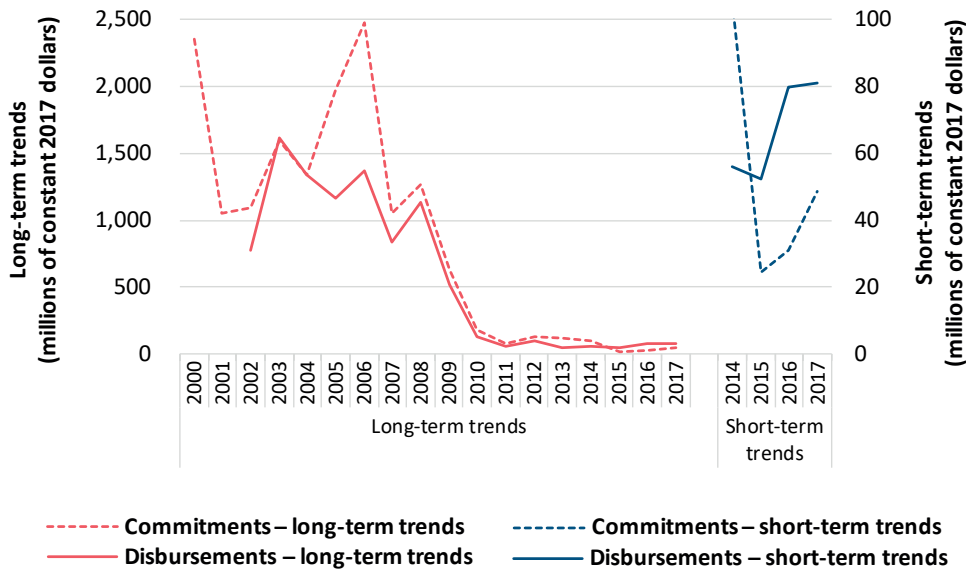
Irrespective of the clear long-term downward trend in assistance provided to developing countries for drug control purposes, there have again been signs of an upward trend in recent years (2015–2017) with regard to both commitments and gross disbursements of funds for drug control-related activities. At the same time, data also suggest that, even at current growth rates, it will nevertheless take a long time for the levels of funds dedicated to drug control that were available at the beginning of the new millennium to be reached again.

Has international cooperation led to global quantities of drugs seized growing faster than global drug production?

The quantities of drugs seized have clearly increased over the past decades. This could be the consequence of more drugs being smuggled and/or of improved law enforcement efforts. If the growth in the volume of drugs seized outpaces the growth in the volume produced, however, it can be assumed that interdiction capabilities have effectively improved. This is reflected in available data: while cocaine manufacture at the global level doubled over the period 1998–2018, the quantity of cocaine seized globally more than tripled. Likewise, global opium production rose by around 80 per cent over the period 1998–2018, while the quantity of opiates seized globally tripled.

Even when taking into account the possibility that changes in drug seizures may not be fully comparable with changes in drug production, because seizures are reported in terms of heterogeneous purity levels

FIG. 22 Commitments and disbursements of development assistance funds for drug control: long-term trends versus short-term trends

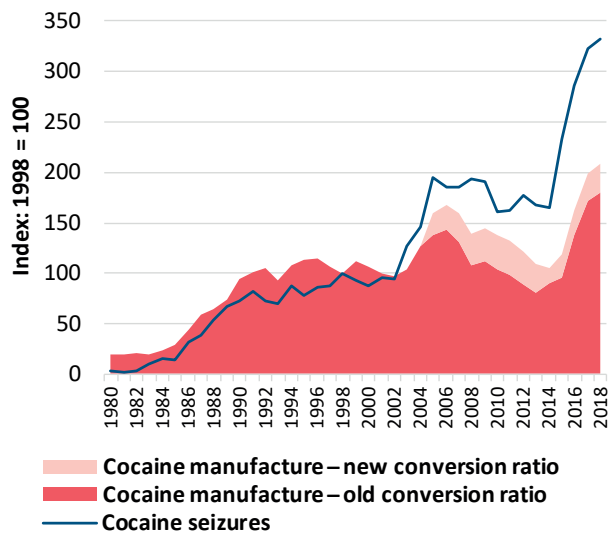


Source: OECD, OECD.Stat, Development, Flows based on individual projects, “Creditor Reporting System (CRS)”.

while production is estimated in terms of fixed purity levels, the fact that seizures have increased far more than production – with no indications of massive declines in the purity levels of drugs trafficked at the global level – suggests that rates of global drug interdiction have increased over the years. It is likely that a number of the largest drug seizures, which contributed to these results, would not have been possible without international cooperation.

The link between expenditure on drug control by donor countries as part of their development assistance and the results of related international cooperation in terms of law enforcement successes in seizing drugs is not at all clear, and all attempts to provide an explanation remain highly speculative. One possible explanation could be that the large amount of funds dedicated to drug control at the beginning of the new millennium may have contributed to improved cooperation on drug control issues at the global level and across countries. Once this cooperation became institutionalized, it continued, even though it appears that far smaller amounts of new funds were made available by the international community over the past decade.

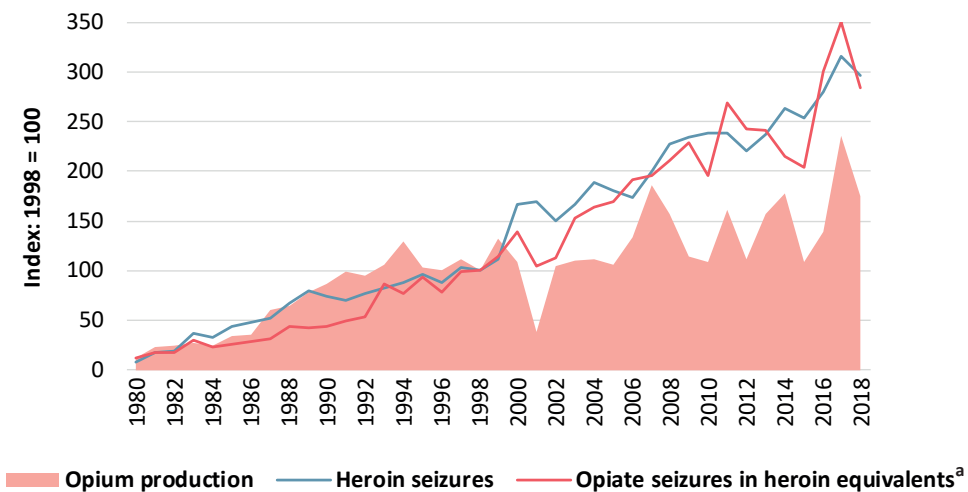
FIG. 23 Growth in global cocaine manufacture and global quantities of cocaine seized, 1980–2018



Sources: UNODC, responses to the annual report questionnaire (for data on seizures); UNODC coca cultivation surveys; and United States, Department of State, International Narcotics Control Strategy Reports (for cocaine manufacture estimates).

Note: The 2018 estimates of cocaine manufacture are provisional.

FIG. 24 Growth in global opium production and global quantities of opiates seized, including heroin, 1980–2018



Sources: UNODC, responses to the annual report questionnaire (for data on seizures); UNODC, opium poppy surveys, and responses to the annual report questionnaire; and United States, Department of State, International Narcotics Control Strategy Reports (for opium production estimates).

^a Applying a conversion ratio of 10 kg of opium per 1 kg of morphine or heroin.

ALTERNATIVE DEVELOPMENT

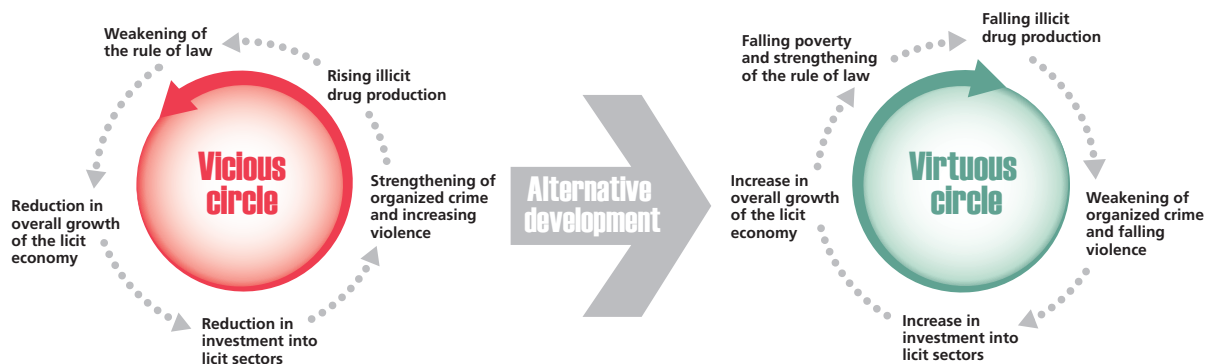
Alternative development is aimed at addressing income- and non-income-related multidimensional poverty and the lack of livelihood opportunities, which are among the root causes of illicit drug crop cultivation. The Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem of 2009, along with the United Nations Guiding Principles on Alternative Development of 2013, the outcome document of the special session of the General Assembly, held in 2016, and the Ministerial Declaration on Strengthening Our Actions at the National, Regional and International Levels to Accelerate the Implementation of Our Joint Commitments to Address and Counter the World Drug Problem of 2019, have placed alternative development high on the global agenda as a development-oriented drug control strategy.

Measuring the impact of alternative development is challenging. Having recognized this fact, many Member States sought to ensure that, in the 2009 Plan of Action, the recommendations relating to

“international cooperation on eradicating the illicit cultivation of crops used for the production of narcotic drugs and psychotropic substances and on alternative development” reflected the importance of assessing the impacts of alternative development not only on the basis of illicit crop estimates but also on the basis of human development indicators. The extent of the area under illicit crop cultivation does not in itself reflect the sustainability of development efforts and is not a sufficient indicator for assessing the success of alternative development interventions.⁷² Experience has shown that short-term reductions in illicit crop cultivation can be quickly reversed, or cultivation can be displaced to other locations, if interventions have not addressed the root causes of illicit crop cultivation and provided sustainable solutions.⁷⁴

Evaluations of alternative development interventions have largely relied on post-project implementation reviews and not on rigorous impact assessments with pre- and post-intervention analysis. Member States have concurred that more efforts are required to improve the impact assessments of alternative development projects with a view to strengthen the evidence base and further increase the effectiveness of projects.⁷⁵

FIG. 25 Theory of change in alternative development



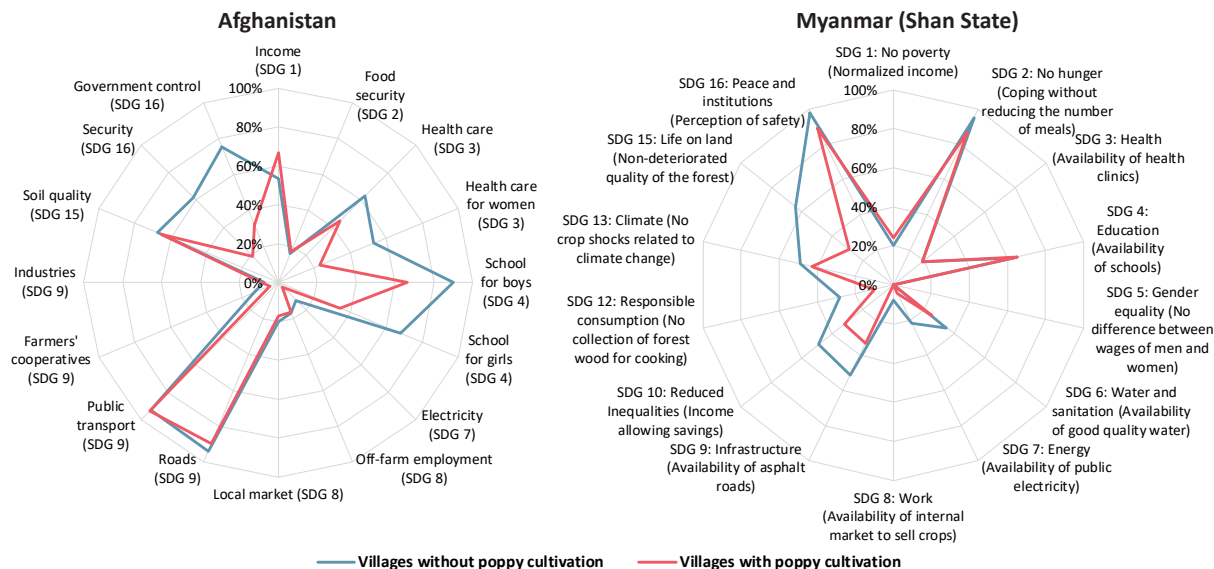
Source: *World Drug Report 2015* (United Nations publication, Sales No. E.15.XI.6).

73 UNODC. 2005. "Alternative Development: A Global Thematic Evaluation. Final Synthesis Report".

74 *World Drug Report 2015*. (United Nations publication, Sales No. E.15.XI.6).

75 Outcome document of the thirtieth special session of the General Assembly, entitled "Our joint commitment to effectively addressing and countering the world drug problem" (General Assembly resolution S-30/1, annex).

FIG. 26 Development gap between villages affected and villages not affected by opium poppy cultivation



Source: UNODC and Afghanistan, Minister of Counter-Narcotics, *Sustainable Development in an Opium Production Environment: Afghanistan Opium Survey Report 2016* (May 2017) and UNODC and Myanmar, Central Committee for Drug Abuse Control, *Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar. Implications for Alternative Development, Peace and Stability* (March 2017).

Notes: The SDG indicators in the graphs are interpretative elements of the Sustainable Development Goal indicators, not the Sustainable Development Goal indicators themselves, of which there are 247. The development gap refers to the difference in Sustainable Development Goal indicators between villages affected (red line) and villages not affected (blue line) by illicit crop cultivation. The closer the lines are to the outside boundaries of the graphs, the better the situation of the villages is in relation to the Sustainable Development Goal indicators.

An earlier analysis⁷⁶ by UNODC highlighted that alternative development interventions, if well designed, can help to address some of the underlying factors and root causes of illicit crop cultivation and can ultimately result in a sustainable reduction in illicit crop cultivation in targeted regions through integrated rural development. The analysis showed that success in alternative development does not come quickly, as it is dependent on long-term investments that enhance human development, gender equality and women’s empowerment, land governance, security, the rule of law, institutional presence and environmental management and sustainability.

Other post-intervention analyses have been critical of the effectiveness of alternative development projects,⁷⁷ while others have been more optimistic and have explained further the potential drivers of

illicit crop cultivation and changes due to alternative development projects on the basis of theoretical economic frameworks.⁷⁸ Understanding the drivers of illicit crop cultivation remains at the core of the design of evidence-based alternative development projects and policies. These drivers continue to be multifaceted and can differ depending on national and local circumstances.

Factors influencing illicit crop cultivation

Development gaps are the main factors associated with illicit crop cultivation

Annual surveys of rural communities in Afghanistan and Myanmar⁷⁹ have shown that villages affected by illicit opium cultivation have a lower level of

⁷⁶ Ibid.

⁷⁷ Special Inspector General for Afghanistan Reconstruction, *Counternarcotics: Lessons from the U.S. Experience in Afghanistan* (Arlington, Virginia, United States, 2018).

⁷⁸ Victoria A. Greenfield and others, *Reducing the Cultivation of Opium Poppies in Southern Afghanistan* (Santa Monica, California, RAND Corporation, 2015).

⁷⁹ For example, UNODC annual socioeconomic reports on Afghanistan and Myanmar.

several of the multidimensional criteria for sustainable development (constituting what is referred to here as a development gap) than villages not affected by such cultivation. Analysed through the lens of the Sustainable Development Goals, the comparison of villages affected and not affected by illicit opium cultivation suggests that different development factors drive farmers to engage in illicit cultivation. For example, in 2017, in Afghanistan, the development gap was particularly acute with regard to the Sustainable Development Goals related to security and access to health and education services, while in Myanmar (Shan State) it was mostly associated with the Sustainable Development Goals related to infrastructure and natural resources.⁸⁰ In the same year, in Colombia, a comparison among 6,000 households, located in 12 departments of the country, showed that households cultivating coca had less access to public services such as electricity and drinking water than households not cultivating coca.⁸¹ The development gap and inequality of opportunities differ not only between countries but also between specific locations within a country; for example, in 2017, in North Shan State in Myanmar, they were largely related to water, sanitation and energy, while in South Shan State, to deteriorating natural resources.⁸² Therefore, generalizations about the drivers of illicit cultivation and the specific gaps and inequalities of opportunities that alternative development may be aimed at reducing could be deceptive.

Drivers of illicit crop cultivation are dynamic and cannot be explained by income alone

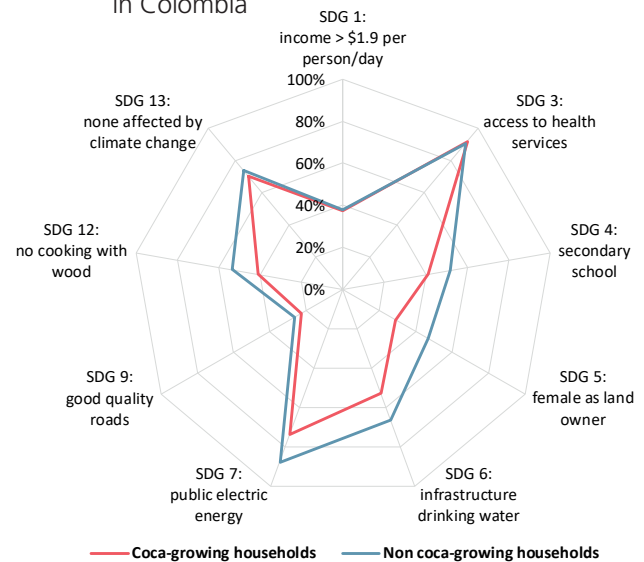
Development gaps can result in unequal opportunities to access basic services required for individuals

80 UNODC and Afghanistan, Minister of Counter-Narcotics, *Sustainable Development in an Opium Production Environment: Afghanistan Opium Survey Report 2016* (May 2017); and UNODC and Myanmar, Central Committee for Drug Abuse Control, *Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar: Implications for Alternative Development, Peace and Stability* (March 2017).

81 UNODC calculations using data from 6,000 households representing the baseline for evaluation of the alternative development project entitled “Land titling to substitute illicit crops” (“Formalizar para sustituir”) in 2017. The baseline data reflect the situation before the beginning of the project.

82 UNODC and Myanmar, *Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar*.

FIG. 27 Development gap between coca-growing households and non-coca-growing households in Colombia



Source: UNODC calculations using data from 6,000 households representing the baseline for evaluation of the alternative development project entitled “Land titling to substitute illicit crops” (“Formalizar para sustituir”) in 2017. The baseline data reflect the situation before the beginning of the project.

Notes: The SDG indicators in the graphs are interpretative elements of the Sustainable Development Goal indicators, not the Sustainable Development Goal indicators themselves, of which there are 247. The development gap refers to the difference in Sustainable Development Goal indicators between households cultivating illicit crops (red line) and households not cultivating illicit crops (blue line). The closer the lines are to the outside boundaries of the graphs, the better the situation of the households is in relation to the Sustainable Development Goal indicators.

to sustain and improve their livelihoods, including when the gaps relate to income disparities, and they can drive different livelihood options (e.g., illicit crop cultivation). However, illicit crop cultivation is not always explained in terms of income differences. Sometimes there are no large differences, or it is even the case that higher income is reported in villages affected by illicit crop cultivation (although overall income levels remain mostly low in both types of communities), as profits derived from illicit crops can be used to temporarily escape poverty⁸³ or to compensate for additional expenses associated with the remoteness of the villages affected by illicit crop cultivation. There are several factors that determine choices about cultivation, including security

83 Allan Gillies, John Collins and Alexander Soderholm, “Addressing the development implications of illicit economies: the rise of a policy and research agenda”, *Journal of Illicit Economics and Development*, vol. 1, No. 1 (2019), pp.1–8.

Female-headed households and illicit crop cultivation

Information about the participation of women in illicit crop cultivation is scarce, and even more so on female-headed households. A baseline survey in 2017 covering 16,100 households in 15 provinces in Afghanistan indicated that female-headed households were less prone to be involved in opium poppy cultivation than male-headed households, as, in that country, the cultivation of cash crops in general is typically a male activity, whereas women are usually in charge of animal husbandry and poultry.

Overall, female-headed households were in a critical condition, characterized by lower annual earnings (up to 40 per cent less) than male-headed households. Female-

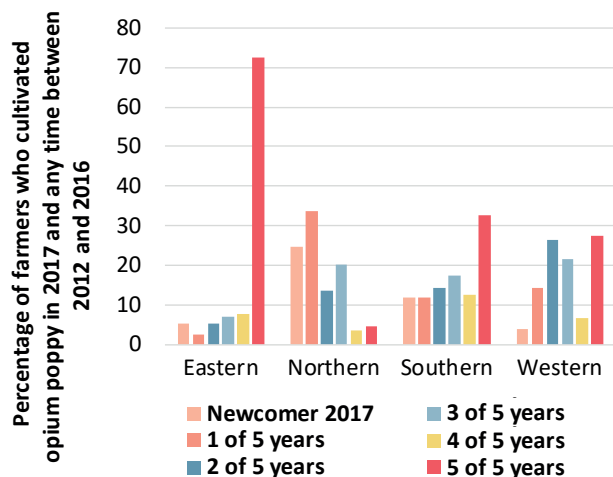
headed households were also found to have lower food security, a lower degree of trust and confidence in national authorities, and a higher number of household members in search of employment. The survey findings suggested that, in general, female-headed households were more distressed by the conflict in Afghanistan than male-headed households.

Source: UNODC, needs assessment and baseline report of the Boost Alternative Development Interventions through Licit Livelihoods and the Community-based Agriculture and Rural Development East and West alternative development projects in Afghanistan (2017).

and governance issues, but also deeper socio-economic disadvantages. In Myanmar, for example, further analysis of the economic data indicates that farmers in villages involved in illicit crop cultivation earn slightly higher income but have significantly

due to greater living expenditure (for example, a lack of schools or markets in the village, which results in greater transport costs). However, a similar or higher level of income does not always fully offset the higher costs of living in those villages.⁸⁴

FIG. 28 Reported frequency of opium poppy cultivation between 2012 and 2016 of farmers who cultivated opium poppy in 2017, selected regions, Afghanistan



Source: UNODC and Afghanistan, Minister of Counter-Narcotics, *Afghanistan Opium Survey 2017: Challenges to Sustainable Development, Peace and Security* (May 2018).

smaller formal or informal savings than similar farmers in villages not involved in illicit crop cultivation

The drivers of illicit drug cultivation are dynamic and can change a farmer's attitude to illicit cultivation over time. For example, in Afghanistan it was observed that, during a five-year period, some farmers cultivated illicit crops every year, some did so intermittently (from two to four times) and others only once, while others were new to illicit cultivation or had re-initiated it after a long-term break.⁸⁵ The dynamic, versatile and context-specific nature of the drivers of illicit cultivation prevent the development of prescriptive solutions for successful alternative development programmes. What is clear is that, for an alternative development intervention to be effective, it must address the long-term root causes of the development gap, which may be related to farmers' livelihoods, households' vulnerability to re-impoverishment, and to security and governance.⁸⁶

⁸⁴ UNODC and Myanmar, *Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar*.

⁸⁵ UNODC and Afghanistan, *Sustainable Development in an Opium Production Environment*.

⁸⁶ *World Drug Report 2015*; UNODC and Afghanistan, *Sustainable Development in an Opium Production Environment*; and UNODC and Myanmar, *Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar*.

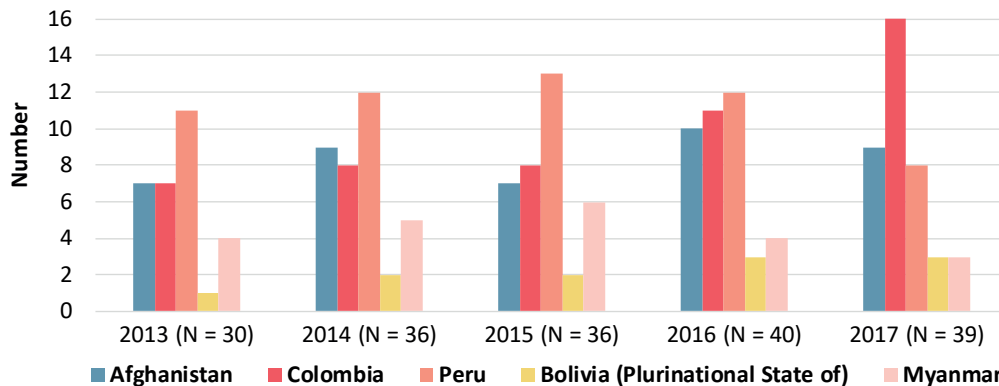
Contribution of alternative development to female income in Afghanistan

In Afghanistan, the Government, together with non-governmental organizations, is currently implementing with UNODC support a unique alternative development project for the period 2017–2021 in 13 provinces that focuses strongly on increasing female income. In doing so, the project is contributing to peace and stability, which are significantly associated with the reduction of illicit crop cultivation. The project involves the initiation or strengthening of dairy and poultry production, vegetable cultivation and orchard activities, with a view to primarily enhancing female income, which usually only constitutes 5 to 10 per cent of total household income.

The mid-term evaluation of the project, carried out in 2019, based on surveys of more than 4,000 households in 220 villages, indicated that, in comparison with the baseline in 2017, the number of households with female members who generated income had increased from 21 to 29 per cent, as had income earned by women, by as much as 10 per cent.

Source: UNODC, mid-term impact assessment of the Boost Alternative Development Interventions through Licit Livelihoods alternative development project in Afghanistan (2020).

FIG. 29 Number of alternative development projects, by country and year, 2013–2017



Source: UNODC, “Research brief: global overview of alternative development projects, 2013–2017” (Vienna, 2019).

Note: N = 53. The numbers between brackets refer to the total number of projects under implementation each year.

Overview of alternative development projects in the period 2013–2017

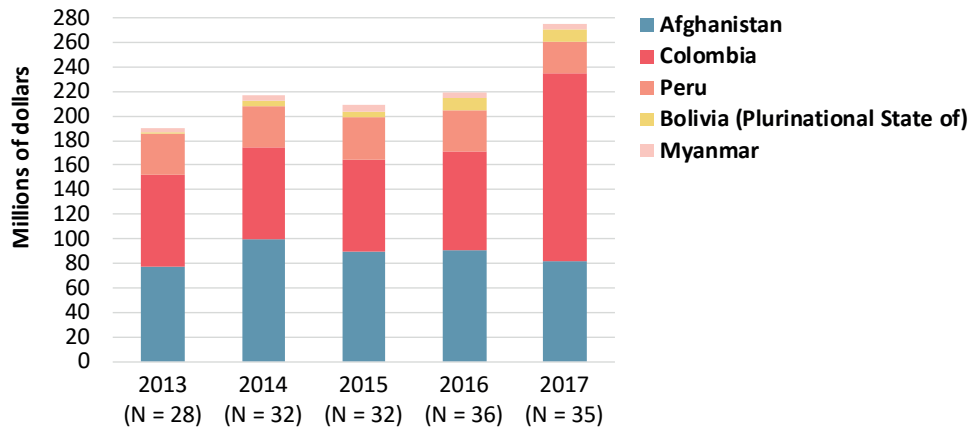
In 2019, UNODC undertook a study to collect information on the characteristics of alternative development projects in terms of individual budgets, main objectives, geographical coverage, duration and implementing partners at the global level, with the aim of understanding the scale of implementation of these projects.

The analysis represented one of the first efforts to collect and systematize information on the status of

alternative development projects⁸⁷ worldwide. It covered a total of 53 identified alternative development projects that had been under implementation during the period 2013–2017 in the countries where most opium poppy is cultivated (Afghanistan, Myanmar and Mexico⁸⁸) and those where most coca

87 The analysis considers as an “alternative development” project those aimed at improving the quality of life of farmers and reduce or prevent the cultivation of illicit drug crops. For simplification purposes, project also refers to programme in the analysis.

88 In the case of Mexico, projects conducted in regions affected by opium poppy cultivation did not explicitly include the double objective of improving the quality of life of farm-

FIG. 30 Total annual budget of alternative development projects, by country, 2013–2017

Source: UNODC, “Research brief: global overview of alternative development projects, 2013–2017”.

Notes: $N = 51$. Two alternative development projects in Colombia were excluded as no official data on their budgets were publicly available. The total annual budget was estimated as the sum per year of the budgets of the alternative development projects after being divided by the total duration of the projects in number of years. The numbers between brackets refer to the total number of projects under implementation each year for which a budget was available.

is cultivated (Colombia, Peru and the Plurinational State of Bolivia). These countries together accounted for 98 per cent or more of the global cultivation of opium poppy and coca in 2017,⁸⁹ the last year covered in the study.⁹⁰

Small increase in the total annual budget of alternative development projects worldwide driven by projects in Colombia

The aggregated annual budget for all the alternative development projects identified experienced a small but gradual increase over the period 2013–2017, from \$190 million to \$275 million. That was mainly due to projects in Colombia, which more than doubled their total annual budgets, from a combined

total of \$75 million in 2013 to \$154 million in 2017. The growth was related to increased interest in funding alternative development projects following the peace agreement concluded with the Revolutionary Armed Forces of Colombia (FARC) in 2016, which included commitments towards the voluntary cessation of illicit crop cultivation and the implementation of social inclusion and development projects. One of the largest alternative development projects, the National Comprehensive Programme for the Substitution of Illicit Crops (Plan Nacional Integral de Sustitución de Cultivos de Uso Ilícito), is funded by the Government of Colombia.

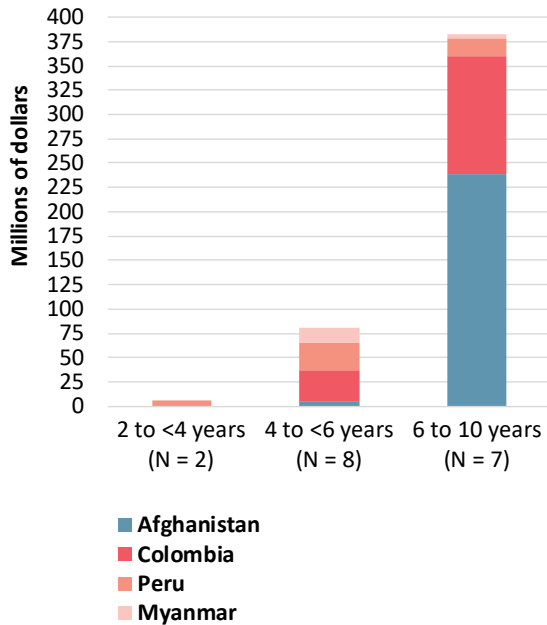
The total annual budget of projects in the Plurinational State of Bolivia was also increased thanks to funds provided by the European Union for two projects on integrated development with coca, one of which started in 2014 and the other in 2016. In Afghanistan and Myanmar, the total annual budget for alternative development projects remained in the same range over the period 2013–2017 (i.e., \$77 million to \$100 million in Afghanistan and \$3.4 million to \$5.6 million in Myanmar). By contrast, funding for alternative development efforts in Peru decreased from \$34 million in 2013 to \$26 million in 2017 as a result of a decrease in the number of projects.

ers and reducing or preventing illicit crop cultivation. One exception was the alternative development project “Rural Development to discourage opium poppy cultivation in Oaxaca, Guerrero and Michoacan”, conducted by the Food and Agriculture Organization of the United Nations, but it is not covered in this report, as it took place during the period 1990–1993.

89 *World Drug Report 2019* (United Nations publication, Sales No. E.19.XI.9).

90 This analysis is based on an extensive review of data and reports gathered from websites, supported by e-mail communications and field visits to the offices of the main international donors located in each of the six countries mentioned.

FIG. 31 Total combined budget of completed alternative development projects, by duration of project, 2013–2017



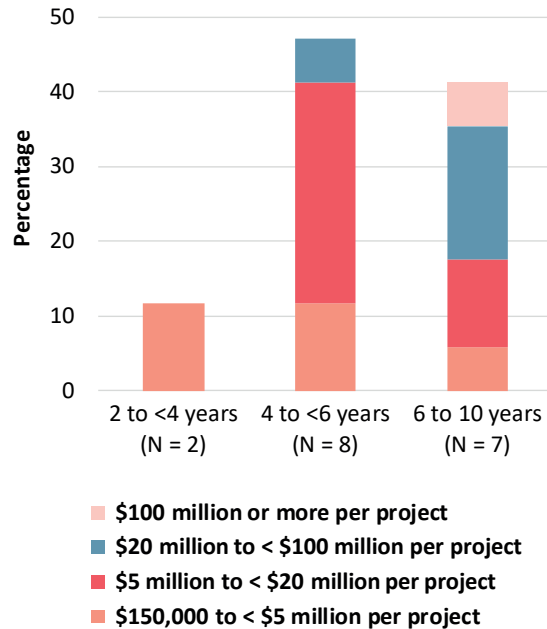
Source: UNODC, “Research brief: global overview of alternative development projects, 2013–2017”.

Note: The data include 17 projects that were completed in 2017 or before. The numbers between brackets refer to the total number of completed projects for each category of project duration. No project was completed during this period in the Plurinational State of Bolivia.

Most funding went to long-term alternative development projects

Alternative development projects promote intricate processes of behavioural change (e.g., farmers’ voluntary decisions to cease illicit crop cultivation) that require long-term and continuous investment. A budget analysis of the projects that ended between 2013 and 2017 showed that most of the funds were spent on long-term projects. Out of a total budget of \$469 million allocated to completed projects over the period 2013–2017, \$382 million went to projects that lasted longer than six years, \$81.3 million to projects that lasted four to six years and \$5.7 million to projects of less than four years.

FIG. 32 Distribution of completed alternative development projects, by individual budget size and project duration, 2013–2017



Source: UNODC, “Research brief: global overview of alternative development projects, 2013–2017”.

Note: The data include 17 projects that were completed in 2017 or before. The numbers between brackets refer to the total number of completed projects for each category of project duration.

Duration of the majority of completed alternative development projects is too short for sustainable results

While the largest share of the total combined budget of the alternative development projects went to long-term projects, in terms of the number of projects, 47 per cent of those completed lasted between four and six years, and 12 per cent lasted less than four years, which is likely to be too short for sustainable results. The remaining 41 per cent of projects lasted from 6 to 10 years. For both short- and long-term alternative development projects, more efforts are required to provide systematic and comparable evidence of the sustainability of their effects on reducing and preventing illicit crop cultivation and community-based socioeconomic growth.

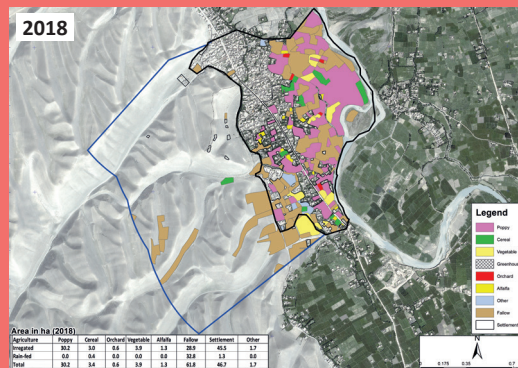
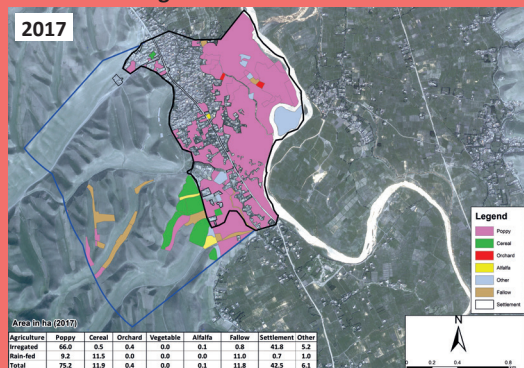
Impact assessments of alternative development interventions in Afghanistan

UNODC, in cooperation with the Government, is currently evaluating the impacts of three large-scale alternative development projects in Afghanistan (with total budgets of \$20 million to \$60 million each). The projects are being implemented by the Afghan Government, two of them jointly with UNDP and one with UNODC. The impact assessments are still ongoing and include the monitoring of a comprehensive set of more than 1,000 socioeconomic indicators and remote-sensing analyses of land cover of more than 530 villages in 15 provinces (bi-)annually (from before the projects began in 2017 until they end in 2022). To be able to isolate the effects of the projects from external factors, the impact assessments consider comparisons of both socioeconomic indicators and land cover changes before and after the implementation of the alternative development projects between villages that receive the interventions (referred to here as treatment villages) and similar villages that do not receive them because they are located

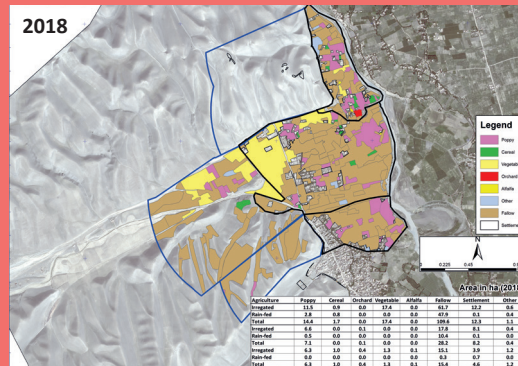
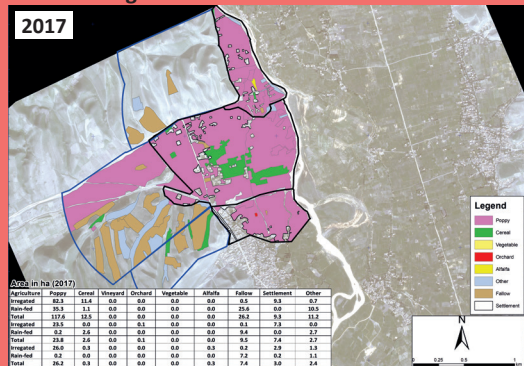
outside the scope of the alternative development projects (referred to here as control villages). In this regard, control villages are key for obtaining robust impact evaluations.

For example, there was a significant reduction in opium poppy areas (depicted in pink in the maps below) in villages that received the alternative development interventions from 2017 to 2018. Nevertheless, a similar reduction was also observed in control villages. If the changes in opium poppy cultivation were purely due to the alternative development projects, then the outcome in the villages receiving the interventions would have been different than in the control villages. The comparison between treatment and control villages helped clarify that the changes in opium poppy cultivation in 2018 were mainly due to a drought, which affected both types of village. The final results of the impact assessments are expected to be available in 2022, once the alternative development projects have ended.

Treatment village

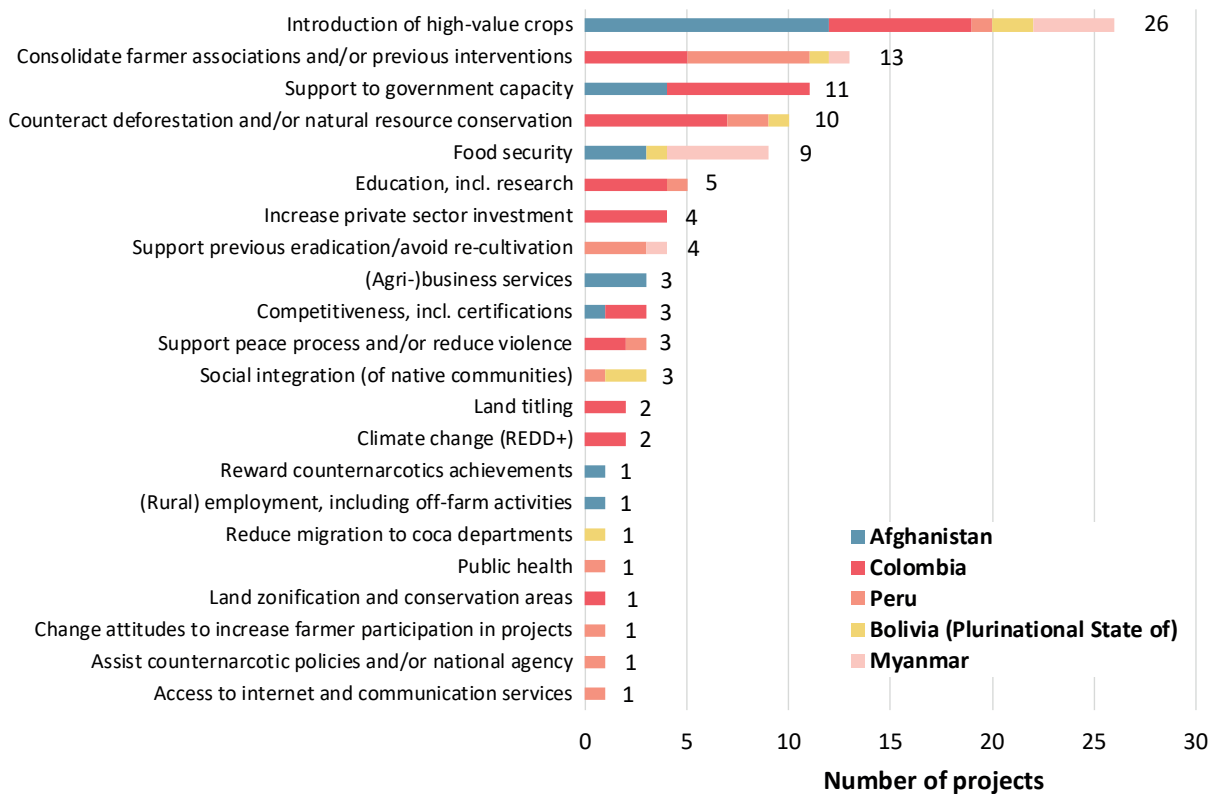


Control village



Source: UNODC, needs assessment and baseline report of the Boost Alternative Development Interventions through Licit Livelihoods and Community-based Agriculture and Rural Development East and West alternative development projects (2017); and UNODC, mid-term impact assessments of the Community-based Agriculture and Rural Development East and West (2019).

Note: "Treatment villages" are those villages currently receiving the alternative development interventions. "Control villages" are similar villages that are currently not receiving such interventions because they are outside the current scope of the alternative development projects.

FIG. 33 Number of alternative development projects, by main objective and country, 2013–2017

Source: UNODC, "Research brief: global overview of alternative development projects, 2013–2017".

Notes: $N = 53$. The main objectives are those as stated in the project documents and are not mutually exclusive. The numbers refer to the number of projects for each stated main objective. The projects had one or more main objectives.

Non-governmental organizations are the main implementing partners in half of all alternative development projects

Alternative development projects were usually implemented by multiple partners, each responsible for specific parts of the interventions, for example, building infrastructure or providing training. Implementing partners either conducted the interventions themselves or hired or subcontracted other entities and organizations. In half of the alternative development projects, local non-governmental organizations or private organizations participated as implementing partners, mostly in projects with budgets between \$20 million and \$100 million, while UNODC was one of the implementing partners in a quarter of the projects, mostly those with individual budgets of less than \$5 million. No

detailed information was available about the amounts provided to individual implementing partners.

Key objectives of alternative development efforts vary greatly between countries

The main stated purposes of the different alternative development projects, aside from reducing or eliminating illicit crop cultivation, varied by country. In Afghanistan, projects focused heavily on the introduction of high-value crops (90 per cent of the projects), in Myanmar, on food security (80 per cent), in the Plurinational State of Bolivia, on the social integration of native communities (70 per cent), in Colombia, on supporting government capacity, including territorial control (40 per cent), and in Peru, on the consolidation of farmers'

Estimates of the number of households cultivating illicit crops worldwide

Reliable estimates of the total extent of illicit crop areas are available from annual remote-sensing evaluations carried out by UNODC together with the countries where most opium poppy is cultivated (Afghanistan, Mexico and Myanmar), and where most coca is cultivated (Plurinational State of Bolivia, Colombia and Peru). However, one of the most persistent gaps in the decision-making process has been the lack of systematic information about the global number of households cultivating illicit crops.

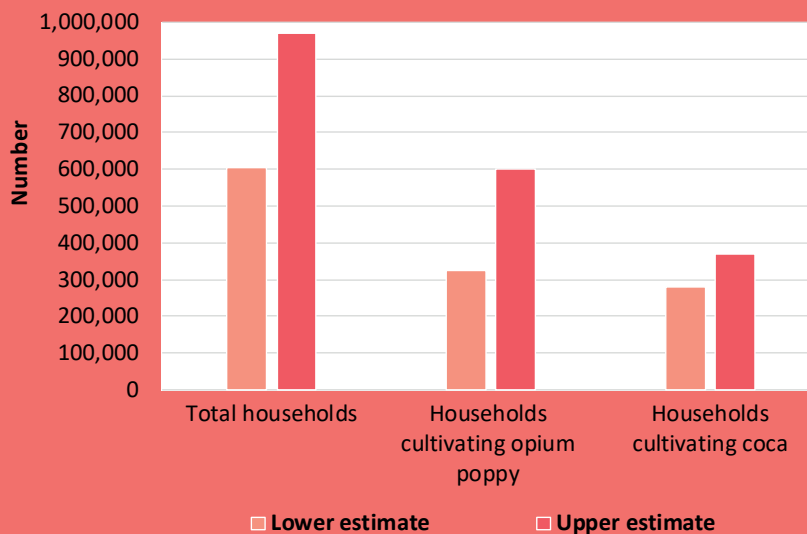
Households may cultivate just one plot or several small or large plots of illicit crops; some locations with large total illicit crop areas may have a relatively small number of such households, while others may have a large number. Therefore, the total extent of illicit crop areas does not alone provide an indication of the number of households growing illicit crops.

On the basis of a methodology that combines data from remote sensing, socioeconomic surveys and agricultural censuses, the number of households cultivating coca bush was estimated to range between

280,000 and 370,000, while those cultivating opium poppy was estimated at between 325,000 and 600,000, resulting in an estimate of 605,000 to 970,000 households cultivating illicit crops in the six countries most affected by coca bush and opium poppy cultivation worldwide.

Any attempt to quantify the extent of the involvement of households in illicit cultivation needs to acknowledge the diversity of rural life. For example, farmers may decide which legal crops to cultivate based on the size and quality of their land, but they may also base their decisions on external factors such as crop prices at the local market. Many households in rural areas also earn income from non-agricultural activities such as wage labour on construction sites. Such issues may explain fluctuations in household income from year to year and affect wider household decisions. As a result of these processes, data on the number of households cultivating illicit crops can be highly dynamic over time, especially in the case of an annual crop such as opium poppy.

Number of households cultivating illicit crops



Source: UNODC, estimates made in 2019 of the number of households cultivating illicit crops worldwide.

Note: based on data on the Andean countries (Plurinational State of Bolivia, Colombia and Peru) and Mexico for 2017, and on Afghanistan and Myanmar for 2018. The research on the number of households cultivating illicit crops was financially supported by Germany (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ).

associations, including the marketing of products and extending previous interventions (40 per cent).

The introduction of high-value crops was one of the most commonly stated main objectives of the alternative development projects, with the exception of those with small budgets of less than \$150,000. The main objectives of the large projects, with budgets of more than \$100 million, included support to government capacity (for example, related to the peace process in the case of Colombia) and, to a minor extent, food security, improved competitiveness of alternative development projects (e.g., marketing assistance), increased farmer participation in alternative development projects, and off-farm activities. The smaller projects, with budgets of less than \$150,000, had as their main objectives the counteracting of deforestation, education and farmer association competitiveness.

Gradual shift away from focusing mainly on high-value crops

Although the introduction of high-value crops was one of the most common main objectives identified in alternative development projects, despite differences among countries, the main focus of such projects overall has shifted over time. While several projects that started in the period 2013–2014 focused on the introduction of high-value crops, that objective was slightly less common in the period 2016–2017. Moreover, some of the most recently initiated alternative development projects are aimed at addressing environmental issues, for example, deforestation and forest degradation, in order to access funding linked to climate change, land use management and natural resource conservation, particularly in Colombia.

Areas with low but sharply increasing levels of illicit crop cultivation are being overlooked

Alternative development projects in Afghanistan and Myanmar tended to be carried out in areas (provinces or states) with traditionally high levels of illicit crop cultivation. However, illicit crop cultivation has recently started to emerge, in some cases at a steady pace, in non-traditional locations such as Jowzjan Province in Afghanistan and Chin State in Myanmar. These emerging cultivation locations have not yet

been covered by alternative development interventions, even though investing there could potentially pay off by preventing the expansion of illicit crop cultivation. Ideally, such interventions, mostly focused on prevention, would also include comprehensive impact assessments in order to provide strong evidence of their effectiveness.

Difficult to assess the number of households targeted by alternative development projects

Reliable evidence on the number of households actually targeted by alternative development initiatives remains scarce. Very few projects conducted baseline and endline surveys or maintained reliable, continuous tracking of project activities and results. By contrast, information was generally provided about the total number of households to be targeted by the different projects, but aggregating that information was complicated. Some projects were not clear about the intended target group; in other cases, the scope of the project was broad and also included households that would indirectly benefit. Some of the projects did not specify the number of target households because they targeted aggregated units such as schools, local community boards or cooperatives. Taking into account these limitations, the best estimate for the number of households intended to be targeted by alternative development interventions in 2017 was 550,000. This estimate includes households cultivating and households not cultivating illicit crops, as alternative development projects are generally aimed at providing benefits to both types of household to avoid the risk of creating “perverse incentives” (i.e., an increase in illicit crop cultivation by households not previously cultivating illicit crops in an attempt to also benefit from alternative developments interventions).

DRUGS AND VIOLENCE

The nexus between drugs and violence is a complex issue with multiple facets. The purpose of this chapter is to frame the issue rather than explore that complexity in its entirety, and to offer some evidence that illustrates key elements using the lens of the tripartite framework developed by Paul Goldstein. While he was the first scholar to conceptualize and explain the relationship between drugs and violence,⁹¹ others since then have further elaborated his framework and broadened it to apply it to the analysis of a wider nexus: that between drugs and crime.⁹²

The tripartite framework on drugs and violence

The tripartite framework developed by Goldstein considers drug use and drug trafficking as etiological factors leading to violence and posits three causal mechanisms or models, which are not mutually exclusive, by which drugs can be directly linked to violence in the short term: the psychopharmacological, economic-compulsive and systemic models. While the framework may apply differently depending on patterns of substance use, specific social contexts, perpetrators' motivations and victim ages and types, the three models of drug-related violence are assumed to transcend such differences, albeit with nuances.

However, going beyond Goldstein's tripartite framework, it is important to acknowledge the myriad

other causalities and mere associations that may characterize the intersection between drugs and violence, either indirectly or within a longer time frame, as well as other research findings supporting the existence of an inverse causality model whereby engagement in criminal behaviour may also be a factor leading to drug use.^{93, 94}

The psychopharmacological model refers to a potentially increased propensity or vulnerability to commit, or be the victim of, violence while under the influence of psychoactive substances. This is mainly understood to refer to substances that can influence a person's readiness to engage voluntarily in criminal acts but may also include substances that impair cognitive and psychomotor functions and therefore increase the likelihood of unintentionally committing crimes through negligence in potentially fatal situations such as driving under the influence of psychoactive substances. This model encompasses violence perpetrated while the victim was under the influence of a psychoactive substance such as sexual assault or robbery because of the victim's incapacitation, as well as violence (e.g., physical attacks or fights) committed while under the influence of drugs.⁹⁵ Intimate partner violence, for example against women, when the victim and/or the perpetrator is under the influence of psychoactive substances, falls into this category.

The economic-compulsive model refers to people – whether drug dependent or not – whose spending on a psychoactive substance leads them to engage in acquisitive or other income-generating crime in order to fund their drug consumption. Such acquisitive crime (e.g., robbery, burglary or other forms of theft) may or may not be violent. It can also involve crimes such as selling drugs or sex work (where criminalized).

The systemic model refers to violence that occurs within illicit drug markets as part of the functioning

91 Paul J. Goldstein, "The drugs/violence nexus: a tripartite conceptual framework", *Journal of Drug Issues*, vol. 15, No. 4 (1985), pp. 143–174.

92 See, for example, Philip Bean, *Drugs and Crime* (Devon, United Kingdom, Willan Publishing, 2001); Trevor Bennett and Katy Holloway, "Disaggregating the relationship between drug misuse and crime", *Australian and New Zealand Journal of Criminology*, vol. 38, No. 1 (April 2005), pp. 102–121; Serge Brochu, Natalie Brunelle and Chantal Plourde, *Drugs and Crime: A Complex Relationship*, 3rd ed., revised and expanded, Health and Society Series (Ottawa, University of Ottawa Press, 2018); Robert MacCoun, Beau Kilmer and Peter Reuter, "Research on drugs-crime linkages: the next generation", in *Towards a Drugs and Crime Research Agenda for the 21st Century*, Special Report (Washington D.C., United States Department of Justice, 2003); Helene Raskin White and D. M. Gorman, "Dynamics of the drug-crime relationship", in *The Nature of Crime: Continuity and Change*, vol. 1, Criminal Justice 2000 (Washington D.C., United States Department of Justice, 2000), pp. 151–218.

93 Serge Brochu, *Drogue et criminalité : une relation complexe*, 2nd ed. (Québec, Presses de l'Université de Montréal, 2006).

94 Helene Raskin White, "The drug use-delinquency connection in adolescence", in *Drugs, Crime, and the Criminal Justice System*, Ralph A. Weisheit, ed., Academy of Criminal Justice Sciences Monograph Series (Cincinnati, United States, Anderson Publishers, 1990), pp. 215–256.

95 EMCDDA, *Drugs and Crime: A Complex Relationship*, Drugs in Focus Series (Lisbon, 2007).

of such markets. It includes crime such as that which occurs as a consequence of drug traffickers' efforts to maintain their illicit supply chains and maximize profits. Systemic violence in this context is embedded in the social and economic networks of drug market actors, both drug traffickers at all levels of the supply chain and drug users.⁹⁶ Manifestations of systemic violence can be brutal and dramatic, since drug traffickers and drug trafficking organizations may resort to violence as a strategy of control to intimidate competitors, enforce discipline among their own ranks, assert control over territory and trafficking routes and even challenge the State and its law enforcement forces.

Multiple aspects of drug production, trafficking and use, as well as law enforcement interventions implemented by States in response to drug trafficking, may contribute to different manifestations of crime and violence.⁹⁷ People, including children, who use drugs may be more susceptible to committing crime than those who do not, in particular acquisitive and other income-generating crime, which may or may not have a violent character (for example, robbery has a violent character, shoplifting does not). Drug use is associated to a degree with homicidal violence, but at a much lower rate than alcohol use.⁹⁸ However, there is also evidence of synergistic effects of alcohol used in combination with drugs, cocaine in particular as it can potentiate violent thoughts and threats.⁹⁹ In addition, it has been shown, for example, that during the "crack" cocaine epidemic which started in the United States in 1984, the sharp increase in the number of homicides¹⁰⁰ in many cities could be attributed to the use of "crack" cocaine, but also, and to a much greater degree, to systemic violence, mostly resulting from territorial

disputes.^{101, 102} However, some have argued that the greatest effect of drug use on violence may be indirect, by creating a demand for the illicit production and distribution of drugs.^{103, 104} In addition, for a variety of reasons, illegal markets can sometimes and in some places generate enormous violence.

Economic compulsive and psychopharmacological links between psychoactive substances, violence and criminal activity

Both the economic-compulsive and psychopharmacological models refer to the impact of drug use on the behaviour of people who use drugs in terms of their propensity to engage in violence or other criminal activity.

Analysis of the limited data on homicides available at the global level shows that the use of psychoactive substances is associated with violent behaviour; intoxication in particular is a significant factor in homicide offences, although there is significant variability among countries. On the basis of data from 17 countries, it is estimated that 37 per cent of homicide perpetrators were under the influence of a psychoactive substance when committing the homicide, and the vast majority tended to be under the influence of alcohol.¹⁰⁵ This finding coincides with

96 Paul J. Goldstein, "The drugs/violence nexus".

97 UNODC, *Global Study on Homicide 2019* (Vienna, 2019).

98 Jeffrey Fagan, "Interactions among drugs, alcohol and violence", *Health Affairs*, vol. 12, No. 4 (1993), pp. 65–79.

99 E. J. Pennings, A. P. Leccese and F. A. Wolff, "Effects of concurrent use of alcohol and cocaine", *Addiction*, vol. 97, No. 7, (2002), pp. 773–783.

100 Alfred Blumstein, Frederick P. Rivara and Richard Rosenfeld, "The rise and decline of homicide: and why", *Annual Reviews of Public Health*, vol. 21, 2000, pp. 505–541.

101 Duane C. McBride and James A. Swartz, "Drugs and violence in the age of crack cocaine" in *Drugs, Crime and the Criminal Justice System*, Ralph A. Weisheit, ed., Academy of Criminal Justice Sciences Monograph Series (Cincinnati, United States, Anderson Publishers, 1990), pp. 141–169.

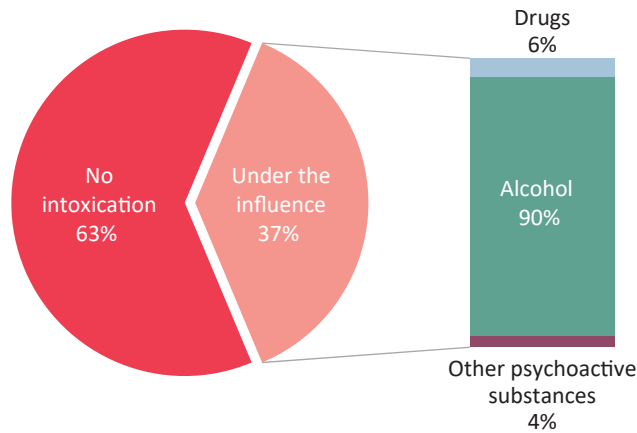
102 Paul J. Goldstein and others, "Crack and homicide in New York City, 1988: a conceptually-based event analysis", *Contemporary Drug Problems*, vol. 16, No. 4 (January 1989), pp. 651–687.

103 Philip Keefer, Norman V. Loayza and Rodrigo R. Soares, "The development impact of the illegality of drug trade", Policy Research Working Paper, No. 4543 (Washington D.C., World Bank, 2008).

104 Drug demand, by creating the possibility of massive profits for potential drug suppliers, may result in the emergence of organized crime groups that make use of violence and corruption as a means of survival and expansion. In some countries, where drugs are produced, the proliferation of organized crime groups may increase and lead to significant levels of violence, to the extent that it poses a threat to public safety.

105 UNODC, *Global Study on Homicide 2019*.

FIG. 34 Influence of psychoactive substances among perpetrators of homicides, latest available data, 2012–2015



Source: UNODC, homicide statistics.

Note: Based on data from 17 countries that provided sufficiently detailed breakdowns of perpetrators of homicides. For each country, only the most recent data, up to 2015, were considered. The breakdown into cases of “under the influence” versus “no intoxication” has been adjusted to take into account cases where the intoxication status was unknown. The breakdown into three kinds of intoxication adjusts for cases in which multiple substance were involved.

a meta-analysis of 23 independent studies,¹⁰⁶ which found that on average 37 per cent of homicide offenders were under the influence of alcohol when they committed the offence.

In the psychopharmacological model, the finding that the role of alcohol in homicide is more important than that of drugs¹⁰⁷ is mostly attributed to the more widespread use of alcohol, which can also occur in concomitance with the use of drugs.¹⁰⁸ The existing body of research points to a positive but not necessarily causal relationship between alcohol use and violence.¹⁰⁹ Some studies analysing drug consumption among inmates found that violent offenders were more likely than non-violent offenders to have consumed alcohol at the time of the offence.¹¹⁰

106 Joseph B. Kuhns and others, “The prevalence of alcohol-involved homicide offending: a meta-analytic review”, *Homicide Studies*, vol. 18, No. 3 (August 2014), pp. 251–270.

107 UNODC, *Global Study on Homicide 2019*.

108 William F. Wiczczonek, John W. Welte and Ernest L. Abel, “Alcohol, drugs and murder: a study of convicted homicide offenders”, *Journal of Criminal Justice*, vol. 18, No. 3 (1990), pp. 217–227.

109 Sara Markovitz, “Alcohol, drugs and violent crime”, *International Review of Law and Economics*, vol. 25, No. 1 (March 2005), pp. 20–44.

110 Lawrence A. Greenfield, “Alcohol and crime: an analysis of national data on the prevalence of alcohol involvement

The association between domestic violence, including male perpetrated intimate partner violence against women, and psychoactive substance use has been investigated extensively.¹¹¹ While it is not possible to ascertain a causal relationship between these phenomena, evidence shows that women who were injured by a male intimate partner are two to three times more likely to abuse alcohol and to have used cocaine than those who were not injured.^{112, 113}

While it is possible to argue that drug use can contribute to crime, it is important to acknowledge that the association between drug use and crime may also be partly explained by mediating factors such as poverty, unemployment, lack of education and other forms of socioeconomic disadvantage as well as other types of adversity, including those resulting from individual factors, family circumstances and peer influences. It is also important to acknowledge

in crime” (Washington D.C., Bureau of Justice Statistics, United States Department of Justice, 1998).

111 Zilberman M.L. and Blume, S.B., “Domestic violence, alcohol and substance use”, *Brazilian Journal of Psychiatry*, vol. 27 (2005).

112 Miller, B.A. et. Al., ‘Family violence and victimization: treatment issues for women with alcohol problems’, *Alcoholism: Clinical and Experimental Research*, vol. 24, No. 8 (2000).

113 Further information about drug use among women can be found in booklet 5 of the present report.

Challenges in measuring drug use-related criminality

There are a number of limitations in the measurement and establishment of causality between drug use and violence and with respect to the applicability of the causal models developed by Goldstein.

Certain types of criminal acquisitive behaviour are violent (e.g., robbery), which makes it difficult to distinguish between the pharmacological and economic-compulsive mechanisms when the perpetrator is a person who uses drugs, or alcohol. In such cases, the measurement of whether the perpetrator was under the influence of psychoactive substances at the time of the offence, which is seldom routinely measured, is essential in order to qualify the relationship between drug use and violence.

As far as the pharmacological model is concerned, the use of dependence-inducing substances may also affect a person's inclination to violent behaviour because of physical and emotional distress such as irritability, anxiety and agitation, which are experienced during withdrawal – when the person is not using any drug. This may occur even when the substance that was used did not have stimulant properties (e.g., heroin).

Furthermore, for both models, the simultaneous use of multiple substances can also make it difficult to clearly ascribe causality to a specific drug. This represents an additional challenge in the case of the psychopharmacological model when the interaction between different substances alters their pharmacological properties.

that drug use and criminal behaviour have many risk factors in common, so the correlation between drug use and crime may be spurious as it may stem from risk factors associated with crime.

It is generally difficult to establish in a rigorous fashion a causal relationship between the use of psychoactive substances and criminal behaviour, as being able to do so is highly dependent on the quality of the data and their coverage as well as the length of the time frame used in the analysis. However, such causality has been observed. One of the first examples was a study conducted in the United States in the early 1980s of a sample of men in Baltimore suffering from heroin addiction, which found that two thirds of them were regularly involved in criminal behaviour and that the extent of their criminality was influenced by their addiction status. Over the 11-year period analysed, findings showed that the study participants committed more crime during the periods when they were suffering from heroin addiction than when they were not.¹¹⁴

The role of drug use as a causal agent for criminal behaviour has been investigated extensively in the literature and is confirmed with a certain degree of

rigour in some contexts. While some studies attempt to present causal associations between drug use and criminal behaviour, often it is not possible to draw any generalization from such findings, as they rely on limited samples and do not always control for other variables that may interfere with this association, in particular when both may result from the same risk factors or socioeconomic conditions. It has been argued in particular that heroin use is more strongly causally related to property crime than are other drugs.¹¹⁵ For example, injecting use of heroin was associated with a 41 per cent increase in the propensity to commit burglaries, robberies and thefts in a longitudinal study of adolescents conducted in the United States in the mid-1990s.¹¹⁶

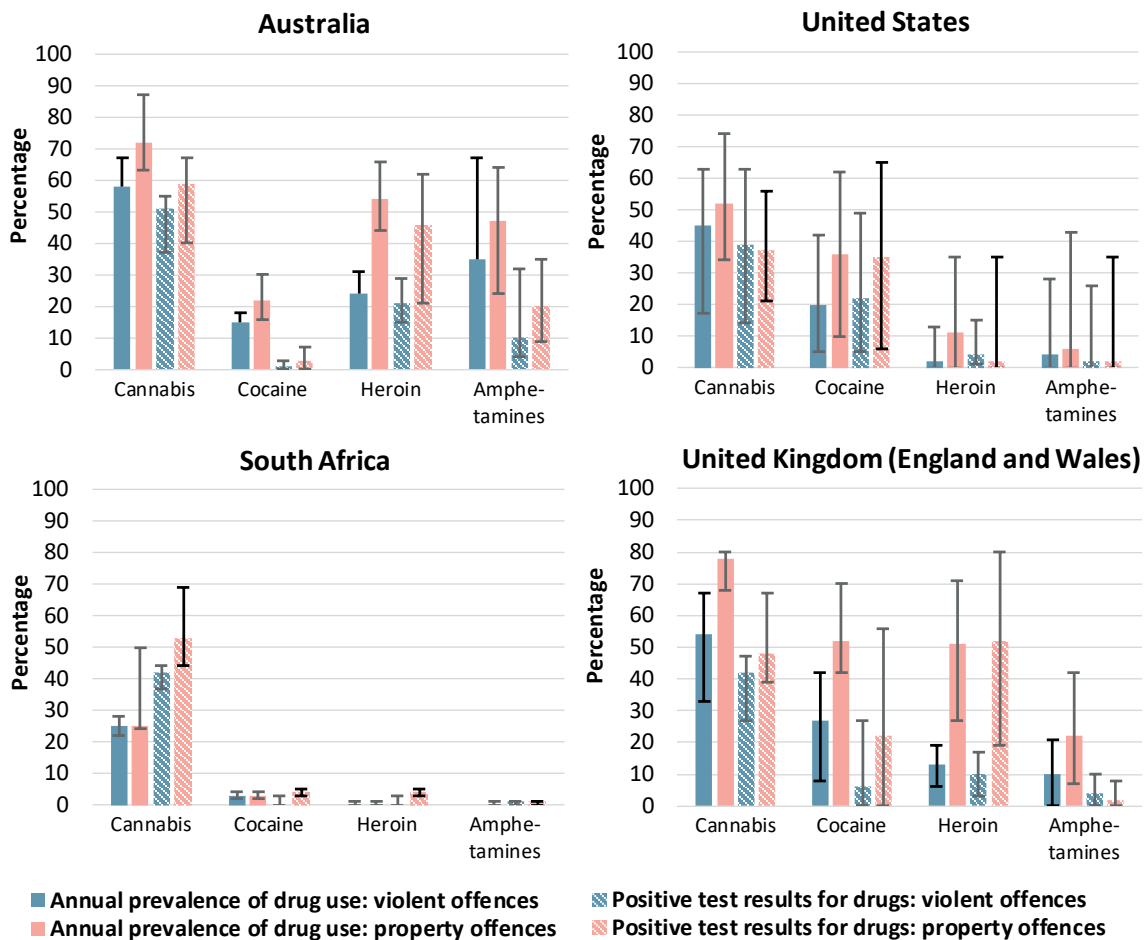
However, some of the better-documented patterns of causations relate to cocaine and “crack” cocaine use, especially in connection with acquisitive crime. While studies in the 1980s have shown the association between “crack” cocaine use and violent crime in the United States, a more recent study on cocaine

114 John C. Ball and others, “Lifetime criminality of heroin addicts in the United States”, *Journal of Drug Issues*, vol. 12, No. 3 (July 1982), pp. 225–239.

115 United States, Office of National Control Drug Policy, *Improving the Measurement of Drug-related Crime* (Washington D.C., October 2013).

116 Naci Mocan and Erdal Tekin, “Drugs and juvenile crime: evidence from a panel of siblings and twin”, *Advances in Health Economics and Health Services Research*, vol. 16, September 2005, pp. 91–120.

FIG. 35 Drug use among male arrestees, by type of offence, Australia, South Africa, United Kingdom and United States, 2000



Source: Bruce G. Taylor and others, “Monitoring the use of illicit drugs in four countries through the International Arrestee Drug Abuse Monitoring (I-ADAM) program”, *Criminal Justice*, vol. 3, No. 3 (2003), pp. 269–286.
 Note: The analysis is based on data from 4 cities in Australia, 3 in South Africa, 8 in the United Kingdom (England and Wales) and 28 in the United States. Violent offences were defined as offences against the person. Drug use was self-reported and assessed through urine testing within 48 hours of arrest.

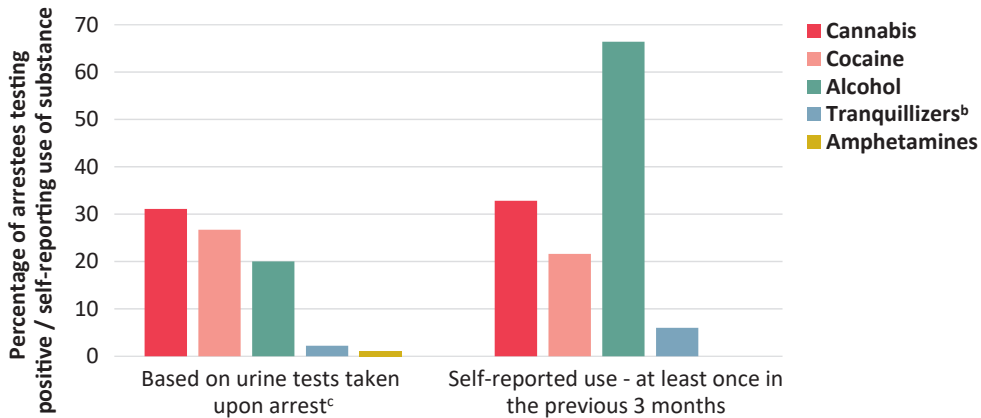
use among people who were injecting drugs in Australia during the “heroin drought” – a sudden contraction of the heroin supply in Australia that began in 2001 – showed evidence of a causal association between cocaine use and violent acquisitive crime.¹¹⁷ Both official crime data and interviews with injecting drug users pointed to an increase in

robberies and burglaries as a result of an increase in – and in some cases a switch to – cocaine use in people injecting drugs when heroin availability was low. The increase in violent crime was attributed to both the psychopharmacological effects of heavy cocaine use and to a resulting increase in the financial need to fund that cocaine use.

117 Louisa Degenhardt and others, “Was an increase in cocaine use among injecting drug users in New South Wales, Australia, accompanied by an increase in violent crime?”, *BMC Public Health*, vol. 5, No. 40 (April 2005), pp. 1–10.

Limited cross-national research available using data collected throughout the calendar year 2000 on drug use in arrestees from four countries (Australia,

FIG. 36 Drug use among male arrestees^a in Chile, 1999



Source: International Arrestee Drug Abuse Monitoring Program I (I-ADAM), United States Department of Justice.

^a Based on a sample of 134 male arrestees from three detention centres in Santiago; includes arrestees detained for drug law offences.

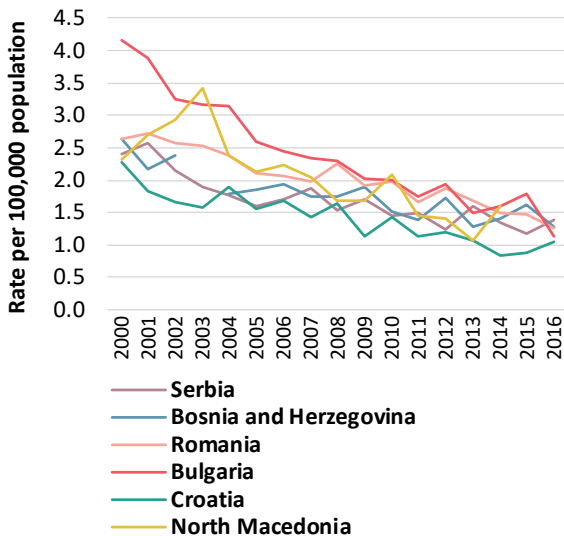
^b Urine tests for tranquillizers refer specifically to benzodiazepines.

^c Urine tests from a subset of 90 arrestees.

England and Wales, South Africa and the United States) has shown some association between drug use and acquisitive crime; in particular, in certain countries, a higher prevalence of drug use was reported among arrestees for property offences than

variations between countries in the use of different drugs among arrestees and in the association with different types of crime.

FIG. 37 Homicide rates in South-Eastern Europe, selected countries, 2000–2016



Source: UNODC, homicide statistics.

among arrestees for violent offences,¹¹⁸ with

The systemic link: violence in the context of drug trafficking

The association between drug trafficking and violence is not a linear one. Large-scale organized crime activities, including international drug trafficking, can take place without outbursts of violence when stable criminal structures are in place, and/or corruption is endemic. For example, illegal drugs are associated with very high violence levels in Colombia and Mexico but not in Afghanistan, Bolivia (Plurinational State of), Peru and other drug-producing and transit countries.¹¹⁹ South-Eastern Europe also offers a good example in this respect. Throughout the 1990s, the simultaneous shocks of the Balkan conflicts and the transition to a market economy enabled organized crime actors in various countries in the Balkan region to negotiate with State authorities and entrench themselves in positions of relative

drugs in four countries through the International Arrestee Drug Abuse Monitoring (I-ADAM) program”, *Criminal Justice*, vol. 3, No. 3 (2003), pp. 269–286.

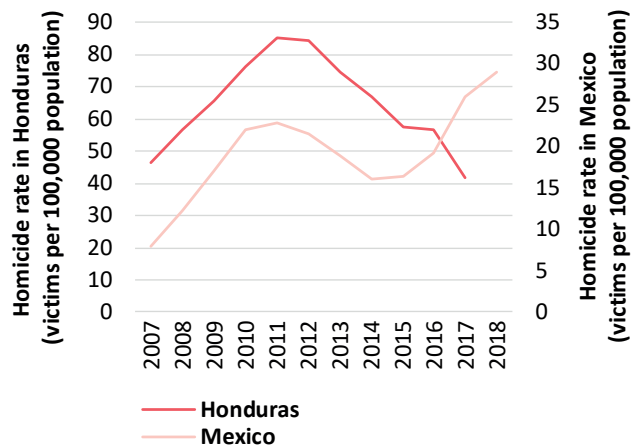
¹¹⁹ Francisco E. Thoumi, “Illegal drugs, anti-drug policy failure, and the need for institutional reforms in Colombia”, *Substance Use and Misuse*, vol. 47, Nos. 8–9 (2012), pp. 972–1004.

¹¹⁸ Bruce G. Taylor and others, “Monitoring the use of illicit

impunity.¹²⁰ Following a spike after the fall of the Berlin Wall, homicide rates in most South-Eastern European countries have been low and declining, although large quantities of heroin have continued to transit the region. It has been estimated that between 2009 and 2012, opiates trafficked along the Balkan route generated an average gross profit of \$28 billion per year.¹²¹

The presence and level of violence is dependent not so much on the quantities trafficked as on certain changes that produce instability in the balance of power between organized crime groups. Several factors can cause such instability, including changes in the size of illicit markets,¹²² the death or incarceration of high-profile leaders¹²³ and law enforcement measures that weaken one group relative to another.¹²⁴ Furthermore, interventions by law enforcement can disrupt the apparent steadiness brought about by illicit trafficking and lead to instability and outbursts of violence in society. Events in Mexico and in the countries of the Northern Triangle of Central America (El Salvador, Guatemala and Honduras) between 2007 and 2011 offer a striking example of how the destabilization caused by shifts in illegal drug markets affected the level of violence.¹²⁵ Within that period of time, the homicide rate¹²⁶ increased threefold in Mexico: such a rapid shift cannot be

FIG. 38 Homicide rates in Honduras and Mexico, 2007–2018



Source: UNODC, homicide statistics, and national sources.

attributed to slow-moving social indicators such as income inequality; organized crime offers a more plausible explanation.¹²⁷

Some research has shown that law enforcement and policing targeting the upper echelons of drug trafficking chains that generate the highest profits and most violence are more effective at reducing violence than is indiscriminate law enforcement by authorities.¹²⁸ For example, police interventions that target the most violent drug traffickers can reduce violence by creating a powerful deterrent to violent behavior.¹²⁹ A systematic review of 15 studies on the impact of drug law enforcement on drug market violence has shown that an increase in drug law enforcement involving targeted crackdowns by military or police forces is unlikely to reduce drug market violence. While disrupting drug markets and in particular organized crime groups involved in drug distribution, this type of law enforcement intervention has been found, paradoxically, to lead to an increase in gun violence and in the homicide rate as new protagonists seize opportunities to enter

120 UNODC, *Crime and its Impact on the Balkans and Affected Countries* (March 2008).

121 UNODC, *Drug Money: The Illicit Proceeds of Opiates Trafficked on the Balkan Route* (2015).

122 For example, in Honduras between 2007 and 2011. See UNODC, *Global Study on Homicide 2019*.

123 Gabriela Calderon and others, “The beheading of criminal organizations and the dynamics of violence in Mexico”, *Journal of Conflict Resolution*, vol. 59, No. 8 (June 2015).

124 In 2008, it was alleged that Mexican enforcement action improved the situation of the Sinaloa Federation relative to their rivals, emboldening them to increase violent reprisals. See Ioan Grillo, *El Narco: Inside Mexico’s Criminal Insurgency* (New York, Bloomsbury Press, 2011), pp. 117–118.

125 For an analysis of the trafficking flows in Mexico and the Northern Triangle, the turf war between drug cartels and the fluctuation of homicide rates, see UNODC, *Global Study on Homicide 2019*.

126 Violence is a much broader concept than homicide and can manifest itself in different ways. Homicide, the intentional killing of another person, is the most severe manifestation of violence. Situations in which organized criminal groups are in control of a territory may lead to a decrease in levels of lethal violence and an increase in other forms of violence, such as extortion, intimidation, and human rights violations.

127 UNODC, *Global Study on Homicide 2019*.

128 *World Drug Report 2016* (United Nations publication, Sales No. E.16.XI.7), p. 98.

129 Mark Kleiman, “Surgical strikes in the drug wars: smarter policies for both sides of the border”, *Foreign Affairs*, vol. 90, No. 5 (September/October 2011), pp. 89–101.

the market and competition increases.¹³⁰

As illustrated by the example of South-Eastern Europe, drug trafficking can occur without violence. The so-called “pax mafiosa”, a set of alliances made between national organized crime groups in Europe observed in the 1990s, after the fall of the communist regimes, signalled the emergence of cooperation between various organized crime groups.¹³¹ Those groups sought to work together, transcending national borders and dividing the proceeds from transnational illicit businesses between themselves. The main idea behind that shift in strategies and operations was that cooperation served their interest better than did conflict. However, the situation of organized crime groups in Southern Europe has evolved since the 1990s. In Montenegro, the historical conflict between criminal groups has spilled over into Serbia and Bosnia and Herzegovina as a result of long-standing feuds between powerful groups in the criminal underworld of Montenegro and Serbia.¹³²

130 Dan Werb and others, “Effect of drug law enforcement on drug market violence: a systematic review”, *International Journal of Drug Policy*, vol. 22, No. 2 (March 2011), pp. 82–94.

131 Claire Sterling, *Crime without frontiers: The Worldwide Expansion of Organised Crime and the Pax Mafiosa*, (London, Little Brown, 1994).

132 Global Initiative against Transnational Organised Crime, “Hotspots of organised crime in the Western Balkans: local vulnerabilities in a regional context” (Geneva, 2019).

DRUGS AND THE CRIMINAL JUSTICE SYSTEM

In 2018, an estimated 10.7 million people worldwide were held in prisons, either in pre-trial detention or because they had been convicted of criminal offences.¹³³ In 2017 (the latest year for which data were available), an estimated 714,000 women,¹³⁴ or around 7 per cent of the prison population, were held in prisons.

Cannabis is the drug that brings most people into contact with the criminal justice system at the global level

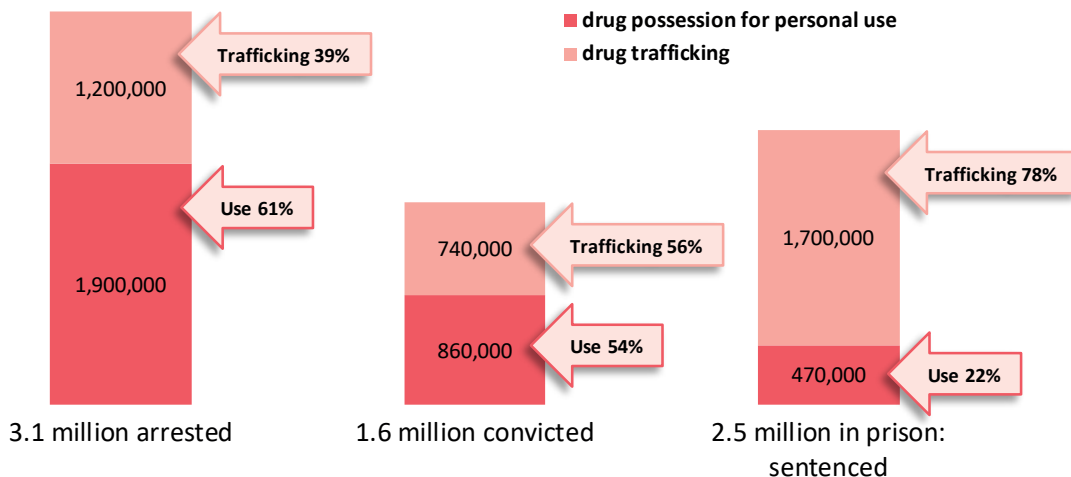
While data on people suspected of drug law offences should be interpreted with caution as they reflect a multitude of factors such as national drug policies, priorities and targeting strategies, as well as the activities and effectiveness of drug law enforcement in different countries, on the basis of reports from a total of 69 countries over the period 2014–2018, overall many more men than women were brought

into contact with the criminal justice system for either drug possession for personal use or drug trafficking (88 per cent were men). Among the four main drug types – ATS, cannabis, cocaine and opioids – for which data were reported, cannabis accounted for more than half of those brought into contact with the criminal justice system over the five-year period (reflecting the large global market for the drug), followed by ATS (19 per cent), cocaine (11 per cent) and opioids (7 per cent).

However, the situation in some regions diverges significantly from the overall global picture, because of either national policies, law enforcement strategies and practices, or the different vulnerabilities of users and traffickers of different substances to law enforcement activities.

Data show that, after cannabis, the drug for which the most people are brought into contact with the criminal justice system is the drug that dominates the market in a particular region. In Asia in particular, ATS are the major drug group for which people are brought into contact with the criminal justice system, most likely as a result of the wide use and trafficking of methamphetamine in the region. For

FIG. 39 Estimated number of people in the criminal justice system for drug offences

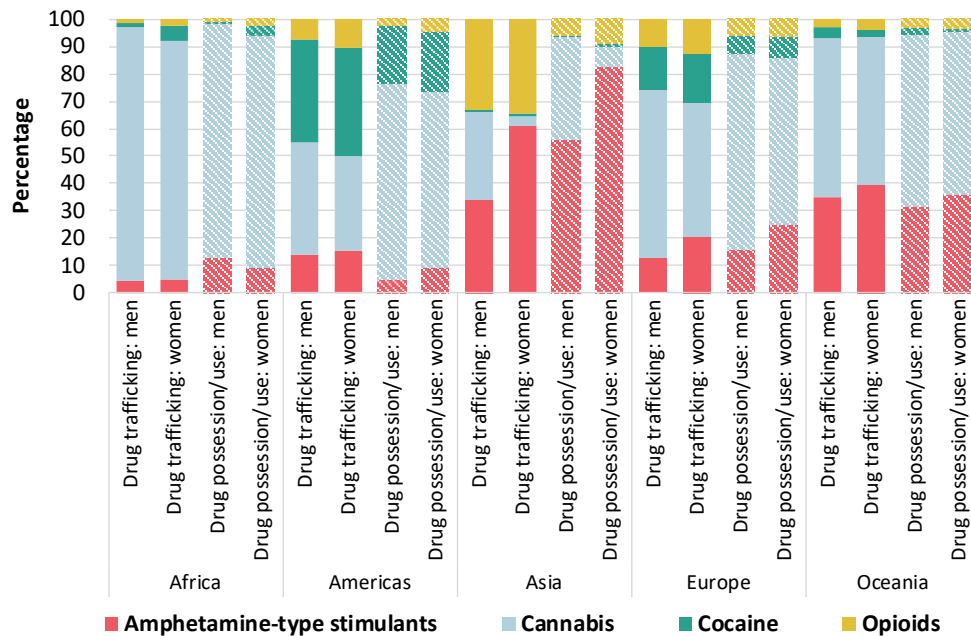


Source: United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (various years, latest data available).

¹³³ Roy Walmsley, “World prison population list”, 12th ed. (London, Institute for Criminal Policy Research, 2018).

¹³⁴ Roy Walmsley, “World female imprisonment list”, 4th ed. (London, Institute for Criminal Policy Research, 2017).

FIG. 40 Distribution of men and women brought into contact with the criminal justice system for drug law offences, by drug type and region, 2014–2018



Source: UNODC, responses to the annual report questionnaire.

Note: The data presented in this graph are based on the percentage of men and women brought into contact with the criminal justice system by drug type, for possession for personal use or trafficking over the period 2014–2018. During that period, a total of 69 countries – 14 in Africa, 18 in the Americas, 14 in Asia, 21 in Europe and 2 in Oceania (Australia and New Zealand) – reported data on the number of people brought into contact with the criminal justice system for possession of drugs than for drug trafficking. In the remaining regions, the same number of countries reported for either type of offence. The data were not weighted by the population of the region.

both males and females, offences related to ATS are predominant among those brought into contact with the criminal justice system for possession for personal use. In the case of trafficking, the data show different patterns for men and women. Among those brought into contact with the criminal justice system for drug trafficking in Asia, for those who are men, ATS, opioids and cannabis account for similar proportions of cases (each drug group accounts for about a third of cases), while for women, ATS account for 60 per cent of cases, followed by opioids (which account for a third).

Cocaine-related offences are particularly prevalent in the Americas, reflecting the extent of cocaine supply and trafficking in the region. Among those brought into contact with the criminal justice system for drug trafficking in the Americas, cocaine accounts for about 40 per cent, with similar proportions of men and women.

Women who are incarcerated for drug-related offences suffer long-lasting consequences

Women often suffer serious long-term consequences of incarceration that affect several aspects of their lives. In most instances, on the basis of gender-neutral policies and practices, women are subject to the same correctional procedures as are men, despite the fact that correctional services and procedures are designed for men.¹³⁵ Both drug use and incarceration carry stigma for both men and women, but the degree of stigma is much greater for women and may be additive, because of gender-based stereotypes that hold women to different standards.¹³⁶ For

¹³⁵ Stephanie S. Covington and Barbara E. Bloom, “Gendered justice: women in the criminal justice system”, in *Gendered Justice: Addressing Female Offenders*, Barbara E. Bloom, ed. (Durham, North Carolina, Carolina Academic Press, 2003).

¹³⁶ Juliana van Olphen and others, “Nowhere to go: how stigma

example, women using drugs or being involved in criminal activity are seen as contravening the traditional role of mothers and care givers.¹³⁷ Therefore a formerly incarcerated woman may be treated poorly by others, denied access to housing or employment because of her criminal history, or internalize feelings of worthlessness because of the lowered expectations of those around her.

Women in prison may also have a long history of abuse and mental health issues. For example, women charged with drug-related offences often suffer from substance use disorders, psychiatric disorders and a history of physical and sexual abuse.¹³⁸ Also, research shows that many women arrested for drug-related offences, in particular drug trafficking, have been victims of trafficking in persons or sex trafficking and forced to carry drugs.^{139, 140} However, while in prison, few women are provided with the health-care services necessary to address their drug use disorders, other co-morbidities or reproductive health issues. In addition, women prisoners may suffer particular emotional and mental health consequences resulting from the disruption of family ties, as they are more likely to be incarcerated a greater distance from home than are men, which has a particularly harmful impact on mothers and their prospects of resettlement.^{141, 142, 143, 144}

limits the options of female drug users after release from jail”, *Substance Abuse Treatment, Prevention, and Policy*, vol. 4, No. 10 (May 2009).

137 UNODC, *World Drug Report 2018*, Booklet 5: Women (United Nations publication, Sales No. E.18.XI.9).

138 Ernest Drucker, “Drug law, mass incarceration, and public health”, *Oregon Law Review*, vol. 91, No. 4 (2013), pp. 1097–1128.

139 Louise Shelley, “The relationship of drug and human trafficking: a global perspective”, *European Journal on Criminal Policy and Research*, vol. 18, No. 3 (September 2012). The author argues that drug trafficking is linked to several forms of trafficking, such as labour trafficking in the agricultural sector and sex trafficking. Some smuggled individuals often pay for their movement to their destination by being drug couriers. In addition, drugs may be used to recruit new victims.

140 UNODC and Colombia, Ministry of Justice and Law, *Caracterización de Condiciones Socioeconómicas de Mujeres relacionadas con Problemas de Drogas: Las Mujeres Privadas de la Libertad por Delitos de Drogas* (Bogotá, 2019).

141 Penal Reform International, *Who Are Women Prisoners? Survey Results from Armenia and Georgia* (London, 2013).

142 Penal Reform International, *Who Are Women Prisoners? Survey Results from Armenia and Georgia* (London, 2013).

Moreover, incarcerated women do not generally receive sufficient support to prepare for their return to their families, intimate partners and the community. Not only do women have fewer opportunities to access education, work and training programmes in prison than do men, but also the skills they learn in prison are mainly recreational and are based on gender stereotypes and thus often fail to provide women with financial remuneration and do not necessarily provide them with skills that are suitable for the current job market upon their release.^{146, 147} Upon release, women face stigma in the community because of their drug use and incarceration, resulting in an even greater challenge for them to access the health-care and social services that they need, such as housing and employment services. They may therefore end up in a situation of social isolation and social exclusion, leaving them to continue living in circumstances of social and economic disadvantage and inequality. In particular, incarcerated women re-entering the community also need to navigate between both the relationships that put them at risk for either drug use or criminality and the relationships that they will rely on for support after their release. This is complicated by the fact that the only relationships that they may have could have been those contributing, in the first place, to their problems, including drug use, mental health issues or criminality.¹⁴⁸

143 Penal Reform International, *Who Are Women Prisoners? Survey Results from Kazakhstan and Kyrgyzstan* (London, 2014).

144 Penal Reform International, *Who Are Women Prisoners? Survey Results from Jordan and Tunisia* (London, 2014).

145 Penal Reform International, *Who Are Women Prisoners? Survey Results from Uganda* (London, 2015).

146 Marta Cruells, Noelia Igeda and SURT Association, eds., *Women, Integration and Prison* (Barcelona, Aurea Editores, 2005).

147 Ana T. Cárdenas, *Mujeres y Cárcel: Diagnóstico de las Necesidades de Grupos Vulnerables en Prisión* (Santiago de Chile, Universidad Diego Portales-ICSO, 2010).

148 Claire Snell Rood and others, “Incarcerated women’s relationship-based strategies to avoid drug use after community re-entry”, *Women Health*, vol. 56, No. 7 (October 2016), pp. 843–858.

GLOSSARY

amphetamine-type stimulants — a group of substances composed of synthetic stimulants controlled under the Convention on Psychotropic Substances of 1971 and from the group of substances called amphetamines, which includes amphetamine, methamphetamine, methcathinone and the “ecstasy”-group substances (3,4-methylenedioxyamphetamine (MDMA) and its analogues).

amphetamines — a group of amphetamine-type stimulants that includes amphetamine and methamphetamine.

annual prevalence — the total number of people of a given age range who have used a given drug at least once in the past year, divided by the number of people of the given age range, and expressed as a percentage.

coca paste (or coca base) — an extract of the leaves of the coca bush. Purification of coca paste yields cocaine (base and hydrochloride).

“crack” cocaine — cocaine base obtained from cocaine hydrochloride through conversion processes to make it suitable for smoking.

cocaine salt — cocaine hydrochloride.

drug use — use of controlled psychoactive substances for non-medical and non-scientific purposes, unless otherwise specified.

fentanyls - fentanyl and its analogues.

new psychoactive substances — substances of abuse, either in a pure form or a preparation, that are not controlled under the Single Convention on Narcotic Drugs of 1961 or the 1971 Convention, but that may pose a public health threat. In this context, the term “new” does not necessarily refer to new inventions but to substances that have recently become available.

opiates — a subset of opioids comprising the various products derived from the opium poppy plant, including opium, morphine and heroin.

opioids — a generic term that refers both to opiates and their synthetic analogues (mainly prescription or pharmaceutical opioids) and compounds synthesized in the body.

problem drug users — people who engage in the high-risk consumption of drugs. For example, people who inject drugs, people who use drugs on a daily basis and/or people diagnosed with drug use disorders (harmful use or drug dependence), based on clinical criteria as contained in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) of the American Psychiatric Association, or the *International Classification of Diseases and Related Health Problems* (tenth revision) of WHO.

people who suffer from drug use disorders/people with drug use disorders — a subset of people who use drugs. Harmful use of substances and dependence are features of drug use disorders. People with drug use disorders need treatment, health and social care and rehabilitation.

harmful use of substances — defined in the *International Statistical Classification of Diseases and Related Health Problems* (tenth revision) as a pattern of use that causes damage to physical or mental health.

dependence — defined in the *International Statistical Classification of Diseases and Related Health Problems* (tenth revision) as a cluster of physiological, behavioural and cognitive phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.

substance or drug use disorders — referred to in the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) as patterns of symptoms resulting from the repeated use of a substance despite experiencing problems or impairment in daily life as a result of using substances. Depending on the number of symptoms identified, substance use disorder may be mild, moderate or severe.

prevention of drug use and treatment of drug use disorders — the aim of “prevention of drug use” is to prevent or delay the initiation of drug use, as well as the transition to drug use disorders. Once a person develops a drug use disorder, treatment, care and rehabilitation are needed.

REGIONAL GROUPINGS

The *World Drug Report* uses a number of regional and subregional designations. These are not official designations, and are defined as follows:

- East Africa: Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Uganda, United Republic of Tanzania and Mayotte
- North Africa: Algeria, Egypt, Libya, Morocco, Sudan and Tunisia
- Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe and Reunion
- West and Central Africa: Benin, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo and Saint Helena
- Caribbean: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Anguilla, Aruba, Bonaire, Netherlands, British Virgin Islands, Cayman Islands, Curaçao, Guadeloupe, Martinique, Montserrat, Puerto Rico, Saba, Netherlands, Sint Eustatius, Netherlands, Sint Maarten, Turks and Caicos Islands and United States Virgin Islands
- Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama
- North America: Canada, Mexico and United States of America, Bermuda, Greenland and Saint-Pierre and Miquelon
- South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela (Bolivarian Republic of) and Falkland Islands (Malvinas)
- Central Asia and Transcaucasia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
- 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, Viet Nam, Hong Kong, China, Macao, China, and Taiwan Province of China

- South-West Asia: Afghanistan, Iran (Islamic Republic of) and Pakistan
- Near and Middle East: Bahrain, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, State of Palestine, Syrian Arab Republic, United Arab Emirates and Yemen
- South Asia: Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka
- Eastern Europe: Belarus, Republic of Moldova, Russian Federation and Ukraine
- South-Eastern Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, North Macedonia, Romania, Serbia, Turkey and Kosovo¹⁴⁹
- Western and Central Europe: Andorra, Austria, Belgium, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, Faroe Islands, Gibraltar and Holy See

Oceania (comprised of four sub-regions):

- Australia and New Zealand: Australia and New Zealand
- Polynesia: Cook Islands, Niue, Samoa, Tonga, Tuvalu, French Polynesia, Tokelau and Wallis and Futuna Islands
- Melanesia: Fiji, Papua New Guinea, Solomon Islands, Vanuatu and New Caledonia
- Micronesia: Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Guam and Northern Mariana Islands

¹⁴⁹ All references to Kosovo in the *World Drug Report* should be understood to be in compliance with Security Council resolution 1244 (1999).



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Presented in six separate booklets, the *World Drug Report 2020* provides a wealth of information and analysis to support the international community in implementing operational recommendations on a number of commitments made by Member States, including the recommendations contained in the outcome document of the special session of the General Assembly on the world drug problem, held in 2016.

Booklet 1 provides a summary of the five subsequent booklets by reviewing their key findings and highlighting their policy implications. Booklet 2 focuses on drug demand and contains a global overview of the extent of and trends in drug use, including drug use disorders, and its health consequences. Booklet 3 deals with drug supply and presents the latest estimates and trends regarding the production of and trafficking in opiates, cocaine, amphetamine-type stimulants and cannabis. Booklet 4 addresses a number of cross-cutting issues, including the macrodynamics that are driving the expansion and increasing complexity of the drug markets, and describes some of the rapidly evolving drug-related concerns: the latest, multifaceted global opioid crisis; rapid market changes; the market for new psychoactive substances; the use of the darknet for supplying drugs; and developments in jurisdictions that have measures allowing the non-medical use of cannabis. Booklet 5 looks at the association between socioeconomic characteristics and drug use disorders, including at the macro-, community and individual levels, with a special focus on population subgroups that may be impacted differently by drug use and drug use disorders. Finally, booklet 6 addresses a number of other drug policy issues that all form part of the international debate on the drug problem but on which in-depth evidence is scarce, including access to controlled medicines, international cooperation on drug matters, alternative development in drug cultivation areas, and the nexus between drugs and crime.

As in previous years, the *World Drug Report 2020* is aimed at improving the understanding of the world drug problem and contributing to fostering greater international cooperation in order to counter its impact on health, governance and security.

The accompanying statistical annex is published on the UNODC website:
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