

THE WORLD DRUG PROBLEM AND SUSTAINABLE DEVELOPMENT

INTRODUCTION

From illicit cultivation and production to trafficking and use, the world drug problem, with all its ramifications, is intertwined with a vast array of social, economic and environmental issues. This exerts great pressure on development efforts, which in turn have an influence on the drug problem. Interventions made in response to the drug problem themselves generate further interplay with the broader development and social context and introduce additional, sometimes unforeseen, complexity to this dynamic. The importance of this interaction is increasingly being recognized by the international community, as reflected in the discussions on the Sustainable Development Goals and the special session of the General Assembly on the world drug problem held in 2016.

The concept of development, together with the engagement by the international community in this area, is reflected in the Millennium Development Goals, followed by the recently formulated 2030 Agenda for Sustainable Development.¹ The 17 Sustainable Development Goals and their targets are integrated and indivisible and balance the three dimensions of development: economic, social and environmental. The new development agenda also recognizes that sustainable development cannot be realized without peace and security, and that peace and security will be at risk without sustainable development. Factors that give rise to violence, insecurity and injustice, such as inequality, corruption, poor governance and illicit financial and arms flows, are addressed in the development agenda.

FIG. 1 Dimensions of sustainable development



¹ See General Assembly resolution 70/1.

The present chapter uses the framework of the Sustainable Development Goals to examine the interplay between the drug problem and the broader development context. It clusters the discussion around five topics — social development; economic development; environmental sustainability; peaceful, just and inclusive societies; and partnership — in the light of the world drug problem and the global response thereto. Specifically, the present chapter seeks to elucidate the interplay between each of these aspects of sustainable development on the one hand, and the issue of drugs on the other, while distinguishing between the drug problem as a phenomenon (illicit drug use, production and trafficking) and the response to the drug problem.

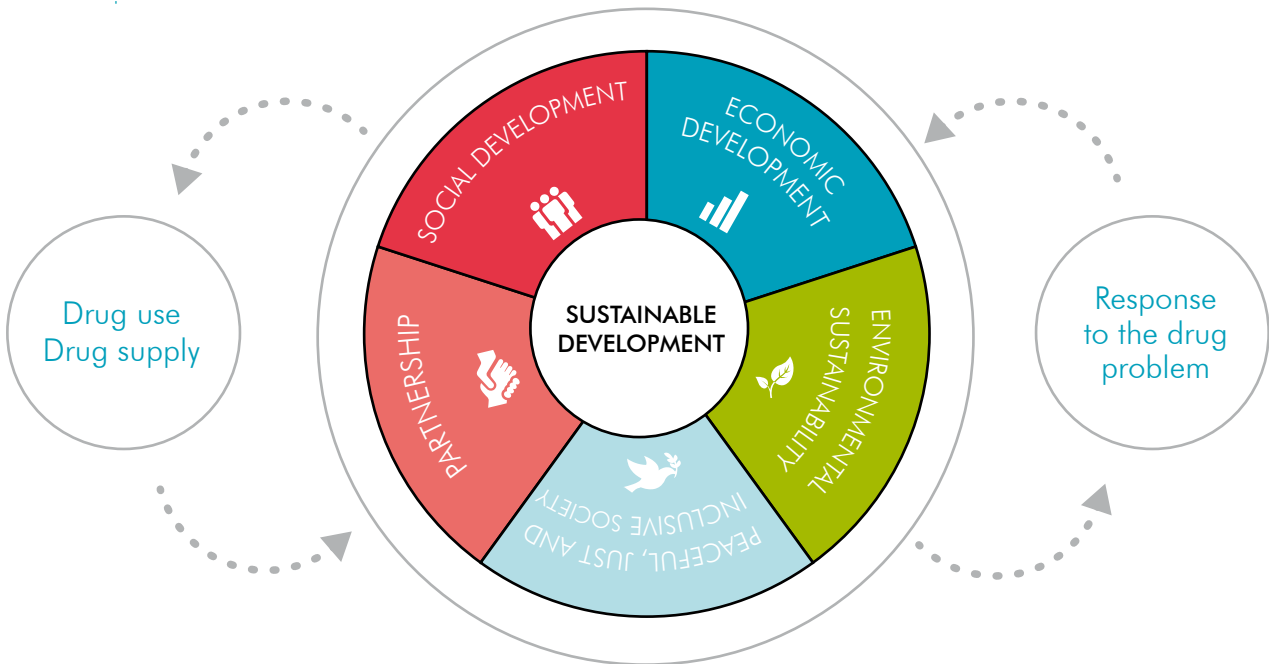
In analysing the interaction between social development and the world drug problem, the first section in this chapter summarizes the evidence of the social costs of illicit drug use, the most important being its effects on the health of people who use drugs. The section also investigates the health impact of drug use across levels of development. Other aspects addressed include the impact on the families of people who use drugs and their communities, and the marginalization and stigmatization of people who use drugs and the repercussions of that, particularly on their employment opportunities. The section also addresses the impact of the response to the drug problem on social development, with reference to, for example, alternative development, as well as the availability of drugs for medical and scientific purposes.

The second section, on economic development, addresses the question of how the level of economic development relates to drug use and the formation of illicit drug markets, by examining indicators at the national level. The analysis attempts to identify patterns describing the evolution of the drug problem and the role of development. It also discusses socioeconomic factors at the subnational level, focusing on marginalization and poverty. The economic cost of drug use resulting from loss of productivity is also taken into account, as are the costs associated with efforts by state institutions to help drug users.

The third section, on environmental sustainability, presents evidence on the environmental impact of illicit drug cultivation, production and trafficking, as well as drug supply reduction interventions, including deforestation and biodiversity loss.

The fourth section, on peaceful, just and inclusive societies, addresses topics that have been recently introduced into the international development agenda through the Sustainable Development Goals. It examines different forms of violence in connection with drugs, including links to terrorism and insurgency, and it discusses the long-term and short-term outcomes of the response to the drug

FIG. 2 Analytical framework of the thematic chapter



problem. In addition, the section investigates the extent to which drug trafficking is intrinsically associated with violence, describes how the drug problem can be an enabler or an outcome of violence, and highlights the role of the underlying rule of law in shaping this relationship. It also explores how the criminal justice system influences, and is influenced by, the drug problem, looking in particular at how drug trafficking can undermine the system, as well as the role of law enforcement in influencing drug prices and markets. Moreover, the discussion covers the impact of criminal justice on people who use drugs, the extent of the resource drain on the system arising from the incarceration of drug users, and alternatives to imprisonment. In addition, the section describes the mutually reinforcing relationship between the drug problem and corruption and addresses the scale and the impact of illicit financial flows arising from drug trafficking and production.

Last but not least, the section on partnership looks at development assistance data provided by countries and highlights divergent trends between overall development assistance on the one hand and the assistance provided for the drug-related sectors on the other, underlining the need to redress this imbalance in the context of the 2030 Agenda for Sustainable Development.

Figure 2 schematizes the interactions discussed in this chapter, which serve as a template for most of the subsections in the chapter.

A. SOCIAL DEVELOPMENT

Impact of drug use on social development

Public health impact

There are numerous ways in which illicit drug use, production and trafficking can have an impact on sustainable development. Principal among them are the negative consequences for public health, which, as its absence precludes human development in every other dimension, lies at the heart of sustainable development.



Sustainable Development Goal 3.
Ensure healthy lives and promote well-being for all at all ages

The impact of illicit drug use on the health of people who use drugs and, more generally, on public health is notorious and well documented. Target 3.5 of the Sustainable Development Goals is to strengthen “the prevention and treatment of substance abuse, including narcotic drug abuse”. Prevention, treatment, care, recovery, rehabilitation and social reintegration measures and programmes all play a role in addressing the problem of drug use and reducing the negative health impact on society.

In addition to medical conditions resulting directly from the psychoactive and physiological effects of drugs, certain forms of drug use and modes of administration are important risk factors for contracting other diseases; this not only affects people who use drugs but also the people with whom they come into contact. As discussed in the previ-

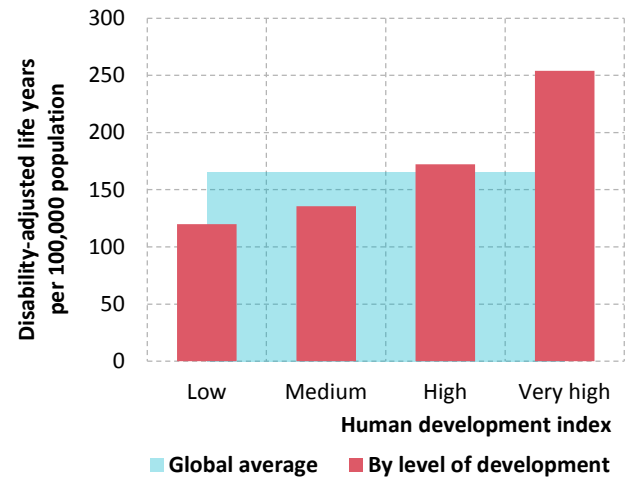
ous chapter, there are many potential health risks and outcomes for people who use drugs, including overdose, suicide, trauma, mental health problems, disability and premature death.

People who develop dependence and become affected by drug use disorders are those who account for the vast majority of negative health consequences among people who use drugs. UNODC estimates that, as of 2014, out of a quarter of a billion past-year drug users, more than 29 million had a drug use disorder (see page 1). Sporadic or regular drug use that has not progressed to drug dependence can still carry some health risks, particularly if it has the potential to change the user's behaviour when he or she is under the influence of drugs; even a single episode, or small number of episodes, can have damaging effects. Since products sold in the illegal drug market under a certain name may contain a wide variety of substances, and people who use drugs do not have information about the contents of what they consume, there are also additional risks. Moreover, episodic drug use itself carries the risk of evolving into drug-dependent use.

Certain people who use drugs may manage to lead socially integrated lives in parallel with regular drug use and thus do not conform to the stereotypical image of a problem drug user, but that does not prevent the development of drug dependence, and the harm caused by drug use may only be felt in the long term. In general, the consequences of drug use may develop independently in two different aspects of an individual's life: health and social. In some cases, there may be health conditions with a limited impact on an individual's social life; in other cases, the social impact of drug use may be more serious than the health aspects. Broadly speaking, the social consequences of drug use may emerge only at later stages of the development of drug use disorders.

Globally, roughly 200,000 people lose their lives each year to causes attributed to drug use. People who regularly use drugs tend to live with disability and die early. The Global Burden of Disease Study quantifies the adverse health impact of hundreds of diseases, injuries and risk factors. It indicates that opioids, cocaine, amphetamines and cannabis together accounted for almost 12 million years of life lost² because of premature death or disability in 2013, of which more than 8 million were linked to the use of opioids.³ Based on data from the study, developed countries appear to be disproportionately affected by the overall health impact of drug use (see figure 3).

FIG. 3 Burden of drug use disorders^a per 100,000 population, by level of development, 2013



Source: Human development index from the United Nations Development Programme (UNDP); data on burden of disease (disability-adjusted life years) from the Institute for Health Metrics and Evaluation, University of Washington, GBD Compare, 2015. Available from <http://vizhub.healthdata.org/gbd-compare>.

Note: The designations "low", "medium" etc. based on the human development index are those used by UNDP.

^a The sum of the burden attributed to opioids, cocaine, cannabis and amphetamines, excluding "Other drugs".

Target 3.3 of the Sustainable Development Goals
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Epidemics and communicable diseases have a negative impact on the health of millions of people and constitute a major challenge to sustainable development, which are among the reasons why target 3.3 of the Sustainable Development Goals is aimed at ending, by 2030, the epidemics of AIDS and tuberculosis and combating hepatitis, water-borne diseases and other communicable diseases. To improve prevention and treatment of these diseases, better understanding of their risk factors is needed. One of the biggest risk factors associated with the use of drugs stems from their mode of administration, particularly injecting drug use. Smoking, swallowing, snorting or inhaling a drug can lead to a variety of health problems, but injecting a drug carries a much greater risk of overdose, vein damage, abscesses and infection, in particular the transmission of blood-borne viruses such as HIV and hepatitis C.

It is currently estimated that some 11.7 million people worldwide inject drugs, of whom around 1.6 million (14.0 per cent) are living with HIV. People who inject drugs (PWID) are estimated to make up approximately 5-10 per cent of all people living with HIV,⁴ and injecting drug use

2 The figure for all drugs, including the category "Other drug use disorders", was 18 million years of life lost.

3 Christopher J. L. Murray and others, "Global, regional, and national disability-adjusted life years (DALYs) for 306 diseases and injuries and healthy life expectancy (HALE) for 188 countries, 1990-2013: quantifying the epidemiological transition", *The Lancet*, vol. 386, No. 10009 (2015), pp. 2145-2191.

4 UNAIDS, "AIDS by the numbers" (Geneva, 2013).

accounts for around 30 per cent of new HIV infections outside sub-Saharan Africa.^{5, 6} Scientific estimates of the probability of HIV transmission ensuing from exposure to an infected source indicate that needle-sharing drug use carries one of the higher risks of transmission per exposure (albeit much lower than transmission by blood transfusion or mother-to-child transmission without antiretroviral therapy).^{7, 8}

HIV transmission is not the only health consequence associated with drug use. According to data on the global burden of disease, drug use as a risk factor accounted for 32 per cent of deaths caused by cirrhosis resulting from hepatitis C and 14 per cent of deaths caused by liver cancer.⁹

Drug use can also have an impact on public health by increasing the risk of road traffic accidents (driving while under the influence of drugs) and accidents in the workplace, which not only cause serious harm to people who use drugs but also to the people around them.

Sexual behaviour and the health impact of drug use

Although indirect, one mechanism whereby drug use may have repercussions on the health of society in general is linked to the sexual behaviour of people who use drugs. This is of particular concern in the case of at-risk groups such as PWID, for whom an increased risk of transmission caused by drug use itself can be the very cause (or a major driver) of a high prevalence of certain sexually transmitted infections. When non-injecting drug use increases the likelihood of risk-taking behaviour among other at-risk groups, such as men who have sex with men (MSM) and transgender individuals, that can also have an impact.

Research confirms that there are links between drug use patterns and sexual behaviour. It is difficult to disentangle causalities between drug use and sexual behaviour, but the following patterns have been documented: transmission of sexually transmitted infections from people who use drugs to spouses and partners; people who use drugs engaging in sex work as a way to fund drug use; and people who use drugs engaging in high-risk sexual behaviour while under the influence of certain drugs, especially stimulants and “party drugs”. Local reports from India, Myanmar and Ukraine have documented HIV epidemics associated with injecting drug use that have spread to the general population chiefly through heterosexual contact.¹⁰

A report by the Commission on AIDS in Asia¹¹ described one example in Indonesia in which HIV did not spread in the sex industry until a few years after it had reached a very high level among PWID.

It has been hypothesized that the use of certain drugs increases or decreases sexual desire and levels of sexual activity and has a disinhibiting effect, making users likely to engage in safer sex, thus exacerbating the negative health impact of drug use. Stimulants such as cocaine and ATS are the most commonly cited drugs linking drug use with high-risk sexual behaviour and HIV transmission. It has also been argued that many people use the disinhibiting effects of amphetamines to facilitate sex, including high-risk sex, and that the impulsivity produced by amphetamines makes users potentially more likely to engage in unprotected sex. For example, a study in the United States found methamphetamine use to be related to increased, unprotected sexual activity and the risk of contracting sexually transmitted diseases, including HIV, irrespective of gender, age, race, ethnicity or sexual orientation.¹²

Impact of drug use on gender equality and the empowerment of women



Sustainable Development Goal 5.
Achieve gender equality and empower all women and girls

Women affected by drug use disorders are more vulnerable and more stigmatized than men. They suffer from co-occurring mental health disorders to a greater extent than men and they are more likely to have been victims of violence and abuse. However, they are far less likely to enter drug treatment programmes than men, which can reduce their opportunities to reintegrate into society and exacerbate their sense of stigmatization as people who use drugs.¹³ Drug use may thus have a direct negative impact on gender equality and the empowerment of women.

There are many aspects of the drug problem that have an impact on gender equality and therefore on social development. Given that there are many more men than women who use drugs, research, guidelines and training programmes concerning people who use drugs remain largely

5 UNAIDS, *The Gap Report: People Who Inject Drugs* (Geneva, 2014).

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

7 Pragna Patel and others, “Estimating per-act HIV transmission risk: a systematic review”, *AIDS*, vol. 28, No. 10 (2014), pp. 1509-1519.

8 Rebecca F. Baggaley and others, “Risk of HIV-1 transmission for parenteral exposure and blood transfusion: a systematic review and meta-analysis”, *AIDS*, vol. 20, No. 6 (2006).

9 Institute for Health Metrics and Evaluation, GBD Compare. Available at www.healthdata.org/.

10 Steffanie A. Strathdee and Susan G. Sherman, “The role of sexual

transmission of HIV infection among injection and non-injection drug users”, *Journal of Urban Health*, vol. 80, No. 4, Suppl. 3 (2003), pp. iii7-iii14.

11 *Redefining AIDS in Asia: Crafting an Effective Response – Report of the Commission on AIDS in Asia* (New Delhi, Oxford University Press, 2008).

12 F. Molitor and others, “Association of methamphetamine use during sex with risky sexual behaviors and HIV infection among non-injection drug users”, *Western Journal of Medicine*, vol. 168, 1998, pp. 93-97.

13 *World Drug Report 2015*, p. 17.

male-focused and fail to address the specificities of female drug use patterns. The impact of drug use is also greater on women than on men because women tend to lack access to the continuum of care for drug use disorders.

Women who use drugs face several issues and problems that enhance their vulnerability to HIV (as well as other major health issues) such as sex work, sexually transmitted infections, viral hepatitis, mental health problems, reproductive health issues, childcare, stigma and violence, in addition to a lack of gender-sensitive health services.¹⁴ Women who inject drugs, in particular, are an often hard-to-reach and highly vulnerable group, to the extent that even data relating to them are more limited than data relating to their male counterparts.

An indirect consequence of drug use on the health of women is that HIV is not only transmitted between PWID through the sharing of injecting equipment but also from (predominantly male) PWID to their spouses and other sexual partners owing to inadequate use of protection such as condoms. Although they also have their own set of risk factors, generally there is a risk incurred by the female sex partners of men who inject drugs, who share injecting equipment, have multiple sex partners, practice limited condom use, engage in sexual violence and have low risk perception and disclosure of HIV status and drug use, as well as low uptake for HIV testing.¹⁵ In a study of over 4,000 female sex partners of men who inject drugs in India, young age, early marriage (more than half had been married before the age of 18), unsupportive partners, diagnosable mental health problems (mainly depression), poor decision-making powers and economic dependence characterized many of the women, who also reported high rates of exposure to domestic violence but low rates of seeking help in such situations.¹⁶

Drug use and intimate partner or family-related violence

Drug use has been identified as a major risk factor for family-related violence. As this type of violence particularly affects women and girls, drug use can effectively be seen to be a factor contributing to violence against women and girls, which, according to target 5.2 of the Sustainable Development Goals, needs to be eliminated in all its forms, in the public and private spheres.

Target 5.2 of the Sustainable Development Goals
Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

14 Tasnim Azim, Irene Bontell and Steffanie A. Strathdee, "Women, drugs and HIV", *International Journal of Drug Policy*, vol. 26, Suppl. 1 (2015), pp. S16-S21.

15 Ibid.

16 UNODC Regional Office for South Asia, *Women and Substance Use in India: Women, Substance Use and Vulnerability*, Pratima Murthy, ed. (New Delhi, 2008).

A study in Afghanistan found that drug use led to domestic violence, with over half of family members interviewed reporting that they had been hit by or had hit out at a drug-using relative during a confrontation regarding the latter's drug use.¹⁷ In India, physical violence by family members was reported by 43 per cent of a sample of 179 women with a male family member currently using drugs, and verbal aggression was reported by 50 per cent.¹⁸

Research indicates that the pathways leading to drug use are different for men and women, with the initial period of a woman's drug-using career significantly related to their relationship with men.¹⁹ A study in the United States of 416 women in opioid substitution treatment (using methadone) found that frequent use of "crack" by women who use drugs increased the likelihood of subsequent violence from intimate partners.²⁰

Women who inject drugs may also experience violence, perpetrated by intimate partners or law enforcement personnel (or clients if the women are sex workers). Research also shows that women who experience intimate partner violence are less likely to use condoms and more likely to share injecting equipment, to have multiple sexual partners and to trade sex.²¹

Impact of problem drug use on the family, children and youth

*"People are at the centre of sustainable development ... and the commitment was made ... to benefit all, in particular the children of the world, youth and future generations of the world."*²²

Another way in which drug use can have a negative impact on social development is by undermining the functioning of society's basic cell — the family — and the welfare of children and youth, upon whom its future hinges.

Family

Different patterns of drug use have different types and degrees of impact. In some situations, drug use may make little or limited difference to the family; in other cases, it may have distinct effects on family structures and on mari-

17 UNODC, *Impacts of Drug Use on Users and Their Families in Afghanistan* (Vienna, 2014).

18 P. Murthy, *Women and Drug Abuse: The Problem in India* (India, Ministry of Social Justice and Empowerment and United Nations International Drug Control Programme, Regional Office for South Asia, 2002).

19 Tammy L. Anderson, "Drug use and gender", in *Self-destructive Behavior and Devalued Identity*, vol. 4, *Encyclopedia of Criminology and Deviant Behavior*, Charles E. Faupel and Paul M. Roman, eds. (Philadelphia, Brunner-Routledge, 2001), pp. 285-289.

20 Nabila El-Bassel and others, "Relationship between drug abuse and intimate partner violence: a longitudinal study among women receiving methadone", *American Journal of Public Health*, vol. 95, No. 3 (2005), pp. 465-470.

21 Azim, Bontell and Strathdee, "Women, drugs and HIV" (see footnote 14).

22 Wording proposed by the Open Working Group on Sustainable Development Goals

tal relationships, family violence and child abuse and neglect and on the family economy. Drug use is often associated with child abuse and domestic violence and is also a leading contributor to marital dissatisfaction, family breakups and rejection of family members.²³

A UNODC study on people who use drugs in Afghanistan found that nearly 70 per cent of family members of people who use drugs had experienced financial problems as a result of a family member's drug use, which led to a reduction in overall family income caused by a decrease in the financial contribution by the person using drugs. Family members interviewed reported that 60 per cent of drug-using relatives who had been employed prior to using drugs had subsequently lost their jobs. Almost half of the family members interviewed also said they had been forced to borrow money as a result of drug use in the family; almost 70 per cent reported that they had faced financial difficulties as a result of that drug use; and a third of all family members indicated that they had gone without food or other basic necessities as a result.²⁴

While drug-using parents may have a negative impact on their children's development, drug use by children, teenagers and young adults can also have a profound impact on a family, affecting the dynamics and relationships with parents, siblings and other members of the extended family, often eliciting feelings of anger, sadness, anxiety, shame and loss. Parents of drug-using children have linked deterioration of their own physical and psychological health to the stress and conflictual nature of living with their child's drug problem. Siblings of drug-using children may experience the loss of a close relationship with their drug-using brother or sister and may themselves be exposed or deliberately introduced to drug use that leads to more problematic use.²⁵

Children



Sustainable Development Goal 4.
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Target 16.2 of the Sustainable Development Goals
End abuse, exploitation, trafficking and all forms of violence against and torture of children

Children appear as a group of special concern in several of the Sustainable Development Goals, in particular Goal 1 (target 1.2 of which covers children living in poverty),

Goal 2 (which covers malnutrition), Goal 3 (which covers mortality among newborns and children), Goal 4 (which covers education) and Goal 16 (target 16.2 of which covers violence against children). The development of children is, however, directly in the hands of their parents, whose parenting skills have a profound effect on their offspring. Unstable and inconsistent family and living environment factors, such as transient living conditions, inconsistent caretaking and violence resulting from drug-using parents, have been linked to psychological and emotional development problems among children. Moreover, parents who use drugs may be absent because they are incapacitated by drug use or spending time procuring drugs, in treatment or in prison.²⁶

A study undertaken in Ireland suggested that opiate dependence has a specific impact on parenting processes, particularly on the physical and emotional availability of parents and on the capacity of parents to provide an emotionally consistent environment. The factors involved relate to the parents' focus on the supply and acquisition of drugs, the impact of intoxication and withdrawal from opioids, preoccupation with drugs and instability of moods. Drug-using parents reported that they were aware of their limitations as parents and were dissatisfied with their levels of availability, emotional responsiveness and stability regarding their children.²⁷

Youth

Target 4.4 of the Sustainable Development Goals
By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Drug use often affects people during their most productive years, and the entrapment of youth in both drug use and the illicit drug trade itself, as opposed to engagement in legitimate employment and educational opportunities, poses distinct barriers to the development of individuals and communities. Depending on a wide range of factors associated with the culture and context of that use, such as the type of drugs and the availability of particular drugs, young people may be vulnerable and at risk of drug use.

There is not a straight cause-and-effect relationship between development and the involvement of youth in illicit drug use and drug trafficking, as these factors are all associated with each other. A key feature in understanding risk factors for youth is their interconnectedness, especially relating to the onset of drug use disorders.²⁸

23 Kenneth J. Gruber and Melissa F. Taylor, "A family perspective for substance abuse: implications from the literature", *Journal of Social Work Practice in the Addictions*, vol. 6, Nos. 1 and 2 (2006), pp. 1-29.

24 *Impacts of Drug Use on Users and Their families in Afghanistan*.

25 Marina Barnard, *Drug Addiction and Families* (London, Jessica Kingsley Publishers, 2006).

26 Marija G. Dunn and others, "Origins and consequences of child neglect in substance abuse families", *Clinical Psychology Review*, vol. 22, No. 7 (2002), pp. 1063-1090.

27 Diane M. Hogan, "The impact of opiate dependence on parenting processes: contextual, physiological and psychological factors", *Addiction Research and Theory*, vol. 15, No. 6 (2007), pp. 617-635.

28 Charlie Lloyd, "Risk factors for problem drug use: identifying vul-

Impact of social development on the drug problem

An entire area of development interventions, namely alternative development, exists for the express purpose of reducing illicit drug crop cultivation, among other things. There is ample evidence that it is only when interventions have succeeded in improving the development status of communities that they turn away from illicit cultivation.²⁹

More broadly, just as drug use has serious ramifications for development, certain socioeconomic factors, such as poverty, poor education and lack of health-care services, can have a negative impact on drug use. Inequality, social deprivation and lack of alternative livelihoods, to name but a few, can all be viewed as deficiencies in development that feed one or another aspect of the drug problem. Poverty, unemployment, poor education, domestic violence and social disadvantage are vulnerabilities linked to social development that can be conducive to drug use. Moreover, people with drug use disorders whose lives are characterized by low levels of literacy and education may have limited understanding of the potentially harmful effects of drugs, particularly relating to the risk of drug dependence, because of a general lack of accurate, practical and realistic information about drugs and their effects.³⁰

Countries with well-developed and articulated healthcare delivery systems, well trained staff and efficient procedures for the issuance and processing of both import and export authorizations tend to fare better in ensuring the availability of opioids for medical purposes. According to the International Narcotics Control Board (INCB), the consumption of narcotic drugs for pain relief is concentrated primarily in countries in North America, Western Europe and Oceania,³¹ some of which are also regions with a high level of documented misuse of prescription opioids. Based on data by the National Center for Health Statistics,³² every year since 2002 more than 40 per cent of the total number of overdose deaths in the United States have been related to prescription opioids. Street gang members have capitalized on the problem of misuse of prescription opioids in the United States by trafficking prescription drugs, specifically hydrocodone and oxycodone.³³

nerable groups”, *Drugs: Education, Prevention and Policy*, vol. 5, No. 3 (1998), pp. 217-232.

29 See *World Drug Report 2015*, chap. II.

30 UNODC Country Office for Afghanistan, “Community drug profile No.5: an assessment of problem drug use in Kabul city”, (Kabul, 2003), p. 25.

31 INCB, “Availability of narcotic drugs for medical use”. Available at www.incb.org.

32 <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>.

33 United States, DEA, *2015 National Drug Threat Assessment Summary* (October 2015).

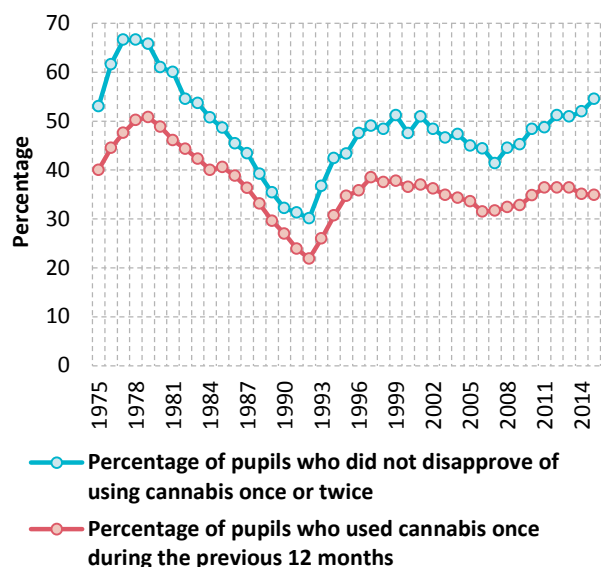
Social norms and drug use

Another indirect way that social development can have an influence on the drug problem is by supporting or undermining existing structures of society that can increase (or decrease) vulnerability to drug use. One aspect of this is related to changing social norms, whereby an individual’s inclination to engage in drug use, particularly the initiation of drug use or of a new type of drug-using behaviour, is influenced by the level of acceptability that individuals perceive to be associated with that particular behaviour within their immediate acquaintances, family, community, peer group and society in general.

As society and social norms change, the inclination to engage in drug use may therefore also undergo change. For example, in families where drugs are used or attitudes towards their use are positive, the incidence of drug use among children is higher than in families where drug use is low and where attitudes towards drug use are not as permissive. One study showed that children of people with drug use disorders are seven times more likely than their peers to grow up with drug and alcohol problems.³⁴

The results of school surveys in the United States provide an indicator of the acceptability of using cannabis, as measured by the percentage of pupils who did not disapprove of people (over 18 or older) who try cannabis once or twice; the trend in this indicator over the period 1975-2015 mirrors the trend in prevalence of cannabis use. Indeed, this disapproval indicator is a slightly better pre-

FIG. 4 Use of cannabis compared with attitudes towards cannabis use among twelfth graders in the United States, 1975-2015



Source: Monitoring the Future study: United States, Department of Health and Human Services (1975-1994), and Institute for Social Research, University of Michigan (1995-2015).

34 Neil P. McKeganey and others, “Preteen children and illegal drugs”, *Drugs: Education, Prevention and Policy*, vol. 11, No. 4 (2004), pp. 315-327.

dicator of the trend in cannabis use than the perceived ease of availability of cannabis. Although this pattern is observable over the long term, in recent years the trends have begun to diverge, which may be linked to developments in the policy on cannabis in some states of the United States.

A similar pattern emerges from the results of a recent study of drug use among the school population in Chile (covering pupils between the eighth year of primary school and the fourth year of secondary school). In 2013, past-year prevalence of cannabis use rose sharply (reaching 30.6 per cent, up from 19.5 per cent in 2011); at the same time, several perception indicators (including parental disapproval) showed significant shifts towards greater acceptability of cannabis use and a decrease in the perception of risk.³⁵

One study of already socially excluded young people who were living in impoverished areas in the United Kingdom of Great Britain and Northern Ireland, where there were changing illicit drug markets and few opportunities in the local economy, found that young people experienced an erosion of normative cultural barriers between recreational and problematic drug use and had an increased risk of transitioning from cannabis to heroin use.³⁶ This is likely to be true for similarly impoverished groups in the rapidly changing drug markets of developing countries.

A review of over 50 articles on school-based education programmes to prevent the use of drugs and other substances identified various cultural components used to adapt the programmes to different schools and settings and evaluated whether the inclusion of such components enhanced outcomes. The study found that among the components that enhanced the outcomes for participants in the school-based drug use prevention programmes was the incorporation of positive values of the participants' cultural and ethnic identities, such as religiosity.³⁷

Migration and drug use

Target 10.7 of the Sustainable Development Goals

Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

One of the numerous perils of migration is that it can affect drug use patterns not only because it may expose

migrants to new drugs, but also because migrants often find themselves living in new and challenging circumstances away from the support of their families and other networks. A UNODC study in Afghanistan, in which interviews were conducted with more than 3,000 people who had been using drugs (opium, cannabis, heroin and tranquillizers) for more than six months on a regular basis, found that 26 per cent of the people interviewed had started using drugs in the Islamic Republic of Iran and 8 per cent had started using drugs in Pakistan.³⁸ Participants in focus-group discussions in all provinces mentioned that the problems faced by migrants could drive them to use drugs. An earlier study in Afghanistan yielded similar results; of the opium users, 40 per cent (all men) had initiated their opiate use in the Islamic Republic of Iran and 4 per cent had initiated their opiate use in Pakistan.³⁹

While migration itself can directly affect drug use patterns, the absence of safe and accessible channels for migration contributes (together with various root causes such as environmental disasters, conflict and political and social upheaval) to the displacement of populations, the formation of communities of internally displaced persons and refugees and the deterioration of many aspects of life, exacerbating poverty and creating unemployment. This leads to conditions conducive to the emergence of illicit drug use, which may arise, for example, as an escape from social stress and post-conflict conditions.

Studies on the mental health of populations displaced by conflict have brought out the links with post-traumatic stress disorder and depression, both potential triggers for initiating or escalating drug use.⁴⁰ Research conducted in six settings of protracted displacement for refugees and internally displaced people — in Iran (Islamic Republic of), Kenya, Liberia, Pakistan, Thailand and northern Uganda — found that a range of narcotic drugs, psychoactive substances and other substances, such as opiates, khat, benzodiazepines and alcohol, contributed to wide-reaching health, social and protection problems. The study also found that displacement experiences, including dispossession, livelihood restriction, hopelessness and an uncertain future may make communities particularly vulnerable to drug use and its effects, and changing social norms and networks (including the population in the surrounding area) may result in changed and potentially more harmful patterns of use and resultant social costs.⁴¹

35 Chile, Servicio Nacional para la Prevención y Rehabilitación del Consumo de Drogas y Alcohol, Ministerio del Interior y Seguridad Pública, "Décimo estudio nacional de drogas en población escolar: principales resultados nacionales" (Santiago de Chile, Observatorio Chileno de Drogas, 2014).

36 Robert MacDonald and Jane Marsh, "Crossing the Rubicon: youth transitions, poverty, drugs and social exclusion", *International Journal of Drug Policy*, vol. 13, No. 1 (2002), pp. 27-38.

37 Anne M. Gewin and Bobby Hoffman, "Introducing the cultural variables in school-based substance abuse prevention", *Drugs: Education, Prevention and Policy*, vol. 23, No. 1 (2016), pp. 1-14.

38 *Impacts of Drug Use on Users and Their Families in Afghanistan* (see footnote 17).

39 UNODC, "Drug use in Afghanistan: 2009 survey – executive summary" (2009).

40 Zachary Steel and others, "Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta analysis", *Journal of the American Medical Association*, vol. 302, No. 5 (2009), pp. 537-549.

41 Nadine Ezard and others, "Six rapid assessments of alcohol and other substance use in populations displaced by conflict", *Conflict and Health*, vol. 5, No. 1 (2011).

Migrants can develop problems related to the use of drugs and other substances while in their country of origin, in transit, in temporary refuge or in resettlement, and a variety of risk factors for developing drug dependence in those settings have been reported, including male gender, exposure to war trauma, displacement and coexisting mental health problems.⁴²

Links between social exclusion, stigma and drug use

Target 10.2 of the Sustainable Development Goals
By 2030, empower and promote the social, economic and political inclusion of all

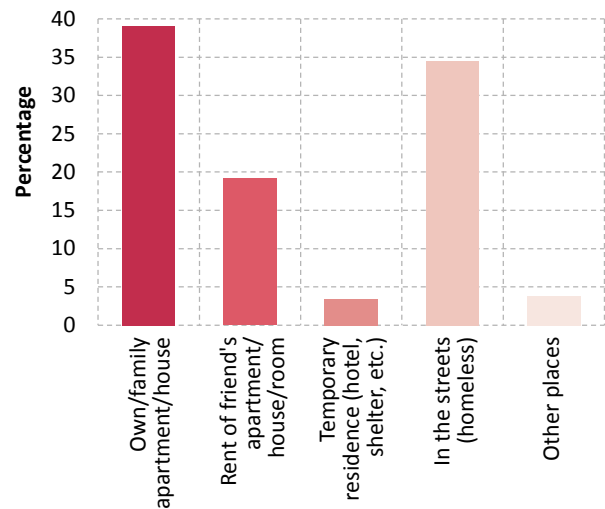
Target 10.3 of the Sustainable Development Goals
Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

Clearly, not all people who use drugs are marginalized and not all marginalized people are people who use drugs. Nevertheless, marginalization can be viewed as contributing to drug use, just as drug use can be viewed as contributing to the marginalization of some users: drug use can cause a deterioration in living conditions, while processes of social marginalization can be a reason for initiating drug use.⁴³

Since marginalization is not easy to measure directly, it does not lend itself to quantitative research. However, several categorical risk factors for marginalization have been shown to be linked to drug use, including unemployment, homelessness, incarceration, sex work and vulnerable youth (such as young victims of family abuse and violence).⁴⁴ For example, a cohort study among homeless people in the four largest cities of the Netherlands (Amsterdam, Rotterdam, The Hague and Utrecht) found that cannabis had been used in the past month by 43 per cent of adult homeless people and by 63 per cent of young homeless people.⁴⁵ A study carried out in Ireland found 67 per cent of homeless ex-prisoners to be drug-dependent.⁴⁶

High-risk behaviours, such as injecting drug use and sharing injecting equipment, are also reported to be high among homeless people.⁴⁷ Research conducted in 2015 by Homeless Link, a charitable company in the United

FIG. 5 Living situation of regular “crack” users in Brazil



Source: *A Profile of Users of Crack and/or Similar Drugs in Brazil* (Brazil, National Drug Policy Secretariat, 2013).

Kingdom, found that 34 per cent of people “sleeping rough” (sleeping in uncomfortable conditions, typically outdoors) had used heroin in the previous month and 37 per cent had used “crack” or cocaine.⁴⁸ Elsewhere, a study focusing on the profile of regular⁴⁹ users of “crack” or similar smokeable forms of cocaine (thus excluding cocaine salt) in Brazil⁵⁰ found that more than a third of those users spent a significant time on the streets and that less than a quarter of them had been to secondary school, although more than 95 per cent had been in school at some point in their lives. The study also found that more than 70 per cent of the users shared their drug using equipment, a pattern which raises concerns about the transmission of infections, especially viral hepatitis. Moreover, prevalence of HIV among these users was eight times higher than the prevalence rate in the general population of Brazil (5.0 per cent versus 0.6 per cent).

Drug use itself can also contribute to marginalization. In some societies, the stigma of being drug users and discrimination drive people who use drugs to the margins of society. People with drug use disorders are frequently distanced from their communities and families. The marginalization and stigmatization of people who regularly use drugs also have a negative impact on their employment opportunities and social relationships. Stigma and social exclusion can lead to a loss of human capital, as people who use drugs are unable to contribute to or participate

42 Kamaldeep Bhui and Nasir Warfa, “Drug consumption in conflict zones in Somalia”, *PLoS Medicine*, vol. 4, No. 12 (2007).

43 EMCDDA, *Annual Report 2003: The State of the Drugs Problem in the European Union and Norway* (Lisbon, 2003).

44 Ibid.

45 Margriet van Laar and others, *Report to the EMCDDA by the Reitox National Focal Point: The Netherlands Drug Situation 2014* (Lisbon, 2015).

46 Claire Hickey, *Crime and Homelessness 2002* (Dublin, Focus Ireland and PACE, 2002).

47 *Annual Report 2003: The State of the Drugs Problem in the European Union and Norway*.

48 Stephen Holland, “Homeless health data finds heroin and cocaine dependency more prevalent amongst women than men”, 5 August 2015. Available at www.homeless.org.uk/.

49 A “regular user” was defined as a person who had used the substances on 25 days or more in the previous six months.

50 Brazil, National Drug Policy Secretariat, “Perfil dos usuários de crack e/ou similares no Brasil” (Rio de Janeiro, 2013).

in a range of community activities such as civic duties, voluntary work, sports clubs, religious gatherings and cultural events. Stigma also contributes to poor mental and physical health, non-completion of drug treatment and increased involvement in high-risk behaviour such as sharing injecting equipment.⁵¹

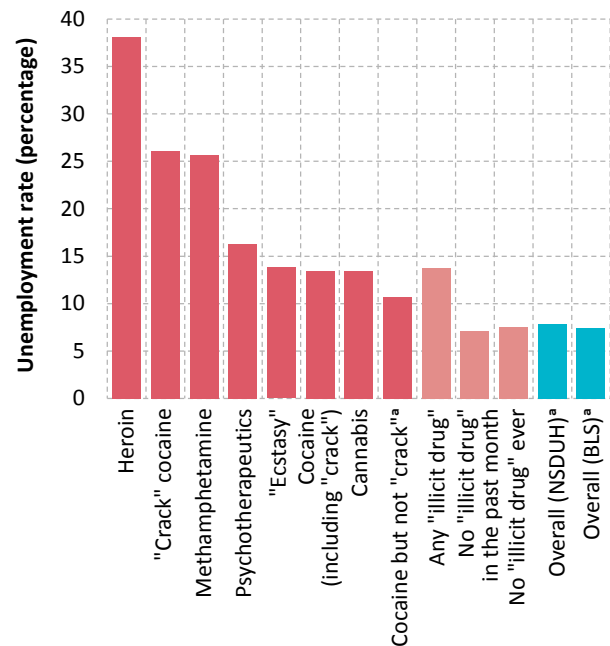
Drug dependence and unemployment: a vicious cycle

There is a clear positive association between drug dependence and social disadvantage, including unemployment and poverty. The relationship between drug use and employment status is complex and characterized by reciprocal causality: drug use exacerbates the risk of unemployment, while unemployment increases the risk of drug use.

Drug use can hamper a person's employment prospects by reducing productivity and the chance of finding work. Conversely, unemployment can cause stress and anxiety, financial difficulties, dissatisfaction and disaffection, which are all risk factors for initiation, perpetuation, intensification or resumption of drug use. In the United States, for example, the prevalence of past-month use of any drug among the population aged 18 years or older averaged 18 per cent among the unemployed, 10 per cent among part-time workers, 8 per cent among full-time workers and less than 6 per cent among those in the "other" category, such as retirees.⁵² Data from EMCDDA for 30 European countries⁵³ suggest that, as of 2013, among all persons accessing treatment for drug use disorders who were in the labour force, at least half were unemployed.⁵⁴ A UNODC study on drug use in Afghanistan also found distinct links between drug use and employment status.⁵⁵

A detailed breakdown of employment status among past-month users of drugs in the United States brings out different levels of association between drug use and unemployment across the various drug types. Heroin, methamphetamine and "crack" cocaine were the drugs most closely associated with unemployment, both in terms of the unemployment rate among past-month users and

FIG. 6 Unemployment^a among past-month drug users in the United States, by drug type, 2013



Source: United States, National Survey on Drug Use and Health, Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, *National Survey on Drug Use and Health, 2013*; data extracted from the National Addiction and HIV Data Archive Program, hosted by the Inter-university Consortium for Political and Social Research at the University of Michigan (<http://doi.org/10.3886/ICPSR35509.v3>).

^a For details, including an explanation of the methodological differences in the unemployment rate based on data from the *National Survey on Drug Use and Health (NSDUH)* and the Bureau of Labor Statistics (BLS), see the online methodology section of the present report.

in terms of the increased likelihood of being a past-month user among the unemployed (compared with employed people). The unemployment rate among past-month heroin users was 38 per cent, while unemployed people were almost 10 times more likely to be heroin users than people in full-time employment (prevalence rates of 0.59 per cent and 0.060 per cent, respectively). The association was much stronger in the case of "crack" cocaine than cocaine in general (see figures 6 and 7).

There are several mechanisms whereby problem drug use can affect an individual's chances of finding and keeping a job. First, people with drug use disorders can suffer from a range of serious personal, health, lifestyle and other problems that need to be addressed before they are in a position either to complete welfare-to-work programmes successfully or to take up and retain paid employment.⁵⁶ Second, drug use may be associated with other factors, such as lack of qualifications, low levels of literacy and poor employment histories, which themselves reduce the competitiveness

51 James D. Livingston and others, "The effectiveness of interventions for reducing stigma related to substance use disorders: a systematic review", *Addiction*, vol. 107, No. 1 (2012), pp. 39-50.

52 Alejandro Badel and Brian Greaney, "Exploring the link between drug use and job status in the U.S.", *Regional Economist*, July 2013. Available at www.stlouisfed.org/publications/regional-economist/july-2013/exploring-the-link-between-drug-use-and-job-status-in-the-us.

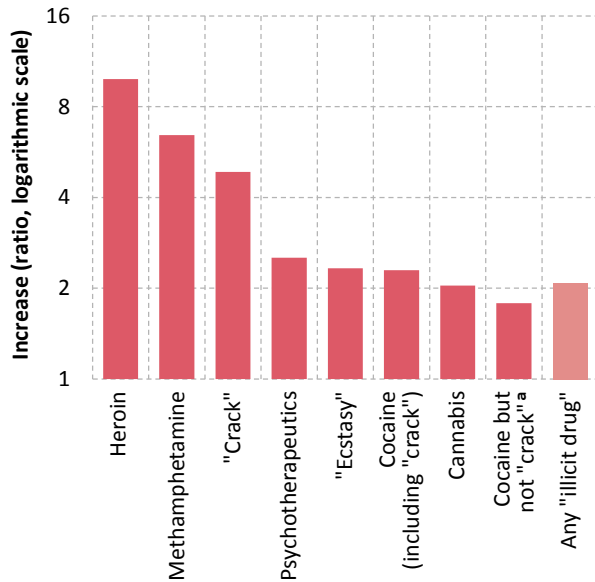
53 These data refer to the 28 member States of the European Union, Norway and Turkey.

54 Fifty per cent corresponds to the proportion of entrants classified as "unemployed/discouraged", among the total of number of entrants with known employment status, excluding students. This total includes persons whose status was classified as "other" as well as "receiving social benefits/pensioners/house-makers/disabled". It is likely that these categories include people who are not in the labour force; if this were taken into account, the proportion of unemployed people would be higher.

55 *Impacts of Drug Use on Users and Their Families in Afghanistan*.

56 Peter A. Kemp and Joanne Neale, "Employability and problem drug users", *Critical Social Policy*, vol. 25, No. 1 (2015), pp. 28-46.

FIG. 7 Increased likelihood of being a past-month drug user among the unemployed population, compared with the population in full-time employment in the United States, by drug type, 2013



Source: United States, National Survey on Drug Use and Health, SAMHSA, Center for Behavioral Health Statistics and Quality, *National Survey on Drug Use and Health, 2013*; data extracted from the National Addiction and HIV Data Archive Program, hosted by the Inter-university Consortium for Political and Social Research at the University of Michigan (<http://doi.org/10.3886/ICPSR35509.v3>).

^a See the online methodology section of the present report.

of people who use drugs on the job market.⁵⁷ Third, additional barriers may arise from social circumstances, such as the exclusion of people from job opportunities because of a criminal record and the stigmatization of people who use drugs, with the resultant discriminatory practices by employers and providers of social services (such as child-care). Fourth, many people with drug use disorders may be acutely aware that limited skills, poor or no qualifications, gaps in their work history, particularly related to imprisonment, and a criminal record can make looking for a job extremely challenging, to the extent that it may seem a pointless venture.⁵⁸

Drug use can limit the opportunities of a person entering or remaining in the workforce, whereas frustration caused by the failure to find adequate employment can increase drug consumption, creating a vicious cycle, particularly in the case of drug-dependent persons.

57 Harry Sumnall and Angelina Brotherhood, *Social Reintegration and Employment: Evidence and Interventions for Drug Users in Treatment*, EMCDDA Insights No. 13 (Luxembourg, Publications Office of the European Union, 2012).

58 J. Spencer and others, *Getting Problem Drug Users (Back) into Employment* (London, United Kingdom Drug Policy Commission, 2008).

How stigma can affect the effectiveness of drug responses

Just as a good level of social development enhances the efficacy of government efforts to counter the drug problem, deficiencies in the social milieu may hamper efforts to reduce illicit drug supply and demand. In particular, the stigmatizing attitudes towards people who use drugs that may extend to staff in health-care services can get in the way of their ability to deliver effective treatment to drug users.

Several studies have identified stigma as a significant barrier to accessing health-care and treatment services for drug users, with some health-care providers holding negative beliefs about people with drug use disorders, including overuse of system resources, non-investment in their own health, abuse of the system through drug-seeking and diversion, and failure to adhere to recommended treatment and care.^{59, 60} Surveys of health professionals have indicated that they may hold negative or stereotypical views of people with drug dependence, which are likely to compromise the provision of high-quality care, while studies of nurses found that negative and punitive attitudes towards people who use drugs are relatively common. Judgmental, unsympathetic or hostile attitudes and views held by health professionals are likely to discourage individuals with drug-related problems from accessing health-care services.⁶¹

Generally, PWID may be perceived as a threat to health-care staff, as well as the community, because they are a potential cause of fear and vigilance, partly as a result of the perceived threat of needle-related injuries and of transmission of blood-borne viruses. A study to examine the extent of discrimination and stigma related to hepatitis C infection experienced by 274 PWID in Sydney, Australia, found that over half (52 per cent) reported discrimination in health-care settings as a result of having tested positive for hepatitis C, and 65 per cent reported that such discrimination was a result of being a drug user, with females more likely than males to experience discrimination because of their status with regard to hepatitis C.⁶² According to UNAIDS, health-care services may even exclude PWID or treat them badly when they ask for help.⁶³

59 Livingston and others, "The effectiveness of interventions for reducing stigma related to substance use disorders".

60 T. M. Ronzani, J. Higgings-Biddle and E. F. Furtado, "Stigmatization of alcohol and other drug users by primary care providers in Southeast Brazil", *Social Science and Medicine*, vol. 69, No. 7 (2009), pp. 1080-1084.

61 Natalie Skinner and others, "Stigma and discrimination in health-care provision to drug users: the role of values, affect, and deservingness judgments", *Journal of Applied Social Psychology*, vol. 37, No. 1 (2007), pp. 163-186.

62 Shah E. Habib and Lester V. Adorjany, "Hepatitis C and injecting drug use: the realities of stigmatization and discrimination", *Health Education Journal*, vol. 62, No. 3 (2003), pp. 256-265.

63 *The Gap Report* (see footnote 5).

The punitive approaches of law enforcement authorities with regard to people who use drugs can contribute to their marginalization, particularly when those approaches lead to high levels of incarceration (for a more detailed discussion, see the subsection entitled “Criminal justice”).

Drug responses and social development

Target 3.5 of the Sustainable Development Goals
Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

Drug demand reduction efforts and the entire continuum of care for people who use drugs, when successful, reduce drug use and therefore its impact on public health. The benefits affect both the people who use drugs and society in general, and such efforts have proved effective in preventing the transmission of, for example, HIV and viral hepatitis. Drug use prevention programmes have also been shown to lead to a decrease in a range of other risky behaviours, such as aggressiveness and truancy.

Effective strategies for countering the drug problem exist, but it takes a well-developed framework to implement them effectively. Even at the level of monitoring the extent of drug use, developed countries are typically better placed than developing countries to assess the extent of the problem. For example, heroin use in Europe has undergone a significant decline in recent years, and this improvement has been attributed in part to increased effectiveness in drug demand reduction efforts, specifically a dramatic increase in treatment availability, which removed a significant proportion of the demand from the market.⁶⁴

Experience has provided an abundance of evidence on how drug demand reduction programmes can have a positive impact.^{65, 66} Programmes are more effective when they recognize that drug use can be the result of multiple causes, and when they incorporate not only drug-specific components, but also skills that help individuals to deal effectively with the challenges of each phase of life, such as relationship skills for adolescents or parenting skills for parents. The results are also enhanced when the interventions employ and expand the use of evidence-based tools systematically. Moreover, the entire continuum of care interventions can be even more effective when it incorporates evidence-based measures aimed at minimizing the adverse public health and social consequences of drug abuse, including appropriate medication-assisted therapy programmes, injecting equipment programmes as well as

antiretroviral therapy and other relevant interventions that prevent the transmission of HIV, viral hepatitis and other blood-borne diseases associated with drug use. The implementation of evidence-based programmes remains at very low levels of coverage in many parts of the world⁶⁷ and is still under-funded.⁶⁸

Impact of alternative development on social development

When successful, alternative development programmes also lead to the broader development of the affected communities. In Myanmar, for example, alternative development projects in Wa Special Region 2 resulted in several benefits on the health front: vaccinations reduced infant mortality and eliminated leprosy among children; and electricity and potable water were brought to some townships. In Thailand, alternative development resulted in increased access to education, health services and potable water, with a resulting decline in the incidence of malaria and smallpox. In Pakistan, alternative development efforts in Dir District, Khyber Pakhtunkhwa (formerly North-West Frontier Province), resulted in the provision of drinking water infrastructure, an effective immunization programme and the improvement of roads, thereby enhancing accessibility to social services. Alternative development programmes often create and strengthen social organizations and generally enhance the level of organization of rural communities, enabling progress on various fronts, especially when such programmes encourage the direct participation of beneficiaries in the design, planning and implementation of projects. A discussion of the social component of alternative development, including detailed examples, can be found in chapter II of the *World Drug Report 2015*.

Availability of drugs for medical and scientific purposes

Target 3.b of the Sustainable Development Goals
Support the research and development of vaccines and medicines [...], provide access to affordable essential medicines and vaccines, [...]

Target 3.b of the Sustainable Development Goals is closely linked to the objective of drug control, which is to ensure access to controlled drugs for medical and research purposes while preventing diversion and abuse. In the preamble to the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol, the parties to the Convention recognized that the medical use of narcotic drugs continues to be indispensable for the relief of pain and suffering and that adequate provision must be made to ensure the availability of narcotic drugs for such purposes.

64 EMCDDA, *Annual Report 2012: The State of the Drugs Problem in Europe* (Lisbon, 2012).

65 “International standards for the treatment of drug use disorders: draft for field testing” (E/CN.7/2016/CRP.4).

66 See UNODC, *International Standards On Drug Use Prevention* (Vienna, March 2013).

67 David P. Wilson and others, “The cost-effectiveness of harm reduction”, *International Journal of Drug Policy*, vol. 26, Suppl. No. 1 (2015), pp. S5-S11.

68 UNAIDS, Halving HIV transmission among people who inject drugs: Background note, document UNAIDS/PCB (35)/14.27.

Notwithstanding the clear intentions of the control system, 5.5 billion people, or three quarters of the world's population, have little or no access to medicines containing narcotic drugs and have inadequate access to treatment for moderate to severe pain. WHO estimates that each year 5.5 million terminal cancer patients and 1 million end-stage HIV/AIDS patients, as well as many other people with chronic, non-malignant pain, suffer untreated or under-treated moderate to severe pain, including 800,000 patients with lethal injuries caused by accidents and violence, patients with chronic illnesses, patients recovering from surgery, women in labour (110 million births per year) and paediatric patients.⁶⁹

While some controlled substances play an important role in the management of pain and other medical uses, in some countries the strategies in place to prevent the abuse, misuse and diversion of controlled substances may sometimes affect the availability of those substances. Human Rights Watch reviewed the national drug control strategies of 29 countries and found that 25 of them failed to identify the issue of ensuring availability of controlled substances for medical and scientific use as an objective or to outline specific measures on this issue.⁷⁰

Impact of other drug responses on social development

There are other ways in which the response to the drug problem, particularly efforts to counter the illicit supply of drugs, may impact health and social development. Eradication of illicitly cultivated crops, if not adequately complemented by initiatives to provide alternative livelihoods, may impact the livelihood of already poor farmers and their families. These aspects are discussed below, in the sections on economic development and environmental sustainability.

Furthermore, when the response to illicit drug use neglects the health aspects of drug use and treats the problem exclusively as a criminal offence, excessively focusing on punishment, consequences can ensue for the well-being of people who use drugs, of prison populations and of society in general. These aspects are discussed below, in the subsection on criminal justice.

Finally, when the response to the drug problem fails to take into account the particular needs of women, it may contribute to undermining the objectives of gender parity and of the empowerment of women and girls. This applies not only to direct interventions against the drug problem but also to the monitoring of drug use, as women are likely to be under-represented in research identifying prevalence, needs, risks and outcomes of drug use, leading to a gap in

appropriate policy development and continuing to perpetuate a lack of understanding of women's specific needs and issues in that area.⁷¹

B. ECONOMIC DEVELOPMENT

Various Sustainable Development Goals and targets make reference to economic aspects, but Goal 8, dealing with economic growth, and Goal 1, dealing with poverty, are probably the two most relevant in analysing the links between economic development and the drug problem.

Poverty, economic disadvantage and unemployment are some of the enabling factors of illicit crop cultivation and drug production. Economic aspects can also have an impact on the evolution of illicit drug markets, as variations in income levels and purchasing power may influence drug consumption patterns. Just as economic development has an impact on illicit drug markets, the drug problem can also have economic ramifications. The economic cost of drug use that is incurred, for example, when drug-using segments of the workforce do not receive adequate treatment, can impact on productivity. The costs associated with efforts by state institutions to help people who use drugs, such as efforts to provide treatment and rehabilitation, as well as law enforcement efforts, can also have an impact on government budgets.



Sustainable Development Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Impact of economic development on the drug problem

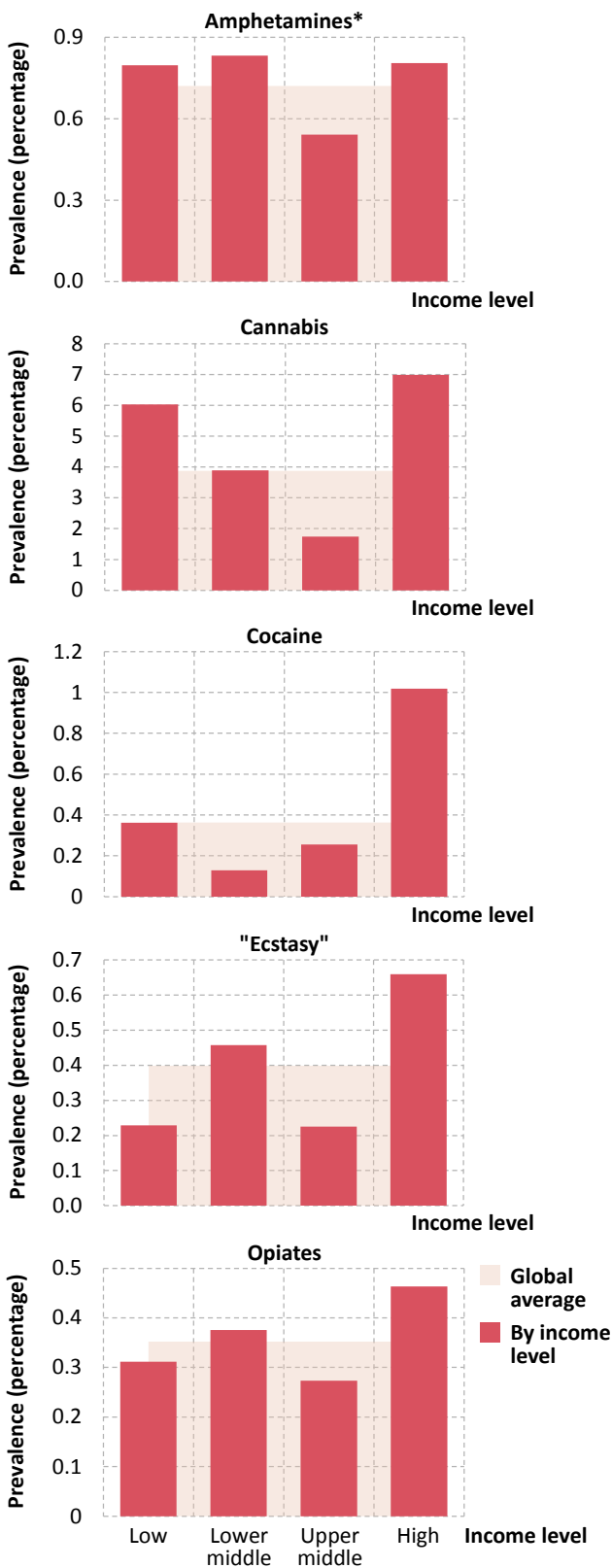
One way to look at how economic development affects the drug problem is to compare the latter across different countries on the basis of their economic development. Such an analysis provides a simplified view, as there are a multitude of factors that can play a role in shaping the drug problem of each country. Proximity to a drug-producing area or to a major drug trafficking route, for example, explains more than economic development the higher than global rates of opiate use in the Near and Middle East and South-West Asia or the higher rates of cocaine use (including "crack" cocaine) in South America and West Africa. Nevertheless, a global macrolevel analysis can still provide insights into how economic development may have a bearing on the drug problem, although the relationship between development and the drug problem needs to be viewed in dynamic terms.

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

70 Human Rights Watch, "National drug control strategies and access to controlled medicines" (2015).

71 A. Roberts, B. Mathers and L. Degenhardt, *Women Who Inject Drugs: A Review of Their Risks, Experiences and Needs* (Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 2010).

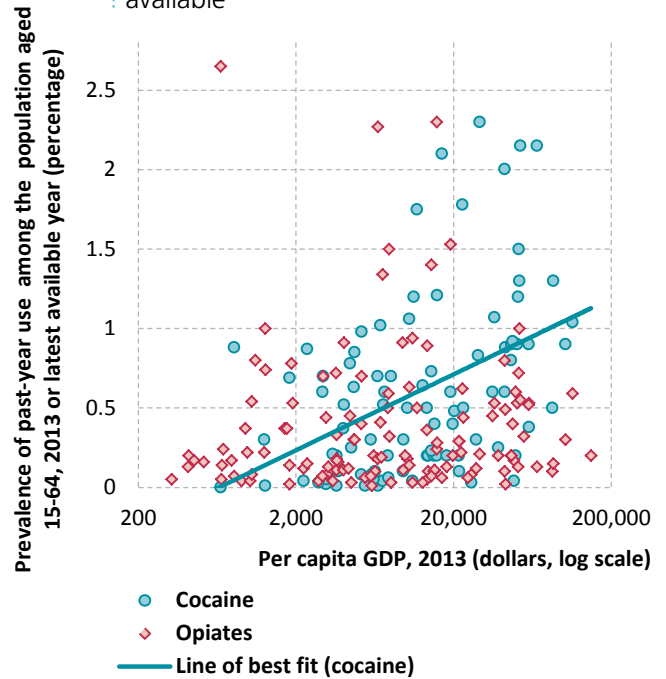
FIG. 8 Prevalence of past-year use of drugs among persons aged 15-64, by drug category and national income, 2013



Source: World Bank (for income levels) and UNODC estimates based on responses to the annual report questionnaire and other official sources (for drug use data).

* Including prescription stimulants.

FIG. 9 Prevalence of past-year use of opiates and cocaine versus per capita gross domestic product in countries with national data, 2013 or the latest year for which data are available



Source: World Bank (for per capita gross domestic product (GDP)) and national data and estimates based on responses to the annual report questionnaire and other official sources (for drug use data).

Some patterns manifest themselves at the global level and can be seen in cross-country comparisons based on national indicators; other patterns are intrinsically tied to variations within countries and can be observed from socioeconomic indicators at the subnational level. Some patterns are evident when all drug types are considered together, some emerge when focusing on a single drug type and others can be observed in the interplay and the trade-offs between different drugs.

Economic development and drug use

The present section examines three overarching patterns whereby the level of economic well-being can influence drug use. First, the analysis uses cross-country comparisons to explore to what extent higher national income is conducive to the formation of illicit drug markets. Second, it uses subnational data to examine poverty, together with other forms of economic and social disadvantage,⁷² as a risk factor for drug use. Third, it explores the relationship between socioeconomic status and different patterns of drug use.

The first pattern emerges from analysing indicators of drug use and economic development at the national level, as past-year use of drugs of all types is higher in “high-

72 In addition to the discussion of poverty in this section, see the discussion of social exclusion in the section entitled “Social development”.

income” countries. As figures 8 and 9 show, cocaine is the drug most clearly associated with high income. The association between the problem of drug use and development can also be noted in terms of disability-adjusted life years (see figure 3, page 65).

Development and the evolution of drug use and consumer markets

Drugs that command a relatively high price, and ultimately greater profits for traffickers, may find an easier foothold in countries with relatively higher levels of per capita income. Although historically there have been different dynamics (including licit use) that have triggered the onset of the use of certain drugs, it is likely that income levels play an important role in enabling drug use to take hold and consolidate. Estimates by United States authorities show the magnitude of the amounts spent on drugs: in 2010, people in the United States who used a drug at least four times a month spent an average of \$10,600 a year on cocaine, \$17,500 on heroin and \$7,860 on methamphetamine.⁷³ Total annual national expenditure related to the purchase of drugs amounted to \$28 billion spent on cocaine, \$27 billion on heroin and \$13 billion on methamphetamine.

High-income countries are likely to have above-average drug prices and to be more attractive to international drug traffickers. This is particularly the case for cocaine and heroin, which originate in confined and well-defined areas of production, creating a scenario in which consumers worldwide compete for a product with a concentrated supply and leading to a situation in which supply gravitates to those places where the largest profits are to be made. In contrast, cannabis and, to a certain extent, some kinds of ATS can be sourced locally and on a very small scale, sometimes even by self-sufficient consumers.

This may help to explain, for example, why relatively undeveloped countries in Africa, which is not located near cocaine and heroin production areas, have typically had relatively low rates of cocaine and heroin use (prior to some of them becoming cocaine or heroin transit areas), whereas the same cannot be said of the prevalence rates of cannabis use, which have tended to be even higher than the global average. The use of unprocessed drugs such as opium and coca leaf remains largely confined to the places in which they are cultivated, where they have been used for centuries, while their derivatives have not always found a large market in the countries of origin. Heroin use, for example, is quite low in Latin American countries, although opium is cultivated in the subregion and is also processed into heroin.

Just as different drug categories display different patterns, different drug subcategories may also explain some of the complexities of illicit drug markets. For example, although

the prevalence of past-year use of cocaine in South America is not very different from the figure for North America, the majority of cocaine users in the United States use cocaine in salt form, whereas in South America the use of other forms of cocaine (in base form) appears to be much more widespread. Moreover, some of the “products” consumed in base form in South America are siphoned off from intermediate stages of the cocaine-processing chain, when they may still contain high levels of impurities and are thus usually considered to have less potential to fetch high prices. In contrast, even “crack” cocaine (used for smoking) in the United States is believed to be obtained from a reverse step that reverts to base form (in this case, “crack”) from salt form. Another possible illustration of this pattern is the case of the domestic heroin market in India. Reports by the Government of India indicate that heroin in the domestic retail market is considered to be of “low value” and that this reflects a distinct market from the heroin transiting India from Afghanistan and headed for other destinations.

Within the same country, different sub-types of a given drug category may have quite different patterns of association with the socioeconomic status of users. Economic well-being is not necessarily homogenous within a country and different subgroups may use different drugs to differing degrees. Indeed, certain links between drug use and socioeconomic well-being, such as income levels and employment status, are only visible at the subnational or community level.

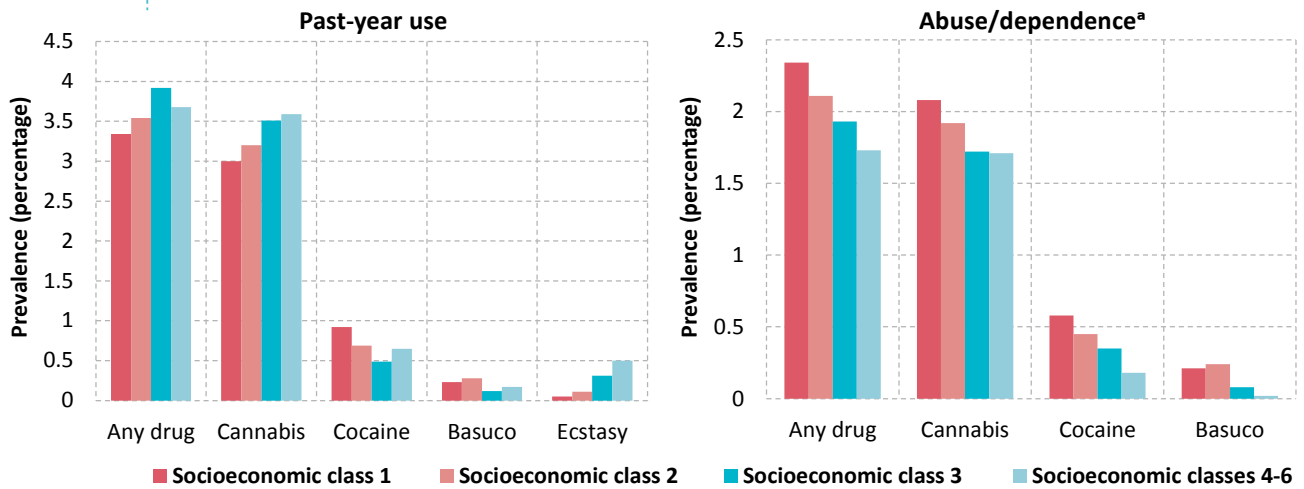
For example, in the United States, the association of drug use with unemployment status is quite different in the case of cocaine salt and “crack” cocaine (see figures 6 and 7 in the section entitled “Social development”). Although this is sometimes attributed to “crack” being cheaper than cocaine salt, it is not clear whether, or in which sense, price can be a determining factor; one study,⁷⁴ based on data covering cities in the United States, determined that, in purity-adjusted terms, there were no consistent differences between prices of “crack” and cocaine salt. The study tentatively suggests that, given typical transaction sizes in practice, the minimum cost for achieving intoxication was frequently lower. However, data from a later study⁷⁵ indicate that the median costs of “crack” and cocaine transactions are comparable (\$27 for cocaine salt versus \$25 for “crack” cocaine). Because of their different modes of administration, the typical experience associated with “crack” use is shorter but reportedly more intense than that of cocaine salt, so it can be argued that users of cocaine salt would need to spend more to achieve the same level of intensity. The differences may also extend to the potential for users to develop tolerance and dependence.

73 B. Kilmer and others, *What America's Users Spend on Illegal Drugs: 2000-2010* (Santa Monica, California, Rand Corporation, 2014).

74 Jonathan P. Caulkins, “Is crack cheaper than (powder) cocaine?”, *Addiction*, vol. 92, No. 11 (1997), pp. 1437-1443.

75 Kilmer and others, *What America's Users Spend on Illegal Drugs: 2000-2010*.

FIG. 10 Prevalence of past-year drug use and of drug abuse or dependence^a in Colombia, by socioeconomic class,^b 2013



Source: Observatorio de Drogas de Colombia, *Estudio Nacional de Consumo de Sustancias Psicoactivas en Colombia — 2013*, June 2014.

^a "Dependence" is defined according to the ICD-10 criteria of the World Health Organization, and "abuse" is defined according to the DSM-IV criteria of the American Psychiatric Association.

^b The socioeconomic classes were ranked so that class 1 was the least wealthy and class 6 the most wealthy.

Generally, even though wealthy societies appear to be more vulnerable to drug consumption, within those societies, economic and social disadvantage is a significant risk factor for drug consumption to translate into drug dependence and drug use disorders. Poverty is associated with drug use disorders, not because of any link with discretionary income but because poor people are more vulnerable and more likely to live on the margins of society. It is relative poverty and marginalization within one country that affects the development of drug use disorders, rather than absolute levels of income. Moreover, drug use can itself exacerbate poverty and marginalization, creating the potential for a vicious cycle.

Higher socioeconomic groups may play a separate role in facilitating the onset of recreational use as a first step in the subsequent formation and consolidation of illicit drug markets. The mechanisms that drive this interaction merit further study, but they may be attributable to a higher propensity to experiment, higher income levels, higher association with an urban location of residence and different patterns of entertainment among people in the higher socioeconomic brackets. A study on cannabis use demonstrated this phenomenon by drawing on evidence from France, Germany and the United States. The study showed how, at the outset, it was mostly well-educated men in the countries examined who started to experiment with cannabis use. Gradually, this shifted to men with low levels of education. Women followed at lower rates and the change was not as marked; moreover, the people who transitioned to daily cannabis use were predominantly those in the lower socioeconomic bracket.⁷⁶

76 Legleye and others, "Is there a cannabis epidemic model? Evidence from France, Germany and USA". *International Journal of Drug Policy*, vol. 25, No. 6 (2014), pp. 1103-1112.

This pattern is also consistent with data on drug use in Colombia, which show very distinct patterns for past-year drug use and for drug use disorders in different socioeconomic classes. In the case of cannabis and "ecstasy", for example, there is a progressive increase in rates of occasional (past-year) use with higher levels of socioeconomic status (see figure 10), but overall drug use disorders are associated with the lower socioeconomic classes.



Sustainable Development Goal 1.
End poverty in all its forms everywhere

As mentioned earlier, poverty is a significant risk factor for drug use; conversely, drug use itself frequently places a significant strain on the finances of people with drug dependence and on their families' finances. The extent of the financial strain brought about by drug use may be related not only to the price of a drug but also to the potential of the person using the drug to develop a tolerance to that particular drug, and hence to its pharmacological properties. In the case of heroin, for example, it is believed that experienced users may seek much higher doses than first-time users. People with fewer economic resources who use drugs may also be exposed to higher levels of harm as they resort to cheaper variants of drugs. Lower prices may be associated with lower purity levels, which imply higher health risks because of the presence of adulterants, by-products and other substances.

The financial difficulties experienced by people with drug dependence are often corroborated by the methods found to have been adopted to generate income. One study in

Brazil focused on the profile of regular⁷⁷ users of “crack” or other similar smokeable forms of cocaine (thus excluding cocaine salt).⁷⁸ The study estimated that 13 per cent of users had resorted to begging as a source of income during the preceding 30 days, 7.5 per cent were sex workers or had exchanged sex for money, 6 per cent had resorted to illicit activities linked to the sale or distribution of drugs and 9 per cent had resorted to other illicit activities.

Low income levels are relevant not only in themselves, but also in relation to the context and the society in which an individual lives, as income inequality within a society may contribute to the marginalization of the less wealthy. As discussed in the *World Drug Report 2012*, an analysis based on Gini coefficients indicated that countries with high levels of inequality (Gini coefficients exceeding 50) tended to face relatively higher levels of drug problems, mostly as transit or production countries. Societies characterized by high income inequality tend to be more prone to crime, and in some extremely unequal societies, members of marginalized groups may view involvement in criminal activities such as drug trafficking as the only feasible strategy for upward social mobility. Similarly, without realistic hopes of a better future, members of those groups may become disillusioned and more vulnerable to illicit drug use.⁷⁹

Many drug-dependent persons are trapped in a vicious cycle of poverty and drug use because of a wide range of factors, such as family breakdown, lack of education and limited access to employment opportunities and health care. However, even though the causes of poverty and deprivation are to some extent social, they are experienced individually and those who experience them have their own set of reasons and motivations for responding to their circumstances in a particular manner.⁸⁰ Not everyone living in a poor community will succumb to drug dependence and it is important to recognize that not all people who are drug-dependent are to be found in the poorest socioeconomic groups.

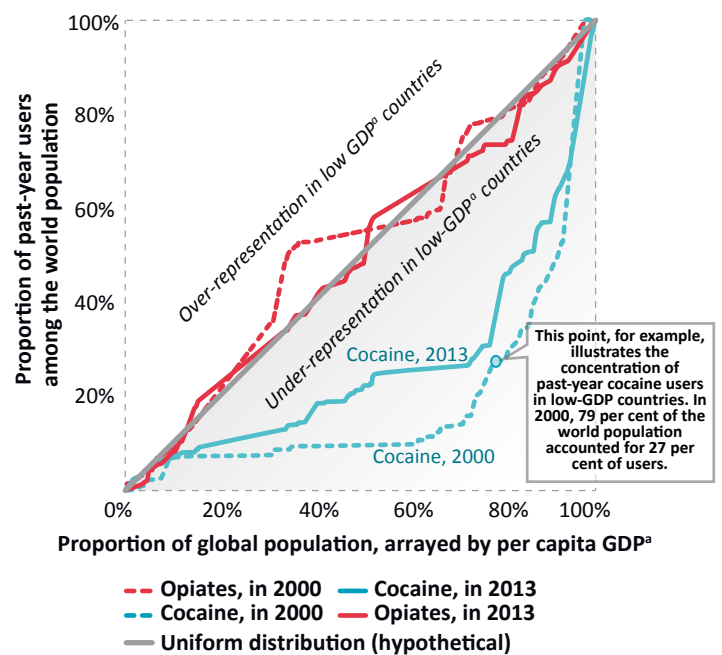
In sum, poverty, together with other forms of social disadvantage,⁸¹ is strongly associated with drug use disorders, both as a risk factor leading to drug use and as a consequence of drug use. Moreover, in some countries middle or upper socioeconomic classes are associated with higher levels of “recreational” drug use, which may simply be a manifestation of purchasing power or may reflect more willingness, or opportunities, to experiment with drug use.

Are developing countries following in the steps of developed countries when it comes to patterns of drug use?

The evolution of the global markets for some drug types has been led by the dynamics in developed countries. This is clear from the history of the illicit use of synthetic drugs and cocaine and, based on historical qualitative assessments, it is also true to a large extent for heroin — all drugs that require a certain degree of processing or synthesis. After emerging in developed countries, over time, consumption eventually tends to catch on in countries with lower levels of development. More broadly, the evolution of consumer markets in developing countries seems to follow patterns seen in developed countries (see the discussion below).

Figure 11 shows an overall shift in cocaine use from developed to developing countries between 2000 and 2013. Given the lack of data, the same analysis can only be done for opiates in general rather than specifically for heroin and only since the year 2000.

FIG. 11 Share of past-year cocaine and opiate users among the global population, cumulative with per capita gross domestic product, 2000 and 2013



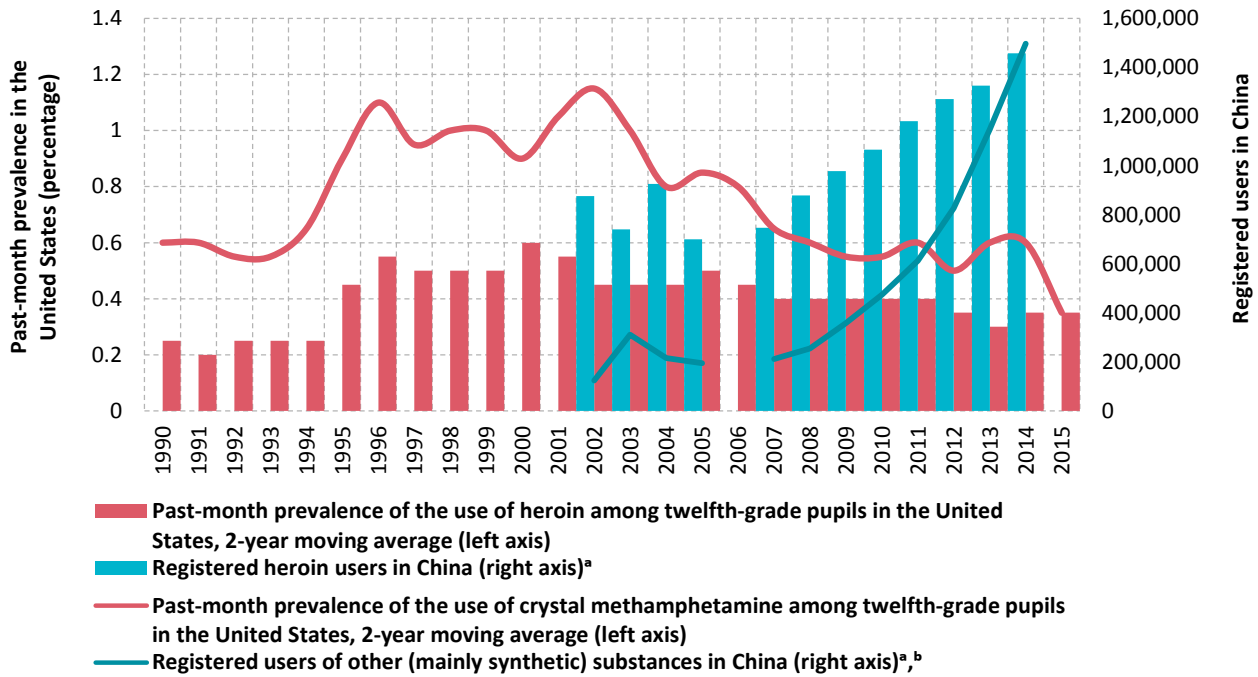
Source: World Bank (for per capita gross domestic product (GDP)) and UNODC estimates based on responses to the annual report questionnaire and other official sources (for drug use data).

^a Gross domestic product.

Consumption of most synthetic drugs and new psychoactive substances (NPS) first emerged in the more developed countries before expanding in less developed countries. Prime examples are the emergence of methamphetamine in Japan and North America near the middle of the twentieth century, the subsequent emergence of “ecstasy” and

77 A “regular user” was defined as a person who had used the substance on 25 days or more in the previous six months.
78 “Perfil dos usuários de crack e/ou similares no Brasil” (see footnote 50).
79 *World Drug Report 2012* (United Nations publication, Sales No. E.12.XI.1), p. 88.
80 R. Young, *From War to Work: Drug Treatment, Social Inclusion and Enterprise* (London, Foreign Policy Centre, 2002).
81 In addition to the discussion of poverty in this section, see the discussion of social exclusion in the section entitled “Social development”.

FIG. 12 Selected indicators of the use of heroin and other substances in China and the United States, 1990-2015



Source: Office of the National Narcotics Control Commission of China; and Monitoring the Future study, Institute for Social Research, University of Michigan.

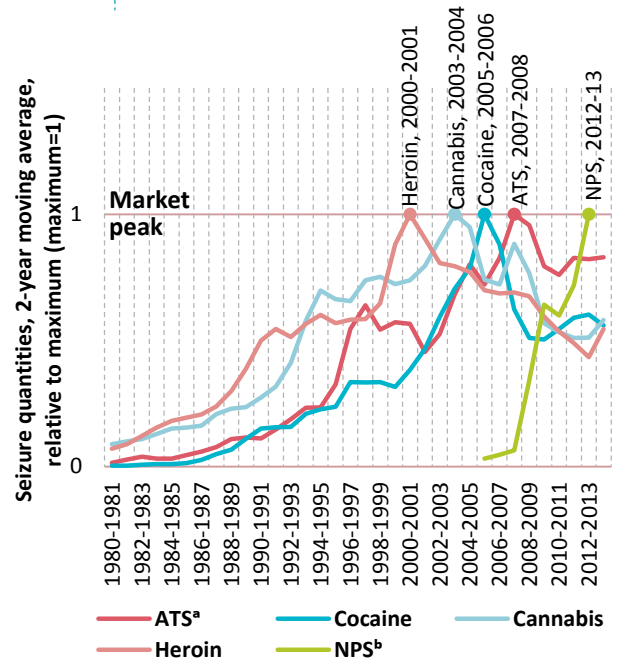
^a Data for the period 1990-2001, 2006 and 2015 were not available.

^b The category "other substances" includes mainly synthetic substances such as methamphetamine and ketamine; a comprehensive breakdown for all years was not available.

other hallucinogens in North America and Europe and the ongoing proliferation of the consumption of NPS in Europe, Japan and North America. It is at a later stage when the use of these substances expanded in less developed countries; for example, the peak in methamphetamine use in the United States happened between 1995-2002, while in China methamphetamine use is a more recent occurrence and the available indicators do not yet show signs of reaching a peak (see figure 12).

The drivers of the emergence of synthetic drug markets in developed countries may be a combination of supply-side and demand-side factors. On the demand side, greater purchasing power, as well as potentially greater inclination and opportunities to experiment with substances for recreational purposes, may play a role. In the case of ATS, however, it appears that the substances' availability for other purposes, including their use in medicine, together with the associated potential for diversion, was crucial in triggering the onset of misuse. In addition, technological innovation and the presence of a variety of precursors and other chemicals in the licit markets facilitated the establishment of clandestine laboratories manufacturing synthetic drugs in developed countries, often close to demand.⁸²

FIG. 13 Long-term trends in drug seizures in Western and Central Europe, 1980-2014



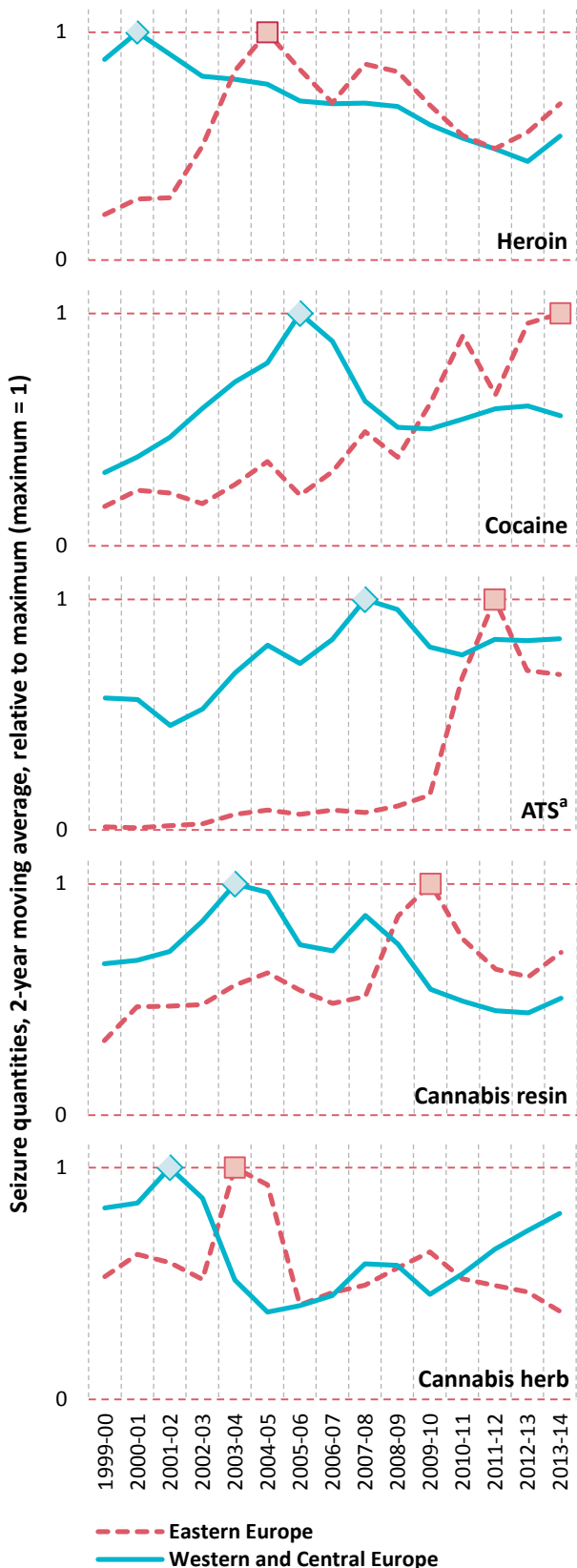
Source: Responses to the annual report questionnaire and other official sources (for data on heroin, cannabis, cocaine and ATS); and EMCDDA (for data on NPS).

^a Excluding "ecstasy" and prescription stimulants.

^b Data for NPS refer to countries covered by the early warning system used by EMCDDA, namely the European Union member States, Norway and Turkey; data on NPS for 2014 were not available.

82 United Nations International Drug Control Programme, *World Drug Report 1997* (Oxford, Oxford University Press, 1997).

FIG. 14 Comparison of seizure trends in Western and Central Europe and in Eastern Europe, by drug type, 1999-2014



Source: Based on responses to the annual report questionnaire and other official sources.

^a Excluding "ecstasy" and prescription stimulants.

Apart from data on drug use, availability indicators also illustrate some patterns in the evolution of the development of illicit drug markets in developed countries and a certain replication of those patterns in the markets of less developed countries. The market in Europe offers a two-fold illustration of these dynamics: first, an apparent situation in which the market in Western and Central Europe may be the first to have become saturated and to have stabilized with respect to most drugs, with an ongoing surge in NPS (see figure 13); and second, an apparent consistent time lag between the situation in Western and Central Europe and the subsequent expansion in Eastern Europe (see figure 14). As with many other social phenomena, development may accelerate the diffusion and a certain homogenization of the drug problem. In effect, an analysis of reported expert perceptions of trends in illicit drug use made across drug types in 2012 also points in this direction: while there appears to have been an overall stabilization in countries of the Organization for Economic Cooperation and Development (OECD) since 2002, other countries tend to perceive the trend as increasing.⁸³

How does economic development influence drug trafficking?

Does globalization affect drug trafficking?

Facilitating trade and easing trade barriers are features of globalization that can potentially have an impact on drug trafficking. While the value of trade agreements in boosting economic development is not under question, by fostering the expansion of trade and global transportation networks, trade openness may also facilitate the cooperation and the formation of alliances among criminal organizations in different countries. Such cooperation expands the power and reach of cartels to distant markets and thereby strengthens their ability to evade detection by local law enforcement. Indeed, it has been argued that globalization has driven an overall decline in the retail prices of drugs by increasing the efficiency of their distribution, by reducing the risk premium involved in dealing drugs and by increasing the degree of competition in illicit drug markets.⁸⁴

Strategies adopted to facilitate trade, such as free trade agreements and the establishment of free trade zones, export-processing zones, economic areas and customs unions, may reduce the opportunity for law enforcement authorities, specifically customs authorities, to monitor shipments from their origin to their destination. Such strategies shift the onus of monitoring trade from the country of destination to the point of entry into the broader economic area. This may potentially affect not only trafficking in illicitly produced drugs but also,

⁸³ *World Drug Report 2012*, p. 67.

⁸⁴ Cláudia C. Storti and Paul De Grauwe, "Globalization and the price decline of illicit drugs", *International Journal of Drug Policy*, vol. 20, No. 1 (2009), pp. 48-61.

Example of development programmes that may have triggered illicit cultivation

In the mid-twentieth century, the Andean nations of Bolivia, Colombia, Ecuador and Peru coordinated efforts to develop road infrastructure into their Amazonian lowlands with the goal of interconnecting the Andean section of the Amazon basin, from Venezuela to Bolivia.^a The Declaration of the Presidents of America, resulting from a meeting of the Presidents of the American States held in Punta del Este, Uruguay, in April 1967, crystallized the scope and ambition of this massive development plan and included the goals of laying the foundation for economic integration by completing the *Carretera Marginal de la Selva* and modernizing agricultural food production through development, agrarian reform and land settlement. In Peru, a badly conceived agricultural reform that was applied from 1970 onwards destroyed the agricultural companies, distributing the land and properties of the landowners (“*gamonales*”) among their workers, leading to the loss of the jobs of many workers, who migrated in search of land and other economic opportunities.

There was an urgent need to expand the agricultural land base,^b since agricultural modernization and demographic growth, coupled with vastly inequitable land distribution in the Andes, made hundreds of thousands of farmers redundant.^c Colonization projects emerged to direct and sometimes follow migration flows of Andean farmers seeking land or a new start or fleeing violence.^{d, e, f, g, h}

Map 1 shows the location of the development projects in the Andean subregion during this period, as well as the main locations of coca bush cultivation in the 1990s. Colombia opened projects in Meta along the Ariari, at El Retorno in Guaviare, near Florencia Caquetá and Puerto Asís, Putumayo;^{c, g, i} but preparations for construction of the road only started in 2012. Colonization projects in Colombia were quickly abandoned in favour of supporting spontaneous colonists, an approach viewed as efficient and effective.^{l, j} Colonization projects east of the Andes in Ecuador (not

shown on map 1) were small in comparison, directly associated with providing support for colonists along the single and late-starting oil extraction road.^{c, j} Bolivia opened projects in Santa Cruz, Chapare and Alto Beni.^e In Peru, special development projects began in 1980, along the *Carretera Marginal de la Selva*; examples being the special projects of Huallaga Central, Alto Huallaga and Pichis-Palcazú. Aimed at triggering the development of the local population, these projects enabled the settlement, with better development prospects, of Andean and coastal migrants.

Designed to bring socioeconomic development to the subregion, overall, these initiatives may have inadvertently set the stage for the subsequent increase in coca bush cultivation.

^{a-j} See the online methodology section of the present report.

depending on the specific arrangements, the diversion of licitly produced substances, particularly precursor chemicals, as the prevention of diversion comes to rely on internal market regulations and safeguards rather than on cross-border protocols. In addition, some agreements may extend to the free movement of people, making the detection and monitoring of drug traffickers more challenging.

The literature presents various hypotheses about the effects of trade openness on the ability of the authorities to reduce drug trafficking. One study that examines the various theories concludes that trade openness decreases the interdiction capabilities of authorities in drug-consuming countries while increasing those of authorities in drug-producing countries. It also finds that greater openness to trade does not have a consistently significant effect on the interdiction capabilities of authorities in transit countries.⁸⁵

Economic development and illicit crop cultivation and drug production

In the relationship between economic development and drugs, nowhere is the link more pronounced than in the case of the illicit cultivation of drug crops. Socioeconomic factors such as poverty and lack of sustainable livelihoods drive farmers in rural areas to engage in illicit crop cultivation and are manifestations of poor levels of develop-

ment, which, alongside issues of governance, constitute the enablers of large-scale illicit crop cultivation in rural areas.

Socioeconomic data collected through UNODC crop monitoring surveys confirm that poverty is one of the enabling factors of the illicit cultivation of coca bush and opium poppy. For example, the latest survey of illicit cultivation in Myanmar⁸⁶ found that the reasons for illicit opium poppy cultivation were predominantly income-related, with village headmen indicating that, on average, the most important use of the income generated by illicit opium poppy cultivation in their villages was buying food, followed by paying debt and paying household property expenses. Most village headmen reported decreases in income among farmers who ceased cultivating opium poppy. Despite this, the average income in poppy-growing villages was still lower than in non-poppy-growing villages,⁸⁷ corroborating the thesis that it is the struggle of villagers to make ends meet that leads to their decision to engage in illicit cultivation.

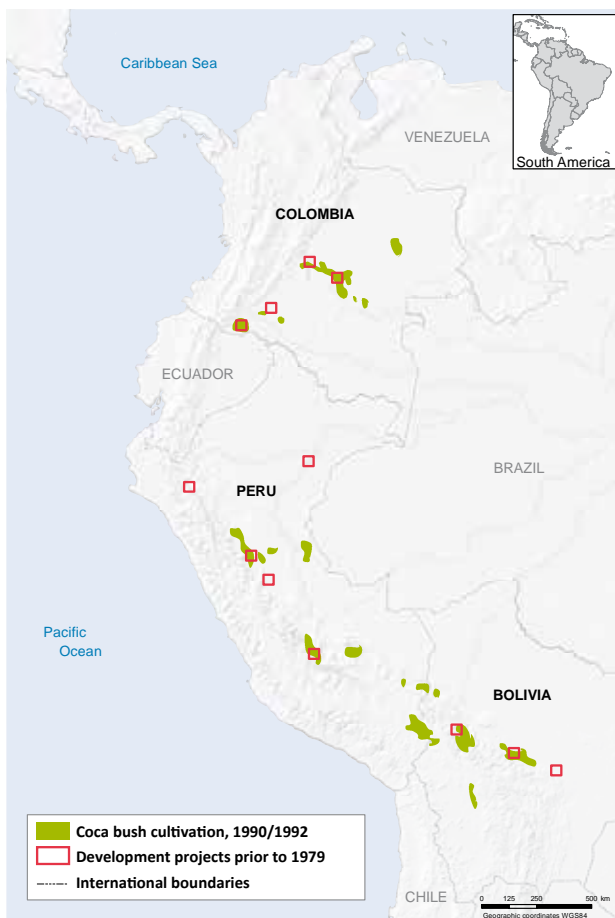
Not all poor farmers are engaged in illicit cultivation, and for certain households and communities the decision to engage in illicit cultivations is related to development issues that go beyond income levels. In Afghanistan, it has been shown that villages growing opium poppy are further

85 Horace A. Bartilow and K. Eom, “Free traders and drug smugglers: the effects of trade openness on States’ ability to combat drug trafficking”, *Latin American Politics and Society*, vol. 51, No. 2 (2009), pp. 117-145.

86 UNODC, *Southeast Asia Opium Survey 2015: Lao People’s Democratic Republic and Myanmar* (Bangkok, 2015).

87 The income was \$1,952 per household in non-poppy-growing villages compared with \$1,548 per household in poppy-growing villages.

MAP 5 | Agricultural development projects in the Andean countries in the 1960s and 1970s and coca bush cultivation in the early 1990s



Source: L. M. Dávalos, K.M. Sanchez and D. Armenteras, "Deforestation and Coca Cultivation Rooted in 20th-Century Development Projects" (forthcoming).

Notes: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

from market than non-poppy-growing villages and that there is a relation between opium poppy cultivation and the absence of basic development facilities such as access to power grids.⁸⁸ Lack of security and governance has also proved to increase the likelihood of individuals and communities engaging in illicit cultivation.⁸⁹

Economic development can reduce the vulnerability of farmers to engage in illicit crop cultivation and drug production and can bring about a sustainable reduction in such cultivation. One of the clearest examples of successfully reduced illicit crop cultivation is the case of Thailand, where illicit cultivation of opium poppy was reduced from around 17,900 ha in the crop year 1965/1966 to 129 ha in 2003/2004. Although progress was achieved in the con-

text of a broad set of development objectives, the reduction of illicit opium poppy cultivation was also explicitly recognized as one of those objectives. Indeed, the case of Thailand illustrates how two streams of intervention — economic development and drug control — have worked well together to help the hill tribes to benefit from the overall progress made and provide them with alternative sources of income and have led to illicit opium poppy cultivation remaining relatively limited since 2004 (265 ha in 2013, the latest year for which estimates are available).

If development interventions are not sensitive to the vulnerabilities of communities to specific drug issues, they may inadvertently trigger dynamics that increase illicit cultivation. One example is the impact of large development programmes in the early 1960s and 1970s in the Andean subregion, where programmes to modernize agriculture and develop infrastructure were initiated to bring socioeconomic development to the subregion. At the same time, these dynamics may have also set the stage for later increases in coca bush cultivation (see map 1 and box on page 82).

In countries with large-scale illicit crop cultivation in rural areas, the elimination of such cultivation can have an impact on the income and employment opportunities of labourers and farmers. Only when efforts to control illicit crop cultivation are accompanied by development measures to ensure alternative livelihoods can communities enjoy positive economic development.

Two contrasting examples can be seen in Afghanistan, where the illicit opiate economy has created a significant link between the labour market and opium poppy cultivation. The opium ban enforced in Taliban-controlled territory in the growing season 2000/2001, which resulted in a very pronounced drop in opium poppy cultivation, had a negative effect on the rural economy. It led to a significant rise in the level of opium-denominated debt and a dramatic increase in levels of rural unemployment. The economic downturn and problems repaying accumulated debts led to increased migration to Pakistan and the mortgaging of land.⁹⁰

The 2005 opium ban in Nangarhar Province, in southern Afghanistan, offers a contrasting example, as it was accompanied by significant development investments in physical and social infrastructure. After the ban, Nangarhar witnessed significant economic growth between 2009 and 2011, experiencing dramatic increases in job opportunities and wage rates. In the lower-lying districts of the province, along the Kabul river, the initial response to the ban was often to replace opium poppy with a combination of wheat

88 UNODC and Ministry of Counter-Narcotics of Afghanistan, *Afghanistan Opium Survey 2014: Socio-economic Analysis* (March 2015).

89 See *World Drug Report 2015*, pp. 92-97.

90 David Mansfield, Alcis Ltd and Organization for Sustainable Development and Research, *Managing Concurrent and Repeated Risks: Explaining the Reductions in Opium Production in Central Helmand between 2008 and 2011* (Kabul, Afghanistan Research and Evaluation Unit, 2011).

and another cash crop (such as onions in the district of Surkhrud and green beans in the district of Kama), but many farmers adapted to the growing demand from the rapidly expanding urban centres of Jalalabad and Kabul, cultivating a wide range of annual and perennial horticultural crops. Many households experienced a pronounced increase in income-earning opportunities; the economic growth is reflected in the expanding footprint of the markets in the district centres of Kama and Surkhrud, as well as in the district of Jani Khel.⁹¹ Although the improvement in Nangarhar could be observed over a number of years, other more recent developments related to governance issues now threaten to undo the progress achieved in that province.⁹²

The region of San Martín in Peru is another example of positive economic development occurring in parallel with efforts to reduce illicit drug supply in rural communities affected by illicit cultivation. Over the period 1996-2000, an average of 3,700 ha of illicit coca bush cultivation were eradicated each year, while agricultural cooperatives were set up and significant international funds were invested. The subsequent years saw significant economic growth in the region, together with sustained eradication of coca bush, even as coca bush cultivation in the rest of Peru rose. In the period 2001-2009, the regional gross domestic product (GDP) rose by 73 per cent.

Impact of the drug problem on economic development

The economic impact of the drug problem is multifaceted and ranges from creating an economy based on illicit activities in the rural areas of developing countries affected by large-scale illicit crop cultivation to discouraging business by fuelling violence, corruption, extortion and protection rackets, notably in transit countries, and to creating costs associated with consumption for individual consumers and for society in general.

Economic profits are generated across the entire chain of illicit drug production and distribution, but it is at the retail stage that profits are typically highest. UNODC, for example, estimated that, in 2009, the average wholesale price of cocaine in Bolivia (Plurinational State of), Colombia and Peru was only 1 per cent of the retail price in the United States (after taking purity levels into account), while the corresponding percentage in Mexico was 7 per cent.^{93, 94} As a result, in absolute terms, only a small com-

ponent of the immediate economic footprint of the global illicit trade in heroin and cocaine is to be found in countries where illicit cultivation of coca bush and opium poppy is concentrated. A recent UNODC report on the illicit flow of trafficked opiates from Afghanistan along the Balkan route found that, in the period 2009-2012, the total gross profit averaged \$357 million per year in Afghanistan, compared with \$28 billion along the rest of the Balkan route.

However, the size of the illicit economy associated with drugs, relative to the licit economy, tends to be higher in drug-producing countries than in the consumer markets. This is partly because the licit economy in some drug-producing countries is relatively small and partly because supply is concentrated in those few countries. For example, UNODC estimated the total value of the illicit opiate economy in Afghanistan to be \$2.8 billion in 2014. This figure, equivalent to 13 per cent of the country's GDP, considerably exceeded the value of the export of licit goods and services in 2014.⁹⁵ Based on UNODC estimates⁹⁶ of total gross profits related to cocaine trafficking, profits in Colombia were equivalent to 4.1 per cent of that country's GDP in 2009, compared with 0.2 per cent in the case of the United States and 0.36 per cent in the case of the United Kingdom.

In Afghanistan, the illicit economy provides access to labour for a large number of farmers and a source of income for other people involved in the trade and has therefore become embedded in the licit economy.

The macroeconomic impact of the opium economy depends, in particular, on how much of its proceeds actually enter the Afghan economy and how this is allocated between consumption, investment and savings, as well as, more generally, how it translates into demand for domestic and imported goods and services. A joint study by the World Bank and UNODC argues that, whereas farmers and wage labourers can be expected to spend rather than save the bulk of their earnings from the opium economy, mostly on domestic goods and services, opium traffickers and processors are likely to save a substantial proportion of their revenue and spend more on imports. While the opium economy results in a significant net inflow of money into Afghanistan's balance of payments, this is reduced by drug-related outflows of funds (including capital flight, as well as spending on imports).^{97, 98}

91 David Mansfield, *Examining the Impact of IDEA-NEW on Opium Production. Nangarhar – A Case Study* (2015).

92 David Mansfield, "The devil is in the details: Nangarhar's continued decline into insurgency, violence and widespread drug production", Brief Series (Kabul, Afghanistan Research and Evaluation Unit, 2016).

93 *World Drug Report 2011* (United Nations publication, Sales No. E.11.XI.10).

94 A discussion of the theories explaining price markup at different stages of the supply chain can be found in Jonathan P. Caulkins and

Peter Reuter, "How drug enforcement affects drug prices", in *Crime and Justice: A Review of Research*, vol. 39, No. 1, Michael Tonry, ed. (Chicago, University of Chicago Press, 2010), pp. 213-272.

95 UNODC, *Afghanistan Opium Survey 2014*.

96 UNODC, *Estimating Illicit Financial Flows Resulting from Drug Trafficking and other Transnational Organized Crimes* (Vienna, 2011).

97 Doris Buddenberg and William A. Byrd, eds., *Afghanistan's Drug Industry: Structure, Functioning, Dynamics and Implications for Counter-Narcotics Policy* (UNODC and World Bank, 2006).

98 *World Drug Report 2012*, pp. 115-116.

TABLE 3 Overview of economic evaluations of the costs of the drug problem

Study	Period covered by the data	Cost per capita	Cost as a percentage of GDP ^a
Gonçalves, Lourenço and da Silva (2015)	2010	25 euros (1999 prices)	..
Garcia-Altés and others (2002)	1997	..	0.07
Mark and others (2001)	1996	..	..
Wall and others (2000)	1996	Can\$ 43-69 ^b	..
Healey and others (1998)	1995	..	..
Mills, Skodbo and Blyth (2013)	2013	..	..
Lievens and others (2016)	2012	66 euros	0.19
Kopp (2015)	2010	36 euros	0.12 ^c
Potapchik and Popovich (2014)	2008	..	..
Vanags and Zasova (2010)	2008	..	0.4
Observatorio Argentino de Drogas (2010)	2008	Arg\$ 94	0.9
Observatorio Peruano de Drogas (2010)	2002-2010	US\$ 6.8	n/a
Slack and others (2009)	2005/2006	..	0.7
Collins and Lapsley (2002)	1998/1999	..	0.85
Collins and Lapsley (2008)	2004/2005	..	0.88 ^d
Rehm and others (2006)	2002	Can\$ 262	..
Godfrey and others (2002)	2000	..	..
Gordon and others (2006)	2003/2004	..	..
United States Office of National Drug Control Policy (2004)	1992-2002	2002: US\$ 650	2002: 1.7
United States Department of Justice (2011)	2007	..	..
Miller and others (2006) ^e	1999	..	..
Fernandez (2012) ^e	2006	..	..

Sources: See the online methodology section of the present report.

Notes: The studies may use different methodologies and take into account different aspects of the drug problem; hence, the results are not directly comparable. Two dots (..) indicate that data are not available or are not reported separately.

^a Gross domestic product.

^b The cost calculation was restricted to untreated opioid dependence in one city.

^c The percentage refers to public expenditure only.

^d The cost calculation in the table pertains exclusively to "illicit drug abuse".

^e These two studies focus specifically on the crime-related aspect of the drug problem.

The cost of the drug problem and drug control policy: the economic perspective

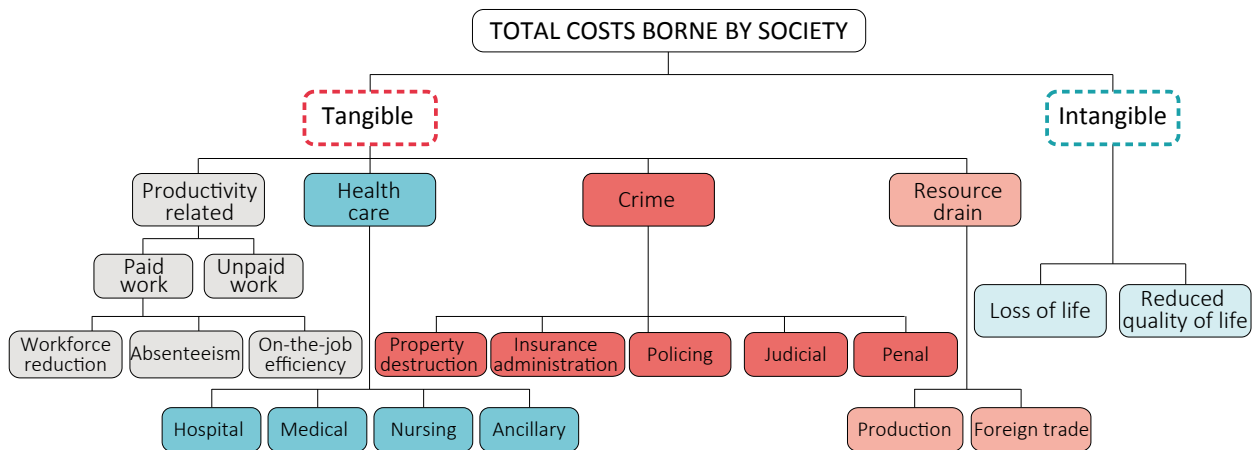
In general, economic studies can be used to quantify the cost borne by society attributable to the drug problem. A review of the literature reveals 22 such studies worldwide (see table 1) that attempt to assess, at the national level, the overall cost attributable to the various aspects of the drug problem (or at least drug use).⁹⁹ The studies go beyond tallying the actual monetary disbursements that were made in connection with drugs. While they include the costs associated with the various forms of intervention in response to the drug problem, such as prevention, treatment and law enforcement (the "direct costs"), they also assign a value to other costs, such as the loss of productivity in the workplace associated with drug use ("indirect costs"). A large number of factors, including absenteeism, accidents and conflicts in the workplace, may lead to a decline in productivity as a consequence of drug use.

A review of the literature shows large variations in the cost of illicit drugs in the 14 countries examined. First, the cost

in percentage of GDP ranged from 0.07 to 1.7 per cent. Second, the majority of the countries registered a high percentage of costs attributable to drug demand and supply reduction interventions (such as prevention, treatment and law enforcement), incurred to address the drug problem, as opposed to productivity losses and any other indirect costs. Some countries, however, were confronted with considerable productivity losses (57-85 per cent of the total cost). The lost productivity was the result of high levels of morbidity and premature mortality caused by illicit drug use; together with the high number of incarcerations for drug-related crime. Third, the composition of the costs of the response differs from country to country. The studies found, in most countries, high costs for law enforcement compared with health costs. The only exceptions were studies in two European countries, which registered medical costs of 60-65 per cent of the total cost of the interventions in response to the drug problem.

The above-mentioned cost studies were conducted mainly in high-income countries. Most of the studies focused on the costs associated with drug consumption (rather than drug production), by using a hypothetical scenario in which there was no drug use. Indeed, it appears that the

99 In many cases the studies focus on drug use.

FIG. 15 Breakdown of the costs of drug use borne by society

Source: Adapted from D. Collins and others, "Introduction; improving economic data to inform decisions in drug control", *Bulletin on Narcotics*, vol. LII, Nos. 1 and 2 (2000), fig. II.

established standard methodology and analytical framework for such studies are well suited to dealing with drug use but are less well suited when it comes to dealing with illicit drug production and trafficking (for a standardized conceptual breakdown of the costs of drug use, see figure 15).

One of the studies, an economic study in Chile,¹⁰⁰ is rather atypical in that it focused on the impact of drug-related crime. The study covered infringements of the national drug law, as well as other types of crime, such as robbery, sex-related crime and homicide, that can be attributed to drug use or drug trafficking through any of the following three mechanisms: the psychopharmacological link (drug users committing crime under the influence of drugs); the economic-compulsive link (drug users committing crime to fund their drug consumption); and the systemic link (crime related to drug trafficking that was not prosecuted under the drug law).¹⁰¹ The costs taken into account consisted of the costs of drug law enforcement incurred by the various relevant institutions (mainly the police, the judicial system and the penitentiary system), as well as the cost of lost productivity resulting from incarceration of perpetrators of the above-mentioned crimes.

The study quantified these costs in 2006 at \$268 million. A breakdown by type of crime shows that offences against the Chilean drug law per se only accounted for about one third (36 per cent) of the total costs, while the majority (60 per cent) of the costs could be attributed to robbery, including violent robbery. An independent breakdown by type of cost shows that the largest share of drug law enforcement costs was borne by the police (32 per cent of

the total), followed by the penitentiaries (25 per cent) and the judicial system (17 per cent). Productivity losses attributable to incarceration for drug-related crimes accounted for virtually all of the remaining costs. The costs were also broken down by drug type, cocaine base ("cocaine base paste") being identified as the drug with the biggest impact, accounting for more than half of the cost, ahead of cocaine salt and cannabis.

Although the economic studies discussed above generally take into account a wide variety of costs that arise directly and indirectly from the drug problem, this is usually limited to costs that can be quantified in monetary terms. Non-tangible costs, such as loss of life or impaired quality of life, are frequently not quantified; and when they are quantified, it is usually done with reference to a non-monetary unit of measure, such as "years of life lost" or "years lived with a disability". While such studies can be very useful in assessing the economic toll that the drug problem has taken on society, other considerations also need to come into play when assessing the impact of the world drug problem and devising policy responses.

C. ENVIRONMENTAL SUSTAINABILITY

Environmental sustainability is embedded throughout the goals of the 2030 Sustainable Development Agenda. Goal 1, ending poverty, is closely linked to Goal 2, target 2.4 of which is to ensure sustainable food production systems and implement resilient agricultural practices. Complementary to this are Goal 13 (combating climate change) and Goal 15 (sustainably managing forests and combating desertification, land degradation and biodiversity loss). Water availability and management are covered in Goal 6, target 6.3 of which includes reducing pollution, eliminating dumping and minimizing the release of hazardous chemicals and materials.

¹⁰⁰ M. Fernandez, "The socioeconomic impact of drug-related crimes in Chile", *International Journal of Drug Policy*, vol. 23, No. 6 (2012), pp. 465-472.

¹⁰¹ For a discussion of the different links between drugs and crime, see the subsection on violence.

The illicit cultivation and production of narcotic drug crops touch on all of these concepts. The present section describes how the illicit production of drugs and the drug control response can have adverse effects on ecosystems, for example, by resulting in the clearing of forests to illicitly cultivate drug crops. This section also reviews evidence on how efforts to reduce illicit drug supply may influence the expansion of illicit (and licit) farming activities to new, fragile or eco-sensitive areas; it also explains how well-designed alternative development interventions can improve biodiversity conservation, thereby mitigating climate change.

Illicit drug crop cultivation and drug production and trafficking: their impact on the environment

Deforestation

Deforestation is the principal environmental concern resulting from illicit crop cultivation, in particular coca bush cultivation in South America, opium poppy cultivation in South-East Asia and, to some extent, cannabis cultivation. Deforestation can be a direct or indirect result of illicit crop cultivation: it is a direct result when a piece of woodland is cleared for opium poppy or coca bush cultivation; and it is an indirect result when the various mechanisms associated with illicit crop cultivation, including licit agricultural activities, the formation of pastures and other forms of development and encroachment, have an influence on deforestation.

Target 15.2 of the Sustainable Development Goals

By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Direct deforestation

Farmers may encroach upon forest to illicitly cultivate crops such as coca bush, opium poppy or cannabis plant in remote areas for two reasons: the poor socioeconomic conditions of farmers at the agricultural frontier may push them to look for cash crops; and the illicit nature of this activity and the necessity to keep it a clandestine activity may spur a move to relatively remote areas.

Quantifying the extent of direct deforestation due to illicit cultivation, and the measurement of deforestation in general, is difficult. The net change in forest area over a given period may not reflect the complexity of the process, as losses in one place may be masked by gains in another, or the first transition from forest to non-forest may not be captured. Finally, illicit cultivation is not the only cause of deforestation and, as it often comes with other driving factors, the scale of direct deforestation resulting from such cultivation needs to be put in the context of the broader phenomenon.

According to UNODC estimates, over the period 2001–2014, an annual average of 22,400 ha of coca bush cultivation replaced forest in Colombia.¹⁰² These estimates are done on a year-on-year basis and are therefore much less subject to the limitations associated with long gaps between snapshots in time. Although not directly comparable, data from the Food and Agriculture Organization of the United Nations indicate that net forest conversion in Colombia from all causes averaged 116,000 ha/year over the period 2001–2012; at the same time, the total loss of land with detectable tree cover (over all tree cover classes) averaged 209,900 ha/year.¹⁰³ However, specific studies in the Andes that focus more on the relative extent of forest conversion to illicit cultivation compared with other forms of land use suggest that the share of deforestation attributable to direct replacement by coca bush cultivation may be lower than the simple comparison above would suggest.

UNODC undertook a study of a risk area in Colombia of 12.4 million ha (defined as all locations within 1 kilometre of a coca bush cultivation site identified in the period in question) that included an assessment of deforestation.¹⁰⁴ The study found that a total of 2.6 million ha of forest had been lost in that area over the period 2001–2006, of which 5.3 per cent could be directly attributed to coca bush cultivation. A follow-up study¹⁰⁵ over a longer time period (2001–2012) showed that 1.2 per cent of the lost forest area was occupied by coca at the end of the period.

Another study, in the San Lucas mountain range of Colombia, reports land-use data for 2002, 2007 and 2010, based on satellite imagery, which suggest that the share of deforestation attributable to illicit coca bush cultivation was below 2 per cent during the periods 2002–2007 and 2007–2010. This does not, however, account for the possibility of conversion to licit use after deforestation for coca bush cultivation during those periods.¹⁰⁶ Aside from capturing the exact transition from forest to non-forest, which is difficult to attribute to coca bush cultivation or other activity, it clearly emerges from such studies that in the long run, most of the deforested areas became pastures and licit crop cultivation areas, and relatively small parts were dedicated to coca bush cultivation. One long-term study in Peru that analysed imagery from 1986, 1993 and 2007 covering a total area of 1.36 million ha in Pichis-

102 UNODC, *Colombia: Monitoreo de Cultivos de Coca 2014* (Bogotá, 2015).

103 Based on data from M. C. Hansen and others, “High-resolution global maps of 21st-century forest cover change”, *Science*, vol. 342, No. 6160 (November 2013), pp. 850–853.

104 UNODC, *Análisis Multitemporal de Cultivos de Coca: Período 2001–2006* (Bogotá, 2006).

105 UNODC, *Análisis Multitemporal de Cultivos de Coca: Período 2001–2012* (Bogotá, 2014).

106 Maria A. Chadid and others, “A Bayesian spatial model highlights distinct dynamics in deforestation from coca and pastures in an Andean biodiversity hotspot”, *Forests*, vol. 6, No. 11 (2015).

TABLE 4 Breakdown of deforestation into licit and illicit components: a summary of four studies comparing side-by-side licit and illicit cultivation, by study and region

Location of study area, source and specifics	Coca	Licit uses
San Lucas Mountain Range, Colombia (Chadid and others, 2015) ^a	2007-2010	0.012% 0.70%
	2002-2007	0.004% 0.17%
Pichis-Palcazú, Peru (UNODC 2011) ^b	1993-2007	0.008% 0.56%
	1986-1993	0.112% 0.25%
Southern Colombia (Dávalos and others 2011), ^c 2002-2007	Secondary forest	0.067% 7.57%
	Old-growth	0.013% 0.39%
Central Colombia (Dávalos and others, 2011), ^c 2002-2007	Secondary forest	0.016% 6.98%
	Old-growth	0.024% 1.74%
Northern Colombia (Dávalos and others, 2011), ^c 2002-2007	Secondary forest	0.006% 6.26%
	Old-growth	0.005% 0.91%
Northwestern Amazonia, Colombia, 2001-2009 (Armenteras and others, 2013) ^d	Secondary forest	0.050% 3.03%
	Old-growth	0.026% 0.29%

Note: The "average annual deforestation rate" represents the average annual forest loss over the reference period, expressed as a percentage of the corresponding forest area at the beginning of that period.

Average annual deforestation rate (percentage)

^a Maria A. Chadid and others, "A Bayesian spatial model highlights distinct dynamics in deforestation from coca and pastures in an Andean biodiversity hotspot", *Forests*, vol. 6, No. 11 (2015).

^b UNODC and Ministerio del Medio Ambiente del Perú, "Análisis económico de las actividades causantes de la deforestación en Pichis-Palcazú" (Lima, 2011).

^c L. M. Dávalos and others, "Forests and drugs: coca-driven deforestation in tropical biodiversity hotspots", *Environmental Science and Technology*, vol. 45, No. 4 (2011), pp. 1219-1227.

^d D. Armenteras, N. Rodríguez and J. Retana, "Landscape dynamics in northwestern Amazonia: an assessment of pastures, fire and illicit crops as drivers of tropical deforestation", *PLoS ONE*, vol. 8, No. 1 (2013).

Palcazú concluded that, by 2007, 269,000 ha had been deforested, of which 57 per cent consisted of pasture and the remainder consisted mainly of agriculture, with coca bush cultivation occupying only 0.39 per cent of the area.¹⁰⁷

Indirect deforestation

The above-mentioned studies show that overall deforestation can only be directly attributed to coca bush cultivation to a small extent. Coca bush cultivation takes place in parallel with other human activities that cause deforestation, but this does not mean that there is necessarily a causal relationship between coca bush cultivation and deforestation in general.

Various mechanisms can determine an indirect influence of illicit cultivation on deforestation rates. Farmers who are willing or inclined to engage in such cultivation would naturally penetrate deeper into forests in order to conceal their activity, and this could gradually attract further expansion, licit agriculture, the formation of pastures and other forms of development and encroachment. Profits made by higher-level organizers involved in large-scale consolidation of farm-gate products and the processing of crops into end products such as heroin and cocaine might generate the need for laundering proceeds through activities such as cattle ranching, pasturage and logging, which themselves contribute to deforestation. Moreover, certain

characteristics of illicit cultivation areas, such as little (or no) security and weak rule of law, may drive other illegal activities that cause deforestation, such as illegal logging and illegal mining.

Several in-depth analyses have focused on the link between illicit cultivation and deforestation in Colombia (see box on page 89). Several variables were considered in order to investigate the potential effect of illicit crop cultivation systematically, but there is little empirical evidence to support the clear impact of such cultivation on overall deforestation, while outcomes vary from municipality to municipality. For example, in some particular cases in Colombia (i.e. Chocó, Nariño), high levels of coca bush cultivation were in fact directly related to high levels of deforestation. In general, deforestation and coca bush cultivation take place in the same areas, but this does not mean that more coca bush cultivation leads to more deforestation. It seems that actions, conditions and policies to provide incentives for frontier development drive deforestation, and coca is a crop that thrives in those environments. Ultimately, with increased development, the area under coca bush cultivation decreases, but deforestation continues, unless specific countermeasures are taken.

A similar exercise was undertaken to examine the potential relationship between deforestation and opium poppy cultivation in South-East Asia. In this case, maps were used to indicate areas with a high risk of opium poppy cultivation in the Lao People's Democratic Republic and Myanmar. The results of the modelling exercise did not show any evidence of a positive association between the risk of opium poppy cultivation and the probability of deforestation.

107 UNODC and Ministerio del Medio Ambiente del Perú, "Análisis económico de las actividades causantes de la deforestación en Pichis-Palcazú" (Lima, 2011).

Does coca bush cultivation drive deforestation? A case study in Colombia

While some studies indicate that there is a relationship between illicit cultivation and deforestation, other in-depth analyses have not confirmed this link and there is little empirical evidence of the impact of illicit cultivation on deforestation. A comparison of deforestation rates in Colombian municipalities and the extent of illicit cultivation fails to bring out clear overarching patterns. After several potential covariates other than coca bush cultivation were included in the model, such as urban population density, road density, the initial forested fraction, the fraction of the population with unsatisfied basic needs and eradication by aerial spraying, the best-fit model indicated that coca bush cultivation was not a significant determinant of deforestation rates.

One study^a concluded that illicit crop cultivation is a driver of forest fragmentation

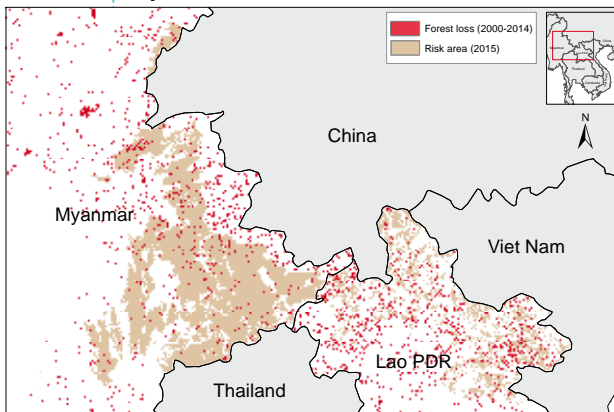
through the perforation of forests. However, it is not clear if this results in a detectable impact in actual deforestation rates, and the study adds that some of the areas affected are later regenerated.

Another study^b set out to systematically isolate the potential effect of illicit crop cultivation as a catalyst of forest loss. The model measured the spatial proximity of coca bush cultivation in two ways — the distance to the nearest coca bush cultivation site and the area under such cultivation in the surrounding square kilometre — and examined how the probability of deforestation varied as a function of these two variables. Other variables usually associated with the probability of deforestation were also included in the model: the proportion of forest remaining,^c distances to roads and rivers,^{d, e, f} biophysical characteristics

related to agriculture in general, such as climate, slope and aspect^g and the protection status of the land.^h The analysis did yield a certain link between coca bush cultivation and deforestation in southern Colombia only, where the probability of deforestation increased with the density of the coca bush cultivation and decreased with the distance from the nearest coca bush cultivation site. Once socioeconomic variables were included, the study did not support the thesis that coca is very different from other crops; instead it hypothesized that what sets municipalities growing coca bush apart is poor rural development, the underlying cause that enables a positive association between population growth and deforestation.

^{a-h} See the online methodology section of the present report.

MAP 6 Deforestation, 2000-2014, and the risk of illicit opium poppy cultivation in the Lao People's Democratic Republic and Myanmar



Source: UNODC opium poppy risk maps; and M. C. Hansen and others, "High-resolution global maps of 21st-century forest cover change", *Science*, vol. 342, No. 6160 (November 2013).

Notes: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

tion. This suggests that other factors, possibly socioeconomic factors not included in the model, are the main drivers of deforestation, of which the displacement of forest by opium poppy cultivation is only one component.

Deforestation as a result of drug trafficking

Another aspect of the illicit supply of drugs that may have repercussions on the environment is cocaine trafficking.

108 Iliana Monterroso and Deborah Barry, "Legitimacy of forest rights: the underpinnings of the forest tenure reform in the protected areas of Petén, Guatemala", *Conservation and Society*, vol. 10, No. 2 (2012), pp. 136-150.

Instances of deforestation stemming from such trafficking have been recorded in Petén, Guatemala,¹⁰⁸ and in eastern Honduras.¹⁰⁹

The simplest way in which trafficking facilitates encroachment is the clearing of strips of forest to enable the take-off and landing of light aircraft. However, the phenomenon may extend beyond this, as it can trigger violent land grabs, generate conflict over land tenure, attract not only licit but also other illicit activity and, as mentioned earlier, generate a need to launder illicit proceeds, a need that can be addressed by converting forest for activities such as cattle ranching. One such example may have occurred in the Maya Biosphere Reserve in Guatemala,^{110, 111} a vast protected area where drug traffickers may have been able to take over land and impose their territorial control through violence.¹¹² Rapid increases in the local cattle inventory are thought to respond to the need to launder earnings from drug trafficking.¹¹³ Local smallholders may "sell" the community lands in the reserve under coercion from drug traffickers and then move on, generating more deforestation.¹¹⁴

109 Kendra McSweeney and others, "Drug policy as conservation policy: narco-deforestation", *Science*, vol. 343, No. 6170 (2014), pp. 489 and 490.

110 Avrum J. Shriar, "Theory and context in analyzing livelihoods, land use, and land cover: lessons from Petén, Guatemala", *Geoforum*, vol. 55, 2014, pp. 152-163.

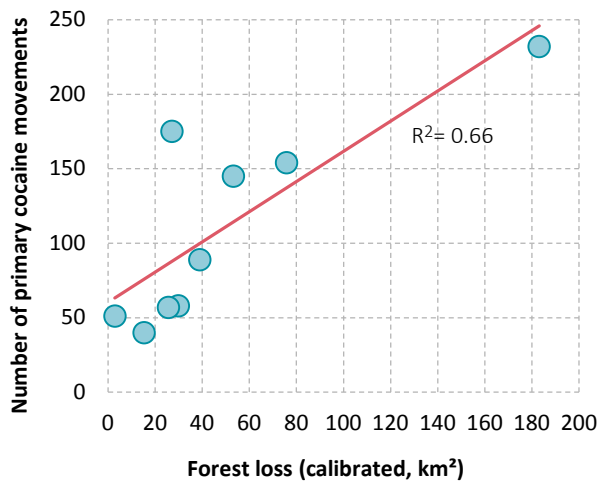
111 Iliana Monterroso and Deborah Barry, *Tenencia de la Tierra, Bosques y Medios de Vida en la Reserva de la Biosfera Maya en Guatemala: Sistema de Concesiones Forestales Comunitarias* (Guatemala City, Centro Internacional de Investigaciones Forestales, Facultad Latinoamericana de Ciencias Sociales, 2009).

112 Ibid.

113 Avrum J. Shriar, "Theory and context in analyzing livelihoods, land use, and land cover" (see footnote 110).

114 Liza Grandia, "Road mapping: megaprojects and land grabs in the

FIG. 16 Forest loss and number of primary cocaine trafficking movements in eastern Honduras, 2004-2012



Source: K. McSweeney and Z. Pearson, "Prying native people from native lands: narco business in Honduras", *NACLA Report on the Americas*, vol. 46, No. 4 (2013).

A quantitative link between drug trafficking and deforestation has been made in the case of Honduras. Forest loss in eastern Honduras over the period 2004-2012 appears to correlate with the number of registered air and maritime landings of cocaine shipments from South America to Honduras, as recorded in the Consolidated Counterdrug Database of the United States Office of National Drug Control Policy. Three interrelated mechanisms may explain this relationship: direct deforestation from landing strips and illegal roads; indirect deforestation from land grabs leading to greater pressure from displaced agriculturalists; and privatization of the public land to create "narco-estates" and launder trafficking assets.¹¹⁵ The last variant often takes place at the expense of indigenous lands.¹¹⁶

Pollution and health hazards arising from chemicals and waste

Target 6.3 of the Sustainable Development Goals

By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

Clandestine laboratories processing and manufacturing plant-based and synthetic drugs require significant quantities of precursors and other chemicals, many of which

are hazardous to human health and potentially damaging to the environment. These chemicals include solvents; metals and salts; and acids and bases. Exposure to such chemicals can result in numerous health complications, ranging from eye, nose and throat irritation to liver and kidney impairments and bleeding and corrosion in the lungs. Some carry a risk of fire or explosion.¹¹⁷ Health hazards are of particular concern in the case of synthetic drugs manufactured in urban settings, with a high risk of exposure for large segments of the population, but they also affect individuals who, often because they have no viable alternatives, work in establishments manufacturing plant-based drugs, frequently in inhumane and exploitative conditions.¹¹⁸ The by-products and unused chemicals are frequently disposed of in urban sewerage systems, other urban settings or, in the case of processing of plant-based drugs in non-urban areas, the natural environment, including rivers and forests.

The consequences in urban settings not only pose health risks but may also have an impact on the urban and industrial environment. According to the European Police Office (Europol), criminals engaged in the illicit manufacture of drugs may resort to simply dumping chemicals, burying them in the ground, leaving them in stolen trailers and draining liquids into sewerage systems, into or onto the ground or into surface water. Other techniques involve burning waste in stolen motor vehicles or mixing the chemicals with other chemical waste prior to releasing them into the open sea from maritime vessels.¹¹⁹

The chemicals used in the illicit supply chain of cocaine and opiates also contribute to pollution and health hazards in rural environments. In late 2005 and early 2006, UNODC undertook a systematic study of the illicit cultivation and processing of coca bush in Colombia, based on a nationwide sample of 1,300 coca bush growers, categorized by geographical region and by landscape.¹²⁰ Most of the agrochemicals found in the study to be used by coca bush growers were legal. A comparison of the use levels of the most commonly used legal agrochemicals with the manufacturers' recommendations indicated that, overall, coca bush growers in the study¹²¹ reported using quantities of herbicides and pesticides within the range used by other tropical agriculturalists.

The study also investigated the use of reagents in the illicit processing of coca bush. The detailed data on reagents

northern Guatemalan lowlands", *Development and Change*, vol. 44, No. 2 (2013), pp. 233-259.

115 McSweeney and others, "Drug policy as conservation policy" (see footnote 109).

116 K. McSweeney and Z. Pearson, "Prying native people from native lands: narco business in Honduras", *NACLA Report on the Americas*, vol. 46, No. 4 (2013).

117 EMCDDA and Europol, *Methamphetamine: A European Union Perspective in the Global Context* (Luxembourg, Office for Official Publications of the European Communities, 2009).

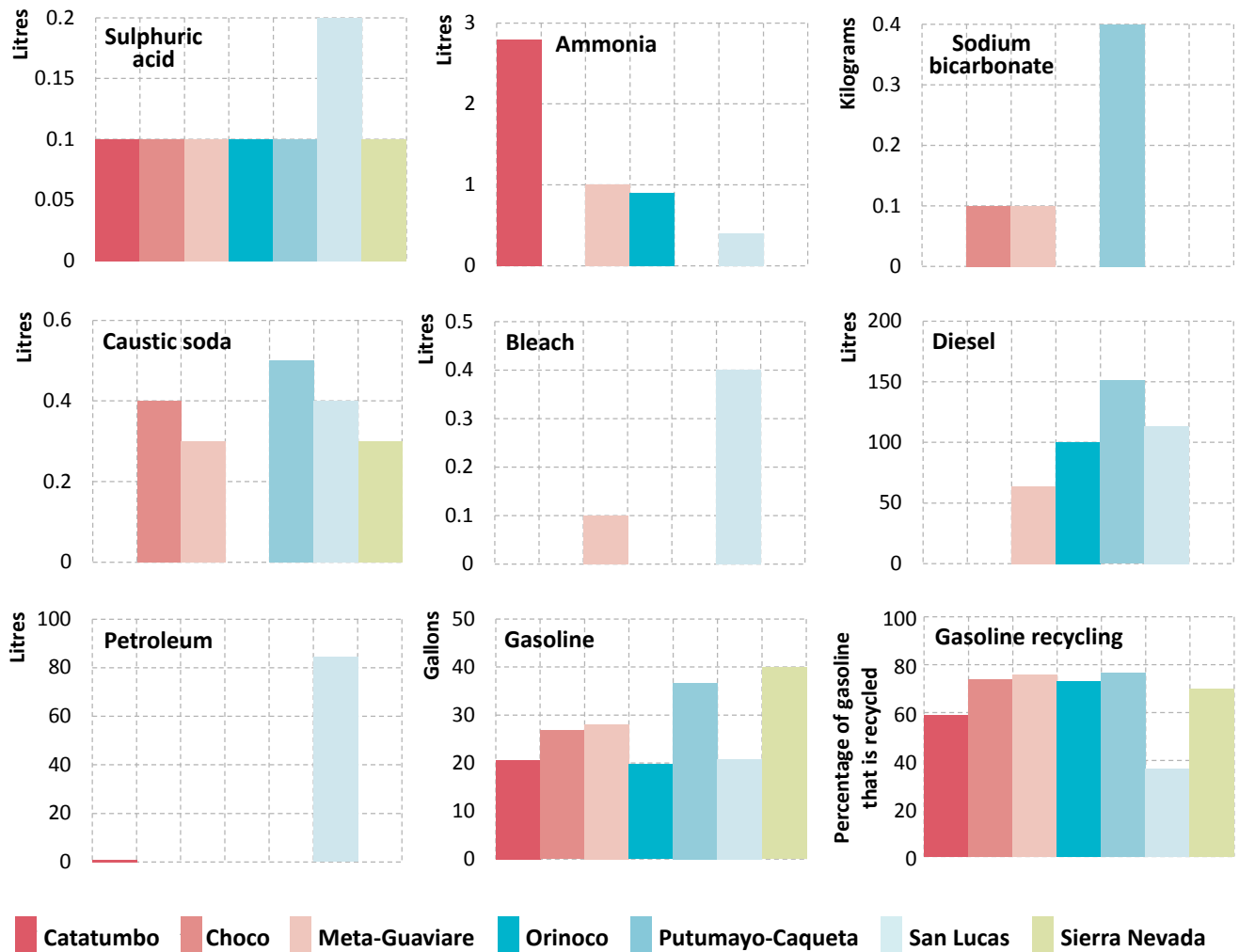
118 Merrill Singer, "Drugs and development: the global impact of drug use and trafficking on social and economic development", *International Journal of Drug Policy*, vol. 19, No. 6 (2008), pp. 467-478.

119 Walter Ego and Aïssata Maïga, "Tallying the hidden environmental costs of drug production", policy brief No. 149 (Stockholm, Institute for Security and Development, 2014).

120 UNODC, *Características Agropecuarias de los Cultivos de Coca en Colombia* (Bogotá, 2007).

121 Ibid.

FIG. 17 Regional variation in reagents used to process one oil drum^a of fresh coca leaves into coca paste in Colombia



Source: UNODC, *Características Agropecuarias de los Cultivos de Coca en Colombia* (Bogotá, Sistema Integrado de Monitoreo de Cultivos Ilícitos, 2006).

^a Approximately 87.5 kg of fresh coca leaves.

indicate: a distinct regional variation in the reliance on different organic solvents, whether gasoline, diesel or petroleum; complete dependence on sulphuric acid; and high levels of gasoline recycling, with variation related to fuel costs. There is potential for pollution by the use of the above-mentioned substances by the great number of laboratories, which are scattered throughout the Amazonian forest; however, the combination of high rainfall and reuse probably reduces the environmental impact of these sources. Indeed, in the early 1990s, field observations in Chapare, Bolivia, found that rainfall quickly diluted chemical spills.¹²²

122 Ray Henkel, "Coca (*Erythroxylum coca*) cultivation, cocaine production, and biodiversity in the Chapare region of Bolivia", in *Biodiversity and Conservation of Neotropical Montane Forests*, Steven P. Churchill and others, eds. (New York, New York Botanical Garden, 1995), pp. 551-560.

Water depletion and salinization

Target 15.3 of the Sustainable Development Goals
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

In Afghanistan, opium poppy cultivation places an additional strain on the availability of water in areas already affected by water scarcity, and the irrigation methods used also contribute to salinization of desert areas.

According to one report,¹²³ in the Province of Helmand, which continues to be affected by high levels of opium poppy cultivation (covering 27 per cent of arable land in

123 John Weier, "From wetland to wasteland: the destruction of the Hamoun Oasis", NASA Earth Observatory, Available at www.earthobservatory.nasa.gov/Features/hamoun.

2014), the combination of drought in the period 1999–2001, unsustainable development and withdrawals for irrigation resulted in a reduction of 98 per cent of the water flow along the lower Helmand river and the complete loss of the formerly rich downstream wetlands. In addition, drought appears to have intensified over time. The real-time record of global precipitation anomalies in the growing seasons (winter and spring) in Afghanistan from winter 2000–2001 until spring 2014 indicates that precipitation in that period was within 10 mm per month of the average in the reference period 1979–2000 in 14 out of the 28 growing seasons, while it was below that range in 12 seasons and above that range in just 2 seasons. At the same time, population growth has not abated, leading to intensification of cropping at the upstream end of canals.¹²⁴ Opium poppy cultivation contributes to water scarcity in two ways: by hoarding water from the irrigation system;¹²⁵ and by rendering financially viable pumping from the aquifer through tubewells.¹²⁶ At times, well-connected and locally powerful opium poppy growers were able to grow opium poppy by the roadside, as they did in Chahar Bolaq, to the extent that no water was available downstream.¹²⁷ In contrast, the growers dependent on tube-well irrigation north of the Boghra canal are among the least powerful and most marginal farmers in central Helmand.¹²⁸ Nevertheless, the returns on opium poppy enabled even those growers — at least for a while — to pay for the considerable costs of acquiring (or renting) and fuelling pumps, lowering the water table and ultimately degrading the marginal lands.¹²⁹ Sustained opium poppy cultivation may have depleted the already low capacity of the soil, leading to decreasing opium yields (such as the exceptionally low yield in the south in 2015), while the process of degradation may have been exacerbated by poor water management.

Biodiversity and protected areas

Target 15.5 of the Sustainable Development Goals

Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

- 124 Adam Pain, “Water, management, livestock and the opium economy: the spread of opium poppy cultivation in Balkh”, Case Study Series (Kabul, Afghanistan Research and Evaluation Unit, 2007).
- 125 David Mansfield and Adam Pain, “Opium poppy eradication: how to raise risk when there is nothing to lose?” Briefing Paper Series (Kabul, Afghanistan Research and Evaluation Unit, 2006).
- 126 David Mansfield, “Between a rock and a hard place: counter-narcotics efforts and their effects in Nangarhar and Helmand in the 2010–11 growing season”, Case Study Series (Kabul, Afghanistan Research and Evaluation Unit, 2011).
- 127 Mansfield and Pain, “Opium poppy eradication” (see footnote 125).
- 128 Mansfield, “Between a rock and a hard place” (see footnote 126).
- 129 David Mansfield, “Helmand on the move: migration as a response to crop failure”, Brief Series (Kabul, Afghanistan Research and Evaluation Unit, 2015).

One of the concerns associated with illicit cultivation is its possible effect on biodiversity. Rather than being evenly distributed throughout the world, biodiversity is concentrated in lowland moist tropical forests,^{130, 131} while montane tropical and subtropical forests are recognized as biodiversity hotspots, hosting a large number of species with a small known habitat.¹³²

The tropical Andes are the world’s most biologically diverse hotspot, accounting for 7 per cent of all plants and 6 per cent of all vertebrates; the Choco lowland forests along the Pacific coast also host a disproportionately large amount of plants and vertebrates. Opium poppy cultivation in the Andes is of particular concern, as the altitude suitable for such cultivation also corresponds to the especially vulnerable Paramo and sub-Paramo ecosystems.¹³³ To the extent that opium poppy cultivation replaces these ecosystems, it represents one of several threats, along with licit agriculture and the fires associated with it, as well as mining, in the case of Colombia.^{134, 135}

The situation is similar in South-East Asia. The highlands of the Lao People’s Democratic Republic and Myanmar are part of the Indo-Burma biodiversity hotspot, which is estimated to harbour in excess of 13,500 plant species, 7,000 of which are found nowhere else, but has less than 5 per cent of natural land cover remaining.¹³⁶

Cultivation of coca bush carries its own ramifications for biodiversity. Satellite-based data reveal clusters of persistent coca bush cultivation in protected areas (national parks) in all three coca-producing countries, where licit agriculture may also pose a threat. In Colombia, the protected areas most affected are encircled by a moving front of agriculture including coca bush cultivation in Sierra de La Macarena, Tinigua and Los Picachos national parks (see the Orinoco line in figure 18).

In Peru, the extent of coca bush cultivation in protected areas is limited. An analysis in 2004 of the location of coca cultivation according to potential land use in the three regions of Alto Huallaga, Apurimac-Ene and La Conven-

130 Clinton N. Jenkins, Stuart L. Pimm and Lucas N. Joppa, “Global patterns of terrestrial vertebrate diversity and conservation”, *Proceedings of the National Academy of Sciences*, vol. 110, No. 28 (2013).

131 Norman Myers and others, “Biodiversity hotspots for conservation priorities”, *Nature*, vol. 403, No. 6772 (2000), pp. 853–858.

132 Thomas Brooks and others, “Global biodiversity conservation priorities”, *Science*, vol. 313, No. 5783 (2006), pp. 58–61.

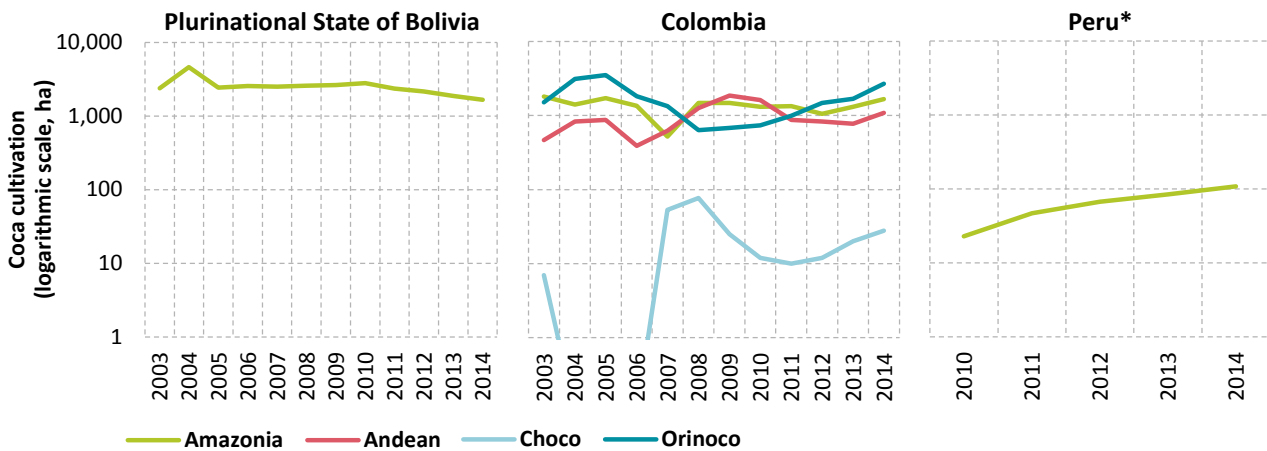
133 David M. Olson and others, “Terrestrial ecoregions of the world: a new map of life on Earth”, *BioScience*, vol. 51, No. 11 (2001), pp. 933–938.

134 Natalia Ocampo-Peñuela and Stuart L. Pimm, “Elevational ranges of montane birds and deforestation in the western Andes of Colombia”, *PLoS ONE*, vol. 10, No. 12 (2015).

135 Pasquale Borrelli and others, “The implications of fire management in the Andean Páramo: a preliminary assessment using satellite remote sensing”, *Remote Sensing*, vol. 7, No. 9 (2015), pp. 11061–11082.

136 Myers and others, “Biodiversity hotspots for conservation priorities” (see footnote 131).

FIG. 18 Coca bush cultivation in protected areas (national parks), Bolivia (Plurinational State of), Colombia and Peru, 2003-2014



Note: Data from national parks were assigned to each of the ecological regions. *Data for Peru were only available from 2010 onwards.

ción-Lares revealed that 2 per cent of the land area was occupied by coca cultivation, most of which (90 per cent) was on land without agricultural potential. Slightly less than a quarter of the coca cultivation was in protected areas, while two thirds was on land designated for forest.

In the Plurinational State of Bolivia, the most affected parks are Isiboro Secure and Carrasco. The first overlaps with the Alto Beni deforestation front and the second overlaps with the Chapare-Santa Cruz deforestation front. Coca-related encroachment into the parks dates back at least to the 1980s.¹³⁷

Impact of drug control interventions on the environment

Alternative development

Target 2.4 of the Sustainable Development Goals

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Alternative development is an area of intervention in which efforts to reduce illicit drug supply contend with the socioeconomic conditions of farmers, as well as the environment in which the farmers live and earn their livelihood. Although short-sighted initiatives in the past may have had negative environmental consequences, alternative development has demonstrated that it can have a positive impact on the environment by promoting biodiversity and reforestation. The key elements, which are often critical to ensuring a holistic and sustainable success of alternative development programmes, include

communal participation and the promotion of land ownership, community organization, good agricultural practices, including in post-harvest processes, agroforestry and forest management.¹³⁸

One successful instance of alternative development extending to positive environmental effects can be seen in the San Martín Region in Peru, where alternative development initiatives included the replacement of coca production with the production of oil palm, cocoa and coffee and with agroforestry, in addition to reforestation of 7.5 per cent of former coca and other crop fields (or about 650 ha). This last activity involved 350 local families. An additional 687 families were involved in 1,415 ha of agroforestry and coffee and cocoa cultivation for fair trade and organic markets. The success of the project rested on the provision of non-conditional support to beneficiaries, whether or not they eradicated coca bush, and on the inclusion of communities as a whole, whether or not they were directly involved in coca production.¹³⁹

Land ownership was emphasized in the context of the Colombian initiative Forest Warden Families Programme, which ran during the period 2003-2013, reaching more than 120,000 families.¹⁴⁰ The project led to the purchase of more than 100,000 ha of land by approximately 30,000 families. The premise of this strategy is that land ownership discourages smallholders from joining or rejoining the coca economy and allows for the development of long-term productive projects. Although deforestation rates were not assessed in the project, land ownership also has the potential to slow down the agricultural frontier.¹⁴¹

138 See *World Drug Report 2015*, chap. II.

139 UNODC, *San Martín: Análisis Económico del Impacto del Desarrollo Alternativo, en relación a la Deforestación y la Actividad Cocalera* (Lima, 2014).

140 UNODC, *Colombia: Monitoreo de Cultivos de Coca 2013* (Bogotá, 2014).

141 María D. Álvarez, "Forests in the time of violence: conservation

137 Henkel, "Coca (*Erythroxylum coca*) cultivation" (see footnote 122).

In the past, crop substitution programmes, aimed at replacing illicit crops with licit crops, may have had undesired effects. In South-East Asia, for example, crop substitution has been criticized for promoting the shifting away from swidden agriculture, which allows for fallow periods during which the land may regenerate, towards permanent agriculture.¹⁴² However, in terms of environmental impact, a study in northern Thailand showed how this does not necessarily translate into unsustainable deforestation. In the village of Pah Poo Chom, intensification of agriculture between the 1970s and 1990s took place in parallel with a decline in the overall use of land and the regrowth of forest on the steepest slopes, even as the population increased.

Eradication and displacement

The impact of illicit crop eradication on the environment may have different outcomes and different ramifications depending on the context. If eradication induces a displacement of the location of drug crop cultivation, this may result in negative environmental effects when farmers react to eradication initiatives and seek new cultivation sites that are out of the reach of law enforcement authorities. In Afghanistan, for example, the targeted “food zone” initiative in central Helmand, including eradication, may have played a role in the relocation of opium poppy growers north of the Boghra canal and the associated expansion of the agricultural frontier north of the canal, which almost doubled between 2008 and 2013.¹⁴³ This, in turn, may have contributed to soil depletion and other environmental effects north of the canal.

In the Andean countries, the easiest way for farmers to evade law enforcement is to establish their coca bush cultivation sites on relatively inaccessible mountain slopes. One study in the San Lucas mountain range in Colombia¹⁴⁴ obtained statistical confirmation that mountainous areas with some slope had a greater probability of being converted into coca bush cultivation areas, while the probability of converting forest into pasture decreased in very rugged terrain.

The complexity of the potential impact of eradication on the spatial distribution of coca bush cultivation, and associated environmental concerns, is also illustrated by other studies undertaken in Colombia. One study provided quantitative evidence to substantiate an overall shift in coca bush cultivation towards municipalities with a higher proportion of old-growth forest and lower road density

implications of the Colombian war”, *Journal of Sustainable Forestry*, vol. 16, Nos. 3-4 (2003), pp. 47-68.

142 Chupinit Kesmanee, “The poisoning effect of a lovers triangle: highlanders, opium and extension crops, a policy overdue for review”, in *Hill Tribes Today: Problems in Change*, John McKinnon and Bernard Vienne, eds. (Bangkok, White Lotus, 1989), pp. 61-102.

143 Mansfield, “Helmand on the move” (see footnote 129).

144 Chadid and others, “A Bayesian spatial model highlights distinct dynamics”.

over the period 2001-2008.¹⁴⁵ Together, the results provide evidence of coca growers migrating out of areas targeted for spraying and taking coca bush cultivation to new municipalities nearby. This explains the shifting of the Andean and Chococoan forest frontiers by coca bush growers.

Some studies, however, have shown that eradication may slow the advance of the agricultural frontier. Analyses of satellite imagery of eastern Bolivia¹⁴⁶ implied that that was the case. Aggressive campaigns to counter drug trafficking and to eradicate coca bush in the 1990s were identified as the main causes of the decline in forest clearing from the late 1980s to the 1990s. Although drug control policy was not identified as a driver of variation for farmers in Santa Cruz and the forest product sector, similar trends in forest clearing were observed. This highlights the difficulties in separating deforestation associated with or caused by coca bush cultivation from land-use change caused by other activities along the forest frontier.

Another study in Colombia suggested that eradication efforts may contribute to forest regrowth after coca bush cultivation has been abandoned.¹⁴⁷ The study observed that coca production had taken place in 8 of the top 10 municipalities gaining forest vegetation in 2001 and the total amount of coca produced had dropped markedly by 2010 (to 30 per cent of the initial amount), probably as a result of eradication efforts.

The possible impact of aerial spraying on the environment has been a long-debated and controversial issue in Colombia and elsewhere. In Colombia, since 1994, most coca bush eradication has been conducted by aerial spraying with the herbicide glyphosate.¹⁴⁸ Many views and opinions have enriched the discussion over the years and a considerable amount of research has been done, including on the substance glyphosate, spraying mixtures and the precision of spraying; however, the evidence is not conclusive, as some studies indicate that there is no negative impact on the environment while others indicate the contrary.¹⁴⁹

145 Alexander Rincón-Ruiz, Unai Pascual and Suzette Flantua, “Examining spatially varying relationships between coca crops and associated factors in Colombia, using geographically weight regression”, *Applied Geography*, vol. 37 (2013), pp. 23-33.

146 Timothy J. Killeen and others, “Total historical land-use change in eastern Bolivia: who, where, when, and how much?”, *Ecology and Society*, vol. 13, No. 1, art. 36 (2008).

147 Ana María Sánchez-Cuervo and others, “Land cover change in Colombia: surprising forest recovery trends between 2001 and 2010”, *PLOS ONE*, vol. 7, No. 8 (2012).

148 Ricardo Vargas, “Fumigaciones y política de drogas en Colombia: ¿fin del círculo vicioso o un fracaso estratégico?”, in *Guerra, Sociedad y Medio Ambiente*, Martha Cárdenas and Manuel Rodríguez, eds. (Bogotá, Foro Nacional Ambiental, 2004), pp. 353-395.

149 References to research undertaken on the environmental impact of spraying in Colombia can be found in the online methodology section of the present report.

D. PEACEFUL, JUST AND INCLUSIVE SOCIETIES

The new Sustainable Development Agenda recognizes the need to build peaceful, just and inclusive societies that provide equal access to justice and that are based on respect for human rights (including the right to development), on effective rule of law and good governance at all levels and on transparent, effective and accountable institutions. Among the targets associated with Sustainable Development Goal 16, those related to the rule of law and access to justice and reducing violence, economic crime (corruption and bribery), organized crime and illicit financial flows all have significant links with the world drug problem and with the response to it.

Violence

Defining drug-related violence

Target 16.1 of the Sustainable Development Goals
Significantly reduce all forms of violence and related death rates everywhere

Although the drug problem may threaten peace and security in some countries, the connection between drugs and violence is not an automatic one. Moreover, as drug problems and violence can reinforce each other, it is challenging to assess to what extent drug problems impact on violence and vice versa. Indicators of drug-related violence may exist for certain locations and time periods, but data enabling comparison across countries and over time are difficult to come by. This is compounded by the multiple ways in which violence can be defined and the different forms it may take. Violence can be both lethal and non-lethal; it can sometimes be highly visible, and it can sometimes be hidden by its perpetrators and thus difficult to identify.¹⁵⁰

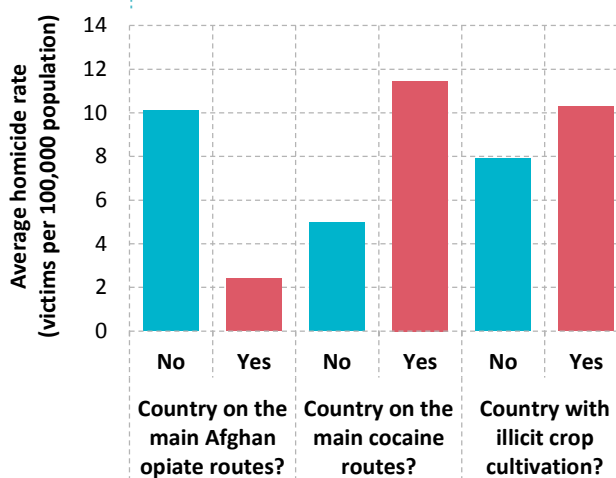
Different stages of the drug problem result in different manifestations of violence. One way used to conceptualize these differences is to distinguish between psychopharmacological violence (violence stemming from direct drug use or withdrawal from drug use), economic violence (violence stemming from users' attempts to secure resources to buy drugs) and systemic violence (violence stemming from struggles for control between or within criminal groups over the illicit production and distribution of drugs).^{151, 152} The intensity and lethality of violence vary significantly across this broad categorization. Illicit drug

150 A. Durán-Martínez, "To kill and tell? State power, criminal competition, and drug violence", *Journal of Conflict Resolution*, vol. 59, No. 8 (2015), pp. 1377-1402.

151 Paul J. Goldstein, "The drugs/violence nexus: a tripartite conceptual framework", *Journal of Drug Issues*, vol. 15, No. 4 (1985), pp. 493-506.

152 Paul J. Goldstein, "The relationship between drugs and violence in the United States", in United Nations International Drug Control Programme, *World Drug Report 1997*, part 3.

FIG. 19 Average homicide rates in relation to the location of countries on the illicit drug supply chain, 2009-2013



Source: UNODC *Homicide Statistics* (2015). Available at www.unodc.org/unodc/en/data-and-analysis/homicide.html.

production and drug trafficking are more clearly associated with lethal violence, while illicit drug use is more related to property crime and domestic violence.

Globally, there is no clear correlation between homicide rates and prevalence of drug use, but there is an association between relatively higher homicide rates and the drug transit status of a country, albeit with variations within each group of countries.

Homicide rates are higher in cocaine transit countries and in cocaine-producing countries than in other countries. However, countries affected by Afghan opiate trafficking flows appear to be associated with relatively lower homicide rates,¹⁵³ suggesting that while drug transit and production can be associated with higher homicide rates, that is not always the case. There are differences across regions, countries and drug types.

Impact of drug use on violence

The relationship between drug use and violent crime is still under-researched and not properly understood, even though it is clear that some connection exists between the two phenomena. There is also enormous variation in the populations and in the sample sizes used in existing studies. There have been more analyses of the connection between drug use and crime in European countries and the United States than elsewhere. Meta-analyses of research studies suggest that certain drugs tend to drive the general association between drug use and crime and that the association tends to be stronger for property crime and drug law offences, including drug dealing.

153 Bivariate correlations between homicide rates and each of these categories appear statistically significant in the categories "Country on the main Afghan opiate routes?", "Country on the main cocaine routes?", but not in the "Country with illicit crop cultivation?" category (possibly because only 17 countries are in the latter category).

Violence and the “crack” epidemic in the United States

Between 1985 and 1991, homicide rates in the United States experienced an increase from 7.9 to 9.8 per 100,000 people, an upward trend mostly driven by increases in homicides among African-American males under 25 years of age (both as victims and perpetrators).^a Similar increases occurred in robberies, which increased by 70 per cent between 1989 and 1994, especially robberies perpetrated by children under 18 years of age; among older perpetrators the uptick occurred earlier. Since the peak in crime in 1991, homicide rates have declined steadily.

The above-mentioned rise in violent crime has been linked to the “crack” cocaine epidemic and the violence generated by the “crack” markets, although the association between the rise in “crack” use and violent criminality was not automatic. In New York, one of the epicentres of the public security crisis that accounted for 9 per cent of national homicides in 1991, the peak in the use of “crack” occurred in 1984, yet the peak in homicides occurred in 1988, while an earlier uptick occurred in 1980. The increase in homicides appeared to be clearly related to the violent disputes generated by control over the “crack” markets, while the connection to “crack” use itself was tenuous despite widespread perceptions to the contrary. “Crack” use was related to the increase in robberies and to the increase in drug dealing, as many “crack” users turned to those activities to sustain their habits.

^a A. Blumstein and J. Wallman, eds., *The Crime Drop in America* (New York, Cambridge University Press, 2006).

A review of studies conducted in Australia, the United Kingdom and the United States found a greater likelihood of property crimes being committed among people who use drugs than among those who do not. The studies focused on people who use drugs (mostly amphetamines and opiates) who had sought treatment or reported drug dependence. A stronger relationship was found between drug use and shoplifting, general theft and drug dealing than between drug use and other crimes.¹⁵⁴ The possibility that individuals engage in drug use to give them courage to commit violent acts was mentioned and found in some of these studies, although not very consistently. Generally, the evidence for psychopharmacological violence was weaker.

The relatively few existing studies have found drug use to be a risk factor for different types of family-related violence, such as minor and severe intimate-partner violence and child maltreatment. Some studies have also found a consistent link between witnessing or being a victim of violence early in life and engaging in drug use and crime later in life. Drug use is among the risk factors for both perpetrating and being a victim of family-related violence. Other risk factors include alcohol abuse, low socioeconomic status and a history of family-related violence. Drug use has been found to be a stronger predictor of committing an offence

154 T. Bennett and K. Holloway, *Understanding Drugs, Alcohol and Crime*, Crime and Justice Series (Maidenhead, Berkshire, United Kingdom, Open University Press, 2005), pp. 96 and 105.

than having been victimized; for example, one study has found that women who use alcohol or drugs are more likely to be victims of battering and verbal abuse, but the effect seems less consistent when analysing severe abuse.¹⁵⁵

Violence and illicit drug production and trafficking

Violence within illicit drug markets can be used for several purposes: to solve territorial, contractual, disciplinary or successional issues within and between drug trafficking organizations; to retaliate against state law enforcement or to pressure state officials not to enforce the law; and to induce changes in legislation or policy that affect criminal activities. In this sense, drug-related violence often affects criminals and state officials, but it is not limited to them and it can also affect civilians perceived as enemies, caught in the crossfire or affected by repressive policies. Violence resulting from market disputes between and within drug trafficking organizations, and from confrontation with state forces, can be lethal because it is more likely to involve firearms. It is also likely to have medium- and long-term objectives such as market control, which are unlikely to be achieved quickly.

Violence varies across countries affected by illicit drug production and trafficking, and it also varies over time within countries. Figure 20 illustrates the diverging trends in homicide rates in the main countries in which coca bush and opium poppy are cultivated. This divergence has not been systematically explained, although several factors related to those countries’ political and societal landscapes and to the organization of illicit drug markets may account for it. In Colombia, powerful drug trafficking groups and the combination of internal armed conflict and the illicit drug trade have contributed to high levels of violence. In addition, as seen in the example of the Plurinational State of Bolivia, societal pressure, particularly from coca bush growers, has also shaped the operations of drug traffickers, possibly reducing the influence of large drug trafficking organizations.¹⁵⁶ Thus, while violence is likely to be more prevalent in cocaine-producing countries, the different homicide levels demonstrate that socioeconomic and political factors mediate this relationship.

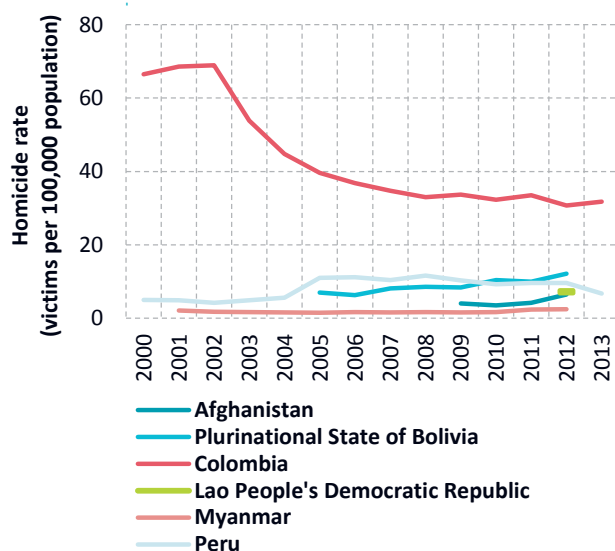
Violence associated with illicit drug markets also varies across regions. For example, although countries in both Latin America and South-East Asia play key roles in the illicit production of cocaine and opium, the former has been associated with significantly higher levels of violence than the latter.¹⁵⁷ Data collected for the *Global Study on*

155 Larry W. Bennett, “Substance abuse and the domestic assault of women”, *Social Work*, vol. 40, No. 6 (1995), pp. 760-771.

156 Eduardo A. Gamarra, “Fighting drugs in Bolivia: United States and Bolivian perceptions at odds”, in *Coca, Cocaine and the Bolivian Reality*, M. B. Léons and H. Sanabria, eds. (Albany, State University of New York Press, 1997), pp. 243-252.

157 V. Felbab-Brown and H. Trinkunas, “UNGASS 2016 in comparative perspective: improving the prospects for success”, Foreign Policy Paper (Washington, D. C., Brookings Institution, 2015).

FIG. 20 Homicide rates in selected countries affected by the illicit cultivation of coca bush and opium poppy, 2000-2013



Source: UNODC *Homicide Statistics* (2015). Available at www.unodc.org/unodc/en/data-and-analysis/homicide.html.

Homicide 2013 show that, among countries reporting the proportion of homicides related to gangs and organized crime, there is a clear difference between the Americas, where an average of 30 per cent of homicides can be related to gangs and/or organized crime, and Asia, where the proportion is about 2 per cent.¹⁵⁸ This does not indicate that organized criminal organizations may be less active in Asia than in the Americas, but it demonstrates that the modus operandi of such organizations is less violent in Asia than in the Americas.

Characteristics of the illicit drug market and drug trafficking organizations may explain why the cocaine trafficking route in the Americas appears to be associated with more violence than the opiate trafficking routes in Asia, and why East and South-East Asia seems generally less violent than Latin America, even though the drug problem significantly affects both subregions. In East and South-East Asia, various individuals and groups engage in illicit opium and heroin production and trafficking, and trafficking networks can be characterized as being compartmentalized and decentralized. Drug couriers tend to come from ethnic groups that straddle borders and are often from families involved in trafficking for generations, yet relatively independent of the traffickers and buyers that run the market. Although large organized criminal groups used to play a prominent role in drug trafficking, the organizations in control today seem less hierarchical and more decentralized.¹⁵⁹ In contrast, the cocaine supply chains in Latin America tend to be built around more cohesive, hierarchical organizations.

¹⁵⁸ *Global Study on Homicide 2013*, p. 43.

¹⁵⁹ UNODC, *Transnational Organized Crime in East Asia and the Pacific: A Threat Assessment* (Bangkok, 2013).

Drug-related violence associated with conflict, terrorism and insurgency

In a number of countries, resources generated by illicit activities such as drug trafficking have played a role in complicating and extending armed conflicts, often increasing their overall lethality.¹⁶⁰ The connection between the illicit drug trade and non-state armed groups has materialized in high-profile examples such as Afghanistan, Colombia, Myanmar and Peru. In Afghanistan, an analysis of the impact of opium production on terrorist attacks and casualties between 1994 and 2008 estimated that a 25 per cent increase in the number of hectares of cultivated opium poppy was associated with an average of 0.15 more terrorist attacks and 1.43 casualties per year. However, this association was modest relative to other variables.¹⁶¹

Colombia is another example where drug trafficking has been a crucial funding source for non-state armed groups since the mid-1990s. The illicit drug trade can thus become a funding source for insurgent and terrorist groups, and such a connection can in turn further weaken the rule of law, perpetuating both crime and insurgency and making conflicts more lethal. Despite the above-mentioned well-known examples, the connection between drugs, armed conflict and terrorism is not inevitable and varies significantly across armed groups and across countries affected by civil war. In fact, many armed groups and terrorist organizations operating in areas where they could profit by engaging in the illicit drug trade do not actually engage in it.

Collaboration between organized criminal and terrorist groups, if effectively realized, can, however, have grave implications for security. An analysis of terrorist and extremist organizations included in the Terrorism Knowledge Base, covering the years 1998-2005,¹⁶² found that of the 395 organizations included in the data set, only about 9 per cent (35 organizations) were engaged in drug trafficking.¹⁶³ The study found that organizations are more likely to engage in drug trafficking when they have the logistical capability and the necessary network.

The profits associated with the illicit drug trade are a key motivation for non-state armed groups to engage in trafficking. However, in addition to direct financial gain, engagement in the drug trade may provide other non-monetary resources that are crucial for waging war, such

¹⁶⁰ Svante E. Cornell, "The interaction of narcotics and conflict", *Journal of Peace Research*, vol. 42, No. 6 (2005), pp. 751-760.

¹⁶¹ James A. Piazza, "The opium trade and patterns of terrorism in the provinces of Afghanistan: an empirical analysis", *Terrorism and Political Violence*, vol. 24, No. 2 (2012), pp. 213-234.

¹⁶² V. Asal, H. Brinton Milward and Eric W. Schoon, "When terrorists go bad: analyzing terrorist organizations' involvement in drug smuggling", *International Studies Quarterly*, vol. 59, No. 1 (2015), pp. 112-123.

¹⁶³ This database included only organizations that were at the peak of their power; therefore the findings could be less applicable to organizations at other stages of development.

as territorial control, military capacity and political and social legitimacy. By protecting illicit activities that provide livelihoods for impoverished segments of the population, armed groups may gain support, protection and intelligence from farmers. In Afghanistan, one reason for the Taliban's decision to allow the trade in opium was their realization of how critical it was for the local economy. Indeed, supporting the opium trade allegedly became one of the Taliban's greatest sources of legitimacy among the population.¹⁶⁴

Responses to the drug problem and its links to violence

Research suggests that law enforcement and policing that target the protagonists and elements of the drug trafficking chain that generate the highest profits and the most violence are more effective in reducing violence than indiscriminate law enforcement by the authorities. For example, policing that targets the most violent drug traffickers can reduce violence by creating a powerful deterrent to violent behaviour (see box below).¹⁶⁵

Another form of targeting that may reduce violence by weakening connections between armed groups and drug trafficking is the emphasis on drug interdiction rather than on illicit crop eradication. Along the same lines, effective alternative development programmes can weaken the connections between armed groups, drug trafficking and the population by providing incentives for the population to move away from illicit activities. But, as discussed in chapter II of the *World Drug Report 2015*, the interactions between alternative development and violence may also work in the opposite direction, meaning that in contexts where violence is already very high, alternative development is difficult to implement.

Targeted law enforcement can also entail strategies that do not focus on arresting low-level players in the drug trafficking chain and thus tend not to add to mass incarceration problems, which would have little positive (or perhaps even a negative) impact on violence.¹⁶⁶

Long-term versus short-term outcomes of interventions

Strategies that focus on rapidly disrupting drug trafficking organizations and reducing violence in the short term can sometimes lead to more violence. By the same token, strategies that tackle the root causes of violence in the medium-to-long term may have a less discernible impact on short-term violence reduction.

164 Vanda Felbab-Brown, *Shooting Up: Counterinsurgency and the War on Drugs* (Washington, D.C., Brookings Institution Press, 2009).

165 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; and Lessing, "Logics of violence in criminal war".

166 Pien Metaal and Coletta Youngers, eds., *Systems Overload: Drug Laws and Prisons in Latin America* (Amsterdam, Transnational Institute, 2011).

Examples of successful policing that reduced violence

Targeting the most violent drug traffickers was an approach implemented in Rio de Janeiro starting in 2008 as part of the programme known as Pacifying Police Units. The programme, which involved announcing in advance the entrance of police and military into some favelas (slums) where violent organizations operated and then introducing social programmes and the sustained presence of specially trained police, was credited with reducing homicides in certain favelas. An initiative known as the Drug Market Intervention Strategy and implemented in some cities in the United States was based on a similar principle, first identifying drug dealers in an active market, building cases against them, prosecuting the most violent and threatening others with arrest unless they stopped dealing. However, some limitations to this "violence-targeting" approach derive from the difficulty in collecting appropriate data for determining responsibility for violence and from the fact that violent drug traffickers often prefer to hide violence so as to avoid attracting the attention of law enforcement.^a

^a A. Durán-Martínez, "To kill and tell? State power, criminal competition, and drug violence", *Journal of Conflict Resolution*, vol. 59, No. 8 (2015), pp. 1,377-1,402.

The internal and external structure of illegal drug markets generate violence. Policies and measures aimed at dismantling the operation of criminal groups, such as actions primarily focused against their leaders, can lead to what has been described as "vacancy chains"¹⁶⁷ and ensuing violent succession competition as well as violent retribution by attacking the State itself. It has been argued that such mechanisms were present in the escalation of drug violence in Mexico since 2006,¹⁶⁸ before the rate of violent homicides started to decline after reaching a peak in 2011.¹⁶⁹ Elsewhere, analysis of organized crime in Osaka, Japan, suggests that the impact of law enforcement in generating "vacancy chains" was more limited than in other contexts, partially because police crackdowns focused on responding to violent activities and had as their primary goal the preservation of social order.¹⁷⁰

Rule of law, access to justice and the drug problem

Target 16.3 of the Sustainable Development Goals
Promote the rule of law at the national and international levels and ensure equal access to justice for all

167 Richard H. Friman, "Forging the vacancy chain: law enforcement efforts and mobility in criminal economies", *Crime, Law and Social Change*, vol. 41, No. 1 (2004), pp. 53-77.

168 Gabriela Calderón and others, "The beheading of criminal organizations and the dynamics of violence in Mexico", *Journal of Conflict Resolution*, vol. 59, No. 8 (2015), pp. 1455-1485, p. 1475.

169 UNODC Homicide Statistics (2016).

170 See McSweeney and others, "Drug policy as conservation policy"; and Friman, "Forging the vacancy chain".

Apart from the different effects that the inner characteristics of illicit drug markets can have on violence, there are characteristics related to the political and criminal justice systems that determine differences in violent outcomes. As figure 21 shows, the level of homicides in Latin America is not a direct consequence of drug trafficking, as some countries have a high level of homicides and a high level of cocaine trafficking while others have a high level of homicides but a low level of cocaine trafficking (or vice versa).

The strength of the rule of law and state presence are key determinants of how illegal activities are organized and how violent they may become. Where state presence is weak, owing to both a lack of services and an inability to provide security for citizens, criminal organizations can grow more powerful and violent and find opportunities to recruit more individuals into their ranks. In addition, where state law enforcement is weak or corrupt, criminal organizations may be more able to engage in combat with each other or with state officials. One example of such a dynamic is in West Africa, a subregion deeply affected by political instability, where the transit traffic in cocaine from South America destined for Western Europe has increased since 2005. The violent impact of such drug trafficking flows has been greater in countries with a highly unstable political environment.

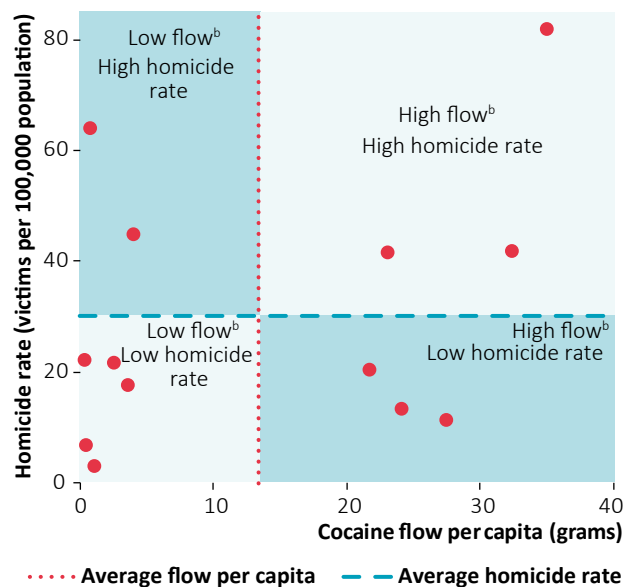
Countries that face criminal violence may experience declines in, or prevent the escalation of, such violence when they conduct reforms that strengthen the rule of law, such as police reforms that increase police training and accountability. Those countries may also see declines in violence when they conduct operations to counter crime that make the price of using violence too high for drug traffickers.

One interesting example of the importance of reforms that democratize and strengthen the rule of law is in Nicaragua, where reforms of the police and their institutional culture have emphasized community policing, crime prevention and crime intelligence. As a result, homicide rates in Nicaragua are significantly lower than in some of the other Central American countries, despite similar vulnerabilities to crime and violence, such as poverty, the legacy of civil war and geographical importance to drug trafficking routes.¹⁷¹ Elsewhere, after the violence and “crack” epidemic in the United States (see box on page 96), the steady decline in the homicide rate in that country in the 1990s has been attributed to different factors, including radical changes in policing strategies.

Criminal justice

Government interventions to disrupt drug trafficking organizations have, by definition, the objective of bringing

FIG. 21 Homicide rates and the amount of cocaine in transit in selected^a cocaine transit countries in Latin America, 2010



Sources: Estimates of the flow of cocaine based on United States, Office of National Drug Control Policy, “Cocaine Smuggling in 2010”, January 2012; homicide data from UNODC Homicide Statistics (2016). Available at www.unodc.org/unodc/en/data-and-analysis/homicide.html.

^a Data were available for 13 countries.

^b All flows are expressed per capita.

criminals to justice and restoring the rule of law. Drug law enforcement operations, like law enforcement operations in general, when they are implemented by impartial, transparent and efficient institutions in compliance with human rights standards, promote the rule of law and justice for all. But when law enforcement operations go against those principles, incentives may be created for indiscriminate repression and for the violation of citizens’ rights.

Where law enforcement agencies lack resources and are prone to corruption and where justice systems are weak and impunity is prevalent, demands on the police to be more effective in countering drug trafficking can lead to indiscriminate apprehension of those likely to be perceived as criminals. This can also lead law enforcement agents to target the types of crime for which suspects are easier to identify, which tend to be minor drug-related offences rather than more serious offences such as homicide.¹⁷² Zero-tolerance policies, if not properly implemented, may sometimes run the risk of generating violence by stigmatizing and enabling the abuse of power to be directed against people who use drugs or low-level players in the

171 José M. Cruz, “Criminal violence and democratization in Central America: the survival of the violent State”, *Latin American Politics and Society*, vol. 53, No. 4 (2011), pp. 1-33.

172 Juan Carlos Garzón, “Tough on the weak, weak on the tough: drug laws and policing” (Washington, D. C., Woodrow Wilson International Center for Scholars, 2015).

drug trafficking chain.^{173, 174, 175} This, in turn, can lead to mass imprisonment for low-level offences or to forced detention of people who use drugs.

Criminal justice, drug trafficking and illicit drug markets

The criminal justice system can indirectly influence the availability of drugs in illicit markets, not only when it reduces the illicit supply through interdiction but also when it increases the risk of interdiction, which raises the price of drugs in consumer markets. Drug dealers are in business to make profit, so when law enforcement increases the dealers' costs, those costs are passed along (in the form of price increases) to people who use drugs. Research suggests that the impact of law enforcement on drug prices is most appreciable in new or emerging markets, or when it induces market shocks in established markets.^{176, 177}

Research confirms that ultimately higher costs imposed on drug trafficking by criminal justice interventions can translate into a reduction in illicit drug use in the long term,¹⁷⁸ although this does not automatically result in a reduction in market size. Indeed, it is not enough to rely exclusively on price increases as a deterrent to drug use, and it is essential to ensure that the reduction in demand, which is assisted by a price increase, actually outperforms that increase. This can be achieved by interventions that reduce demand directly, such as drug use prevention, treatment, rehabilitation and aftercare.

Criminal justice interventions can have other indirect and unforeseen impacts on drug markets. The targeting of high-ranking individuals in drug trafficking organizations may trigger restructuring¹⁷⁹ and changes in modus operandi and crackdowns in one particular area or route may induce shifts in supply patterns, as traffickers exploit other vulnerabilities and seek the path of least resistance in gar-

nering profit from the illicit demand for drugs;^{180, 181} such outcomes reflect the necessity to systematically consolidate progress in the rule of law beyond successes in one country or on one trafficking route. An example of this phenomenon is the shift in illicit cocaine production to cocaine-processing laboratories in Colombia following the introduction of a policy for shooting down small aircraft transporting coca paste or base from growing areas in the Upper Huallaga valley in Peru.¹⁸²

In addition, drug trafficking can exert an influence on the criminal justice system. For example, a high level of drug trafficking can feed corruption and undermine the ability of the criminal justice system to function properly. The successes of drug trafficking organizations in achieving their criminal objectives, along with the sometimes more visible consequences of drug trafficking, may expose the inadequacy of the criminal justice system and lead to reform. In Colombia in the 1980s, when drug violence threatened the State, security agencies, especially the police, were unprepared for drug control operations and plagued by corruption and lack of coordination. The need to confront criminal organizations motivated crucial transformations in Colombian security agencies.¹⁸³

Impact of criminal justice on people who use drugs

Different criminal justice approaches have a different impact on drug use and on people who use drugs. There are differences across jurisdictions in terms of definitions, prosecutorial discretion or types and severity of sanctions for drug-related offences. In some regions, countries exercise more punitive approaches when dealing with people apprehended for minor offences, such as possession of small quantities of drugs for personal consumption, which may result in such offenders being incarcerated. Several countries in Europe and Latin America have chosen to limit punishment by adopting alternative measures to incarceration or punishment (for example, fines, warnings, probation or counselling) in certain cases (without aggravating circumstances) involving minor offences related to personal consumption.

Punitive approaches do not necessarily translate into gains in terms of discouraging drug use. The imposition of

173 UNDP, *Addressing the Development Dimensions of Drug Policy* (New York, 2015).

174 "Making drug control 'fit for purpose': building on the UNGASS decade", report by the Executive Director of the United Nations Office on Drugs and Crime as a contribution to the review of the twentieth special session of the General Assembly" (E/CN.7/2008/CRP.17).

175 Report by the Special Rapporteur on extrajudicial, summary or arbitrary executions, document A/HRC/14/24/Add.6.

176 Peter Reuter and Mark A. R. Kleiman, "Risks and prices: an economic analysis of drug enforcement", *Crime and Justice: A Review of Research*, vol. 7 (1986), pp. 289-340.

177 Caulkins and Reuter, "How drug enforcement affects drug prices" (see footnote 94).

178 Michael Grossman, "Individual behaviors and substance use: the role of price", in *Substance Use: Individual Behavior, Social Interactions, Markets, and Politics*, vol. 16, Björn Lindgren and Michael Grossman, eds., *Advances in Health Economics and Health Services Research Series* (Bingley, United Kingdom, Emerald Group Publishing Limited Amsterdam, 2005).

179 Jason M. Lindo and M. Padilla-Romo, "Kingpin approaches to fighting crime and community violence: evidence from Mexico's drug war", discussion paper No. 9067 (Bonn, Institute for the Study of Labor (IZA), May 2015).

180 Peter Reuter, "The mobility of drug trafficking", in *Ending the Drug Wars: Report of the LSE Expert Group on the Economics of Drug Policy*, John Collins, ed. (London School of Economics and Political Science, 2014).

181 Juan C. Garzón and John Bailey "Displacement effects of supply-reduction policies in Latin America: a tipping point in cocaine trafficking, 2006-2008", in *The Handbook of Drugs and Society*, Henry H. Brownstein, ed., Wiley Handbooks in Criminology and Criminal Justice Series (West Sussex, United Kingdom, John Wiley and Sons, 2016).

182 Barry D. Crane, A. Rex Rivolo and Gary C. Comfort, *An Empirical Examination of Counterdrug Interdiction Program Effectiveness*, IDA paper P-3219 (Alexandria, Virginia, Institute for Defense Analysis, 1997).

183 Durán-Martínez, "To kill and tell?" (see footnote 150).

severe penalties for drug use and the possession of drugs for personal consumption does not appear to have a deterrent effect on drug use in the community,¹⁸⁴ and it can actually have a negative impact on the well-being and health of people who use drugs.

Incarceration in prison and confinement in compulsory drug treatment centres often worsen the already problematic lives of people who use drugs and drug-dependent persons, particularly the youngest and most vulnerable.¹⁸⁵ Exposure to the prison environment facilitates affiliation with older criminals and criminal gangs and organizations, increases stigma and helps to form a criminal identity. It also often increases social exclusion, worsens health conditions and reduces social skills. Alternatives to incarceration within the community (in an outpatient or residential therapeutic setting), such as psychosocially supported pharmacological treatment for opiate dependence, can be more effective than imprisonment in reducing drug-related offences.¹⁸⁶ Criminal justice can have a different impact on women than on men. Female offenders and prisoners, especially those with drug use disorders, face particular hardship as, in many instances, criminal justice systems are not yet equipped for the special needs of women. Women affected by drug use disorders are more vulnerable and more stigmatized than men, they suffer from co-occurring mental health disorders to a greater extent than men and they are more likely to have been victims of violence and abuse (see the section above entitled “Social development”); and yet they are far less likely than men to access treatment.¹⁸⁷ Children with substance abuse disorders are of particular concern within the justice system, as they are often exploited by gangs and organized criminal groups in the illicit drug market. In many countries, the majority of children who are in detention are either children affected by drug dependence or children who have committed drug-related offences. Overreliance on the deprivation of children’s liberty and insufficient application of drug treatment programmes or other alternatives to detention are common challenges,¹⁸⁸ despite international obligations to use the deprivation of liberty as a measure of last resort.¹⁸⁹

184 UNODC, “From coercion to cohesion: treating drug dependence through health care, not punishment”, discussion paper, 2010.

185 Ralf Jurgens and Glenn Betteridge, “Prisoners who inject drugs: public health and human rights imperatives”, *Health and Human Rights*, vol. 8, No. 2 (2005), pp. 46-74.

186 “From coercion to cohesion” (see footnote 184).

187 *World Drug Report 2015*, p. 6.

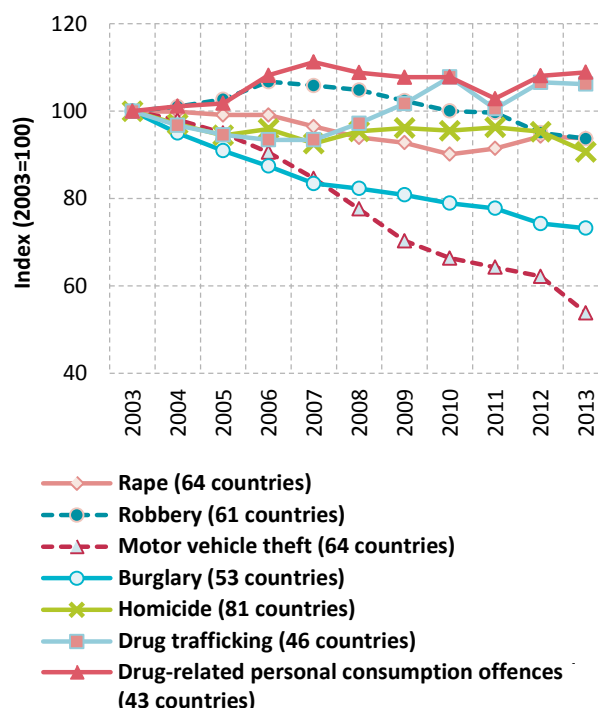
188 See the report of the independent expert for the United Nations study on violence against children (A/61/299, para. 61); see also the thematic report by the Special Representative of the Secretary-General on Violence against Children (*Promoting Restorative Justice for Children* (New York, 2013), pp. 7 and 29).

189 Convention on the Rights of the Child, article 37; see also rules 1 and 2 of the United Nations Rules for the Protection of Juveniles Deprived of their Liberty (General Assembly resolution 45/113, annex).

The impact of drugs on the criminal justice system

As with any law carrying the potential of criminal punishment, the enforcement of drug-related laws may result in a corresponding burden on the criminal justice system and require resources dedicated to investigation, prosecution, adjudication and incarceration in connection with drug-related offences. At the global level, drug-related offences recorded by the police, and offences related to personal consumption in particular, have increased moderately over the past decade, whereas other kinds of crime, such as robbery, motor vehicle theft, burglary and homicide, have decreased substantially (see figure 22). UNODC estimates that just under a third of the global prison population (30 per cent over the period 2012-2014, compared with 32 per cent over the period 2003-2005) continues to be made up of unsentenced or pretrial prisoners.¹⁹⁰ Among convicted prisoners, drug-related offences account for an estimated 18 per cent of the global prison population, representing a rate of 28 per 100,000 population¹⁹¹ (see figure 23).

FIG. 22 Trends in global crime rates, by type of crime, 2003-2013



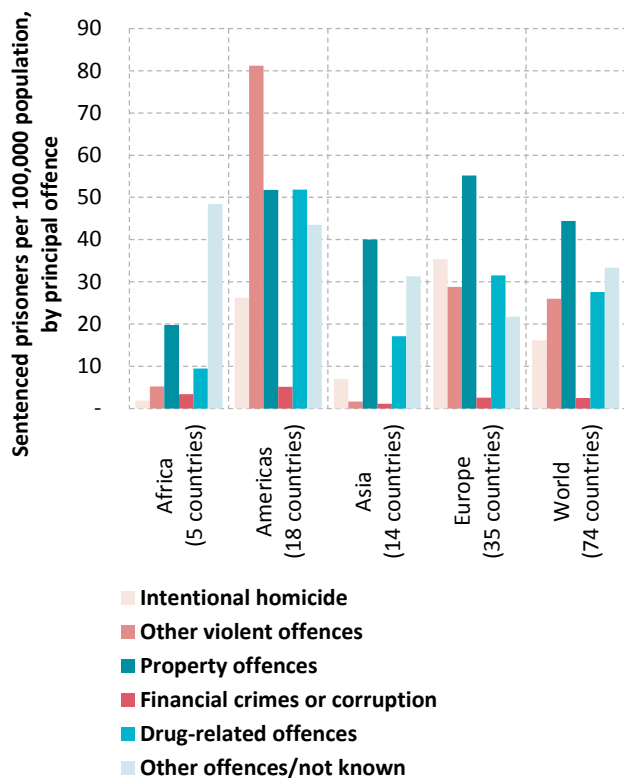
Source: United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (UNODC).

Notes: Trends are calculated as weighted crime rates per 100,000 population relative to the base year 2003. To produce global estimates, the estimated crime rates for each region were weighted according to the share of the region’s population in the global population. Data on drug trafficking and drug-related personal consumption offences refer mostly to persons arrested or prosecuted for those types of crime.

190 Based on data for 145 countries.

191 Based on data from 74 countries, classifying convictions with multiple offences according to the most serious one.

FIG. 23 Sentenced prisoners by principal offence of final sentence, 2012



Source: Note by the Secretariat on world crime trends and emerging issues and responses in the field of crime prevention and criminal justice (E/CN.15/2016/10).

There is great variation in the criteria used by national laws to establish the “personal consumption” versus “trafficking” character of a drug-related offence; they can include the drug type and amount, associated thresholds (or none at all), drug purity, position in a gang and whether the person in question uses drugs. This variation thus makes the comparison of data across countries challenging. Global aggregates show that the number of offences related to personal consumption exceeds the number of trafficking offences, reflecting the fact that the number of people who use drugs is much larger than the number of people in the drug supply chain. The limited data available also indicate that the conviction rate (the number of persons convicted as a proportion of the number of persons suspected) for offences related to personal consumption tends to be lower than the conviction rate for trafficking offences. Moreover, the stipulated periods of imprisonment tend to be longer for trafficking offences. All of those factors help determine the relative share of drug trafficking offences and offences related to personal consumption in the overall extent of incarceration attributable to drug-related offences. More than three quarters of all persons held in prison for drug-related offences in 2014 had been convicted of drug trafficking offences and less than a quarter had been convicted of offences related

to personal consumption (based on data from 29 countries).^{192, 193}

One study estimated that 235,000 people were detained without their consent in 1,000 drug detention centres in East and South-East Asia, where they may be subject to a range of human rights violations, such as forced labour, physical punishment and sexual violence.¹⁹⁴

Alternatives to imprisonment for personal consumption offences can have a positive impact on access to justice

The international drug control conventions have given the flexibility to provide people who possess, purchase or cultivate drugs for personal consumption, or in other situations considered minor in nature, measures of treatment, education, aftercare, rehabilitation and social reintegration, either as an alternative to conviction or punishment or in addition to conviction or punishment, taking into account the gravity of the offence.¹⁹⁵ Examples of this approach are the diversion of minor cases from the criminal justice system through the exercise of police or prosecutorial discretion and the imposition of non-custodial measures as an alternative to imprisonment. This is in line with the international drug control conventions¹⁹⁶ and with the requirements of an effective penal policy that is in compliance with human rights standards. In addition, States parties to international drug control conventions are required to take measures to prevent drug abuse and to provide for early identification, treatment, education, aftercare, rehabilitation and social reintegration of persons who abuse drugs.¹⁹⁷

Alternatives to imprisonment can clearly have a positive impact on people who use drugs. The provision of evidence-based treatment and care services to drug-using offenders, as an alternative to incarceration, has been shown to substantially increase recovery and reduce recidi-

¹⁹² Each of the above-mentioned estimates has been calculated on the basis of the corresponding available data set and presented on the assumption that the data set is representative of the global population. However, the exact coverage, and hence the level of uncertainty, differs according to the specific indicator.

¹⁹³ Note by the Secretariat on world crime trends and emerging issues and responses in the field of crime prevention and criminal justice (E/CN.15/2016/10).

¹⁹⁴ Joseph J. Amon and others, “Compulsory drug detention in East and Southeast Asia: evolving government, UN and donor responses”, *International Journal of Drug Policy*, vol. 25, No. 1 (2014), pp. 13-20.

¹⁹⁵ See article 3, paragraph 4, of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, article 36, paragraph 1(b), of the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol and article 22, paragraph 1(b), of the Convention on Psychotropic Substances of 1971.

¹⁹⁶ See article 36, paragraph 1 (a), of the 1961 Convention as amended by the 1972 Protocol, article 22, paragraph 1 (a), of the 1971 Convention and article 4 (a) of the 1988 Convention.

¹⁹⁷ See article 38 of the 1961 Convention as amended by the 1972 Protocol and article 20 of the 1971 Convention.

vism.¹⁹⁸ There is considerable evidence that effective treatment of drug dependence offering clinical interventions (inpatient or outpatient) as an alternative to criminal justice sanctions substantially increases recovery. This improves outcomes both for the person with the drug use disorder and the community when compared with the effects of criminal justice sanctions alone.¹⁹⁹

Alternatives to imprisonment have sometimes been put in place as a response to developments in drug use. For example, the spread of the use of “crack” in the United States in the 1980s was a major factor in prompting the introduction of “drug courts”. Similarly, the challenging nature of the drug problem in Portugal in the 1990s set the scene for a turning point in Portuguese drug control policy, as well as the institutional setup for its implementation.²⁰⁰

Corruption, organized crime and illicit financial flows

Corruption

Target 16.5 of the Sustainable Development Goals
Substantially reduce corruption and bribery in all their forms

Corruption and related forms of crime such as extortion engender costs in terms of discouragement or impediment to investment, entrepreneurship and business formation (which have prerequisites such as the rule of law and procedural transparency) and ultimately the hindrance of prosperity and economic development.

There is a mutually reinforcing relationship between the drug problem and corruption. The illicit drug trade often flourishes where state presence and the rule of law are weak and, thus, where opportunities for corruption exist. At the same time, the profits and power of drug trafficking organizations provide them with resources to reinforce corruption by buying protection from law enforcement agents — particularly when the agents’ levels of remuneration are low — and from politicians and the business sector; this means that corruption can be the Achilles heel in the response to drug trafficking.

Types of corruption

Corruption can be at a high or low level. Low-level or “petty” corruption often starts with street police or local politicians, who may be vulnerable to crime because of a lack of social legitimacy or because they come from the very same communities as members of criminal groups.²⁰¹

As drug traffickers grow in power, they may also infiltrate police institutions to ensure the acquiescence of officials. High-level or “grand” corruption, for its part, affects the highest ranks of power, such as police chiefs, national politicians and high-level law enforcement officials. The practice of corrupting officials to facilitate drug trafficking has been documented in all parts of the world.

Corruption can also vary depending on the strength of the rule of law and the effectiveness of state institutions; characteristics of the political systems such as the strength of political parties, the efficacy of the criminal justice system, including its investigative and prosecutorial functions, the existence of functioning oversight mechanisms and sanctions for corruption can reduce the extent of drug-related corruption. The organization of criminal groups can also affect the specific interaction between state officials and criminal groups. In Italy, for example, studies have found that organized criminal groups with complex internal structures, such as Cosa Nostra and ‘Ndrangheta, whose activities include, but are not limited to, the illicit drug trade, have benefited from high-level political connections and even enjoyed official state sanctioning in parts of Sicily and Calabria. In other parts of the country, organized criminal groups such as the Camorra and the Apulian groups, which are less hierarchical and strict in their recruitment practices, have more diffuse, though still strong, political connections.²⁰²

When institutions are strong, corruption can also exist, although more sporadically and manifested in more individualized links. For example, according to a report by the General Accounting Office in the United States, less than 1 per cent of employees of the Custom and Border Patrol were arrested on charges of corruption between 2005 and 2012; among the 144 employees arrested or indicted for corruption, pressure from drug trafficking and other transnational criminal groups was found to be a key factor. Of the 144 cases, 103 were found to be “mission-compromising”, including instances involving drug trafficking or the smuggling of migrants. There were 32,290 allegations of corruption or misconduct during the same period,²⁰³ which shows that even though corruption may not threaten the integrity of an institution as a whole, it does affect its performance and plays a very important role in illegal networks.

Drug trafficking organizations conduct their business using both corruption and violence. Criminals and drug traffickers use those two strategies simultaneously, and even as complements, because the threat of violence or the

198 See Commission on Narcotic Drugs resolution 55/12; see also UNODC, *Introductory Handbook on the Prevention of Recidivism and the Social Reintegration of Offenders*, Criminal Justice Handbook Series (Vienna, 2012), p. 43.

199 “From coercion to cohesion” (see footnote 184).

200 EMCDDA, *Drug Policy Profiles: Portugal* (Luxembourg, Publications Office of the European Union, 2011).

201 Graham D. Willis, “Antagonistic authorities and the civil police in

Sao Paulo, Brazil”, *Latin American Research Review*, vol. 49, No. 1 (2014), pp. 3-22.

202 Letizia Paoli, “Italian organised crime: Mafia associations and criminal enterprises”, *Global Crime*, vol. 6, No. 1 (2004), pp. 19-31.

203 United States of America, Government Accountability Office, *Border Security: Additional Actions Needed to Strengthen CBP Efforts to Mitigate Risk of Employee Corruption and Misconduct*, GAO-13-59 (Washington, D.C., 2012).

direct use of violence can be used to make corruption cheaper.²⁰⁴ However, the type of corrupt network can also determine whether violence becomes more or less pervasive. Corrupt networks that are predictable and stable offer protection that criminals might be unwilling to destabilize through violence.²⁰⁵ Some analysts argue that the characteristics of political systems and the relations between different law enforcement agencies may shape the organization and predictability of corruption networks. Predictable corrupt networks — those that guarantee protection from law enforcement — can deter criminals from deploying large-scale violence. Such networks may be more likely to emerge where government power is centralized and the rule of law is weak because those environments facilitate the creation of corruption channels at the highest echelons of power. This, in turn, may deter the use of violence because criminals may prefer to avoid violence, as that could force the government authorities to target them more strongly.²⁰⁶ By the same token, institutional changes that decentralize power and create political competition may fragment corruption channels and compel criminals to use violence to pressure the authorities.²⁰⁷

Drugs and illicit financial flows

Target 16.4 of the Sustainable Development Goals

By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime

Profits from the illicit drug trade can constitute considerable financial incentives for organized criminal groups. For example, a recent UNODC study²⁰⁸ showed that the illicit proceeds of opiates smuggled along the Balkan route through Europe amounted to, on average, \$28 billion per year. Almost half of those profits were generated in the four European countries with the largest illicit markets for opiates: France, Germany, Italy and United Kingdom. However, profits from the illicit opiate trade in those countries accounted for a significantly smaller proportion of GDP (0.07-0.19 per cent) than in countries with a relatively small GDP, such as Albania (2.60 per cent of GDP), Iran (Islamic Republic of) (1.66 per cent) and Bulgaria (1.22 per cent).

Money-laundering occurs by many different means, ranging from the use of small, decentralized techniques,

involving money orders or remittances, to sophisticated uses of front businesses; in all cases, however, the often substantial proceeds of the illicit drug trade are recirculated via legitimate means. In many cases, such illicit proceeds can inject large cash inflows into a country's economy and can have important macroeconomic effects, such as changes in currency values and increases in budgets and foreign exchange reserves, as in a number of West African countries, some of which have been significantly affected by cocaine trafficking. In Guinea-Bissau, for example, foreign exchange reserves rose from \$33 million in 2003 to \$174 million in 2008; and in the Gambia, the value of the dalasi increased very rapidly with no clear change in capital inflows.²⁰⁹

One of the consequences of illicit financial flows is that they may undermine the integrity of a country's financial system, including its international financial sectors. In the case of opiates originating in Afghanistan, for example, a report by the Financial Action Task Force²¹⁰ found that money does not generally flow from the major consumer markets to Afghanistan directly; rather, intermediate countries act as gateways to move money to or from Afghanistan. The transfer of funds between consumer markets and intermediate countries varies significantly, with drug traffickers using the full range of money transfer techniques, such as the banking system, money or value transfer services, and high-value commodity and cash couriers. However, funds moving between intermediate countries and Afghanistan seem to make particular use of cash couriers and money or value transfer services.

Part of the proceeds from the illicit drug trade generated in the country of consumption are transferred to financial centres, where the accounts of companies, financial institutions, resident individuals and financial service professionals are used to accumulate and redistribute the financial flows.

Recent examples of money-laundering illustrate how illicit proceeds are recirculated through major financial institutions in developed countries. In 2012, the United States Department of Justice fined a bank based in the United Kingdom \$1.9 billion for "failures of oversight" that allowed the laundering of at least \$881 million in proceeds from drug trafficking.²¹¹ Such failures included failure to monitor at least \$670 billion in wire transfers from the bank's unit in Mexico. The money originated from the Sinaloa cartel in Mexico, the Norte del Valle cartel in Colombia and other smaller drug trafficking organizations.²¹² These forms of illicit financial flows are essential

204 Benjamin Lessing, "Logics of violence in criminal war", *Journal of Conflict Resolution*, vol. 59, No. 8 (2015), pp.1486-1516.

205 R. Snyder and A. Durán-Martínez, "Drugs, Violence, and State-sponsored protection rackets in Mexico and Colombia", *Colombia Internacional*, No. 70 (July/December 2009), pp. 61-91.

206 Durán-Martínez, "To kill and tell?" (see footnote 150).

207 UNODC, *Transnational Organized Crime in West Africa: A Threat Assessment* (Vienna, 2013).

208 UNODC, *Drug Money: the illicit proceeds of opiates trafficked on the Balkan route* (Vienna, 2015).

209 West Africa Commission on Drugs, *Not Just in Transit: Drugs, the State and Society in West Africa* (2014).

210 Financial Action Task Force, *Financial Flows Linked to the Production and Trafficking of Afghan Opiates* (Paris, 2014).

211 United States v. HSBC Bank USA, N.A., No. 12-CR-763, 2013 WL 3306161, at 13-14 (E.D.N.Y. July 1, 2013).

212 Press Release, Department of Justice, HSBC Holdings Plc. and HSBC Bank USA N.A. Admit to Anti-Money Laundering and

for criminal groups to survive and constitute an enormous threat to sustainable development.

E. PARTNERSHIP



The provision of assistance geared towards global sustainable development, including development assistance to be provided by developed countries to developing countries, is another key element addressed in the Sustainable Development Goals. Developed countries are to provide 0.7 of gross national income in official development assistance to developing countries. Moreover, target 17.9 of the Sustainable Development Goals is to enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals. Given the extensive interplay that exists between sustainable development and drug control, development assistance and capacity-building must also be channelled into measures to counter the world drug problem.

The efforts of the international community in countering the world drug problem have long recognized the importance of partnership as embodied in the concept of common and shared responsibility that requires effective and increased international cooperation. At a special session of the General Assembly, held in April 2016, Member States recognized that the world drug problem remains a common and shared responsibility that should be addressed in a multilateral setting through effective and increased international cooperation and demands an integrated, multidisciplinary, mutually reinforcing, balanced, scientific evidence-based and comprehensive approach. The special session was an important milestone after the policy document of 2009 “Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem”, which defined action to be taken by Member States as well as goals to be achieved by 2019. At the 2016 session, Member States adopted the outcome document entitled “Our joint commitment to effectively addressing and countering the world drug problem”.²¹³

Sanctions Violations, Forfeit \$ 1.256 Billion in Deferred Prosecution Agreement, Dec. 11, 2012, <http://www.justice.gov/opa/pr/hsbc-holdings-plc-and-hsbc-bank-usa-na-admit-anti-money-laundering-and-sanctions-violations>, archived at <http://perma.cc/NNX2-PCLJ>. Statement by Lanny A. Breuer, Assistant Attorney General, to the HSBC Press Conference, New York, 11 December 2012. Available at www.justice.gov/.

213 General Assembly resolution S-30/1, annex.

This document welcomes the 2030 Agenda for Sustainable Development, and notes that efforts to achieve the Sustainable Development Goals and to effectively address the world drug problem are complementary and mutually reinforcing. Moreover, in the document Member States reaffirmed the need to mobilize adequate resources to address and counter the world drug problem and called for enhancing assistance to developing countries, upon request, in effectively implementing the Political Declaration and Plan of Action and the operational recommendations of the outcome document.

Resource allocation for international development assistance

Data on the provision of official development assistance are made available by OECD, covering assistance committed and disbursed by members of the OECD Development Assistance Committee as well as by other donors. According to OECD international aid statistics (Creditor Reporting System), over the period 1995-2014, international assistance by those donors followed a broadly increasing trend, even when adjusted for inflation (expressed in 2013 dollars). However, over the same period, the magnitude of commitments towards the sectors specific to drug-related matters, namely “alternative development” (agricultural and non-agricultural)²¹⁴ and “narcotics control”,²¹⁵ followed a different trend. Assistance in these sectors, particularly in the “narcotics control” sector, increased substantially after 1998, when the twentieth special session of the General Assembly, devoted to countering the world drug problem together, was held. Over the period 1999-2008, “narcotics control” assistance averaged \$1.44 billion (in constant 2013 dollars) and “alternative development” assistance averaged \$219 million (in constant 2013 dollars) — approximately 80 times and 5 times the annual average over the period 1995-1998, respectively.

Despite the adoption in 2009 of the Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem,²¹⁶ assistance in both sectors, particularly in the “narcotics control” sector, has declined significantly since 2008. Moreover, while the “narcotics control” sector dominated the drug-related total over the period 1999-2008, the decline in that sector was so steep that assistance in the “alternative development” sectors, even though significantly lower than in the peak years of 2007 and 2008, exceeded assistance in the “narcotics control” sector every year from 2010 onwards. Expressed as a percentage of total development assistance, total assistance to the above-mentioned drug-related sectors reached its highest level (2.6 per cent) in 2000 and stood at 0.14 per cent in 2014.

214 See the online methodology section of the present report.

215 See previous footnote.

216 See previous footnote.

The major beneficiaries of assistance in drug-related sectors reflect the location of drug crop cultivation. Over the period 2009-2014, South America accounted for more than half of the assistance committed to the “narcotics control” sector, as well as to “alternative development”, while the region of South and Central Asia (OECD designation) accounted for more than a fifth of the “narcotics control” commitments and more than a third of “alternative development” commitments.²¹⁷

There may be important contributions towards development assistance in drug-related areas by countries that are not covered by the Creditor Reporting System of OECD. Some development assistance, which in the OECD Creditor Reporting System is not categorized under the sectors discussed above, may also contribute, directly or indirectly, to countering the world drug problem. For example, the sector “medical services” covers, among other areas, “drug and substance abuse control”,²¹⁸ while assistance to the “STD control including HIV/AIDS” sector may also indirectly contribute to the mitigation of drug use disorders.

Technical assistance and international cooperation

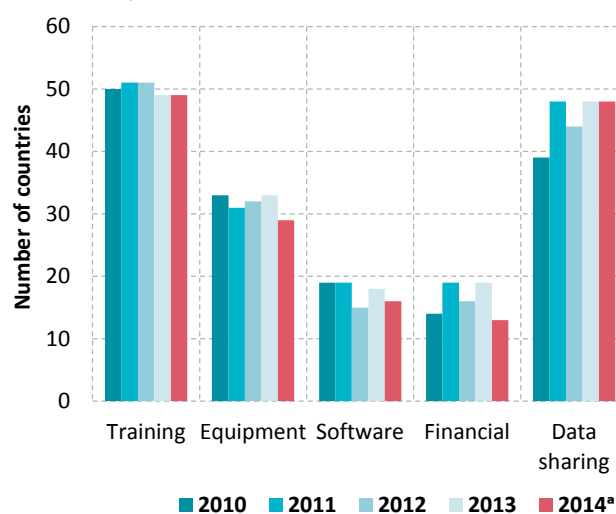
In the 2009 Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem, several courses of action in the area of international cooperation were agreed. In particular, it was agreed that Member States should scale up international assistance in addressing drug demand reduction in order to achieve a significant impact. With respect to drug supply reduction, in the Plan of Action, Member States committed themselves to providing further encouragement and assistance for: the sharing of information through official channels in a timely manner; the implementation of border control measures; the provision of equipment; the exchange of law enforcement officers; collaboration between the private and public sectors; and the development of practical new methods for effectively monitoring drug trafficking activities.

At the special session of the General Assembly, Member States reaffirmed their commitment to implementing effectively the provisions set out in the Political Declaration and Plan of Action, and recommended, inter alia, the following measures: strengthening specialized, targeted, effective and sustainable technical assistance (including, where appropriate, adequate financial assistance), training, capacity-building, equipment and technological know-how, to requesting countries, in order to assist Member States to effectively address the health, socioeconomic, human rights, justice and law enforcement aspects of the world drug problem; enhancing North-South, South-

South and triangular cooperation among Member States, in cooperation with the international development community and other key stakeholders; and strengthening the regular exchange of information, good practices and lessons learned among national practitioners from different fields and at all levels.

Responses from Member States to the UNODC annual report questionnaire from 2010 onwards indicate that Member States continued to engage in a wide range of cross-border activities and international cooperation to reduce the illicit supply of drugs, including the exchange of information, joint operations with other countries and the exchange of liaison officers. A range of communication platforms continue to be used extensively to exchange information between law enforcement agencies. The majority of responding Member States use multiple communication platforms, including both formal and informal channels; the most common include regional and international meetings, direct communication between law enforcement agencies, the International Criminal Police Organization (INTERPOL), liaison officers, regional organizations, the World Customs Organization and diplomatic channels.²¹⁹

FIG. 24 Number of countries reporting the receipt of specific types of technical assistance, 2010-2014



Source: Responses to the annual report questionnaire.

^a Data for 2014 reflect the responses received as of November 2015.

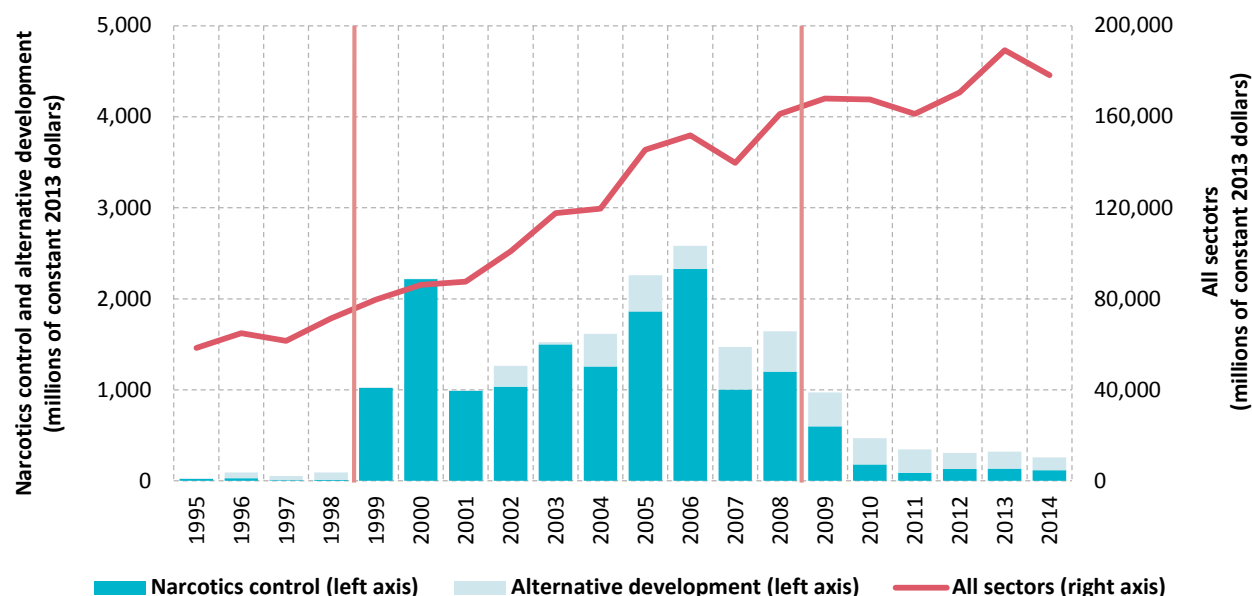
The Plan of Action also recognizes that several developing countries, especially those on major drug trafficking routes, require technical assistance to further strengthen their law enforcement agencies. In line with this, nearly three quarters of responding Member States reported

²¹⁷ See previous footnote.

²¹⁸ See the purpose codes of the OECD Creditor Reporting System Aid Activities database (valid for reporting up to and including 2014 flows), available at www.oecd.org.

²¹⁹ Report of the Executive Director of UNODC 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.7/2016/6).

FIG. 25 Trends in global commitments to providing official development assistance: assistance in all sectors and in the sectors “narcotics control” and “alternative development”,^a 1995-2014



Source: OECD, International Development Statistics online database (Creditor Reporting System). Data extracted March 2016.

^a The sum of agricultural alternative development and non-agricultural alternative development.

receiving technical assistance in the area of drug supply reduction from another country or from an international organization in 2014. The data indicate a stable trend in the provision of most forms of assistance and suggest that those forms of assistance that come with fewer financial implications are the most frequently adopted. Specifically, the most common forms of assistance were training and data-sharing, followed by the provision of equipment. Less common forms of assistance included the provision of software and financial aid.

Given the fact that the drug problem is intertwined with a vast array of development issues, it is fair to say that sustainable development can only truly occur if the world drug problem is addressed. As this chapter shows, although official development assistance has increased overall, assistance to drug-related sectors has actually decreased. The momentum already generated towards the achievement of the 2030 Sustainable Development Agenda could provide an ideal opportunity to redress this imbalance.

The outcome document of the special session of the General Assembly also calls for Member States to consider strengthening a development perspective as part of comprehensive, integrated and balanced national drug policies and programmes so as to tackle the related causes and consequences of illicit supply chain of drugs by, inter alia, addressing risk factors affecting individuals, communities and society, which may include a lack of services, infrastructure needs, drug-related violence, exclusion, marginalization and social disintegration, in order to contribute to the promotion of peaceful and inclusive societies. The document also recommends that Member States promote partnerships and innovative cooperation initiatives with the private sector, civil society and international financial institutions to create conditions more conducive to productive investments targeted at job creation in areas and among communities affected by or at risk of illicit drug cultivation, production, manufacturing, trafficking and other illicit drug-related activities in order to prevent, reduce or eliminate them, and to share best practices, lessons learned, expertise and skills in this regard.