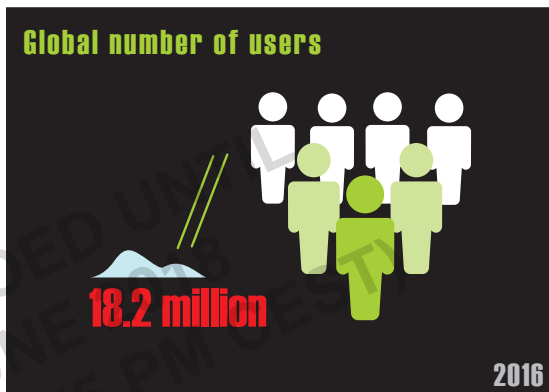
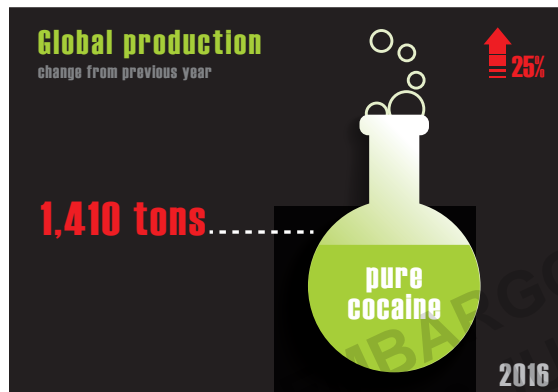
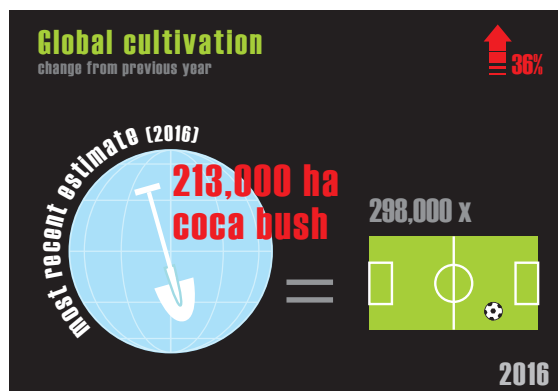


B. COCAINE



Note: All data refer to 2016.

After the downward trend, coca bush cultivation is expanding dramatically

After the peak in 2000, there was a long-term downward trend in coca bush cultivation that came to an end in 2013, and since then the global area under coca bush cultivation has increased by 76 per cent to reach 213,000 ha in 2016. The increase in coca bush cultivation in 2016 reported in Bolivia (Plurinational State of), Colombia and Peru took place in parallel with the decline in eradication reported in all three Andean countries.

The increase in coca bush cultivation in Colombia is the main driver of global expansion

Recent trends in the global area under coca bush cultivation have largely been driven by changes in coca cultivation in Colombia, where the cultivation area decreased by 70 per cent over the period 2000–2013 only to then triple in size from 2013 to 2016. With 146,000 ha under coca cultivation in 2016,

Colombia accounted for 68.5 per cent of the global cultivation area. Coca bush cultivation is widespread in Colombia, having been identified in 21 of the country's 33 departments in 2016, although more than two thirds of the total area under cultivation is located in the southern area of the country. The increase in coca bush cultivation in Colombia in 2016 came about for a number of reasons related to market dynamics and the strategies of trafficking organizations. Among other factors, it was also linked to a perceived decrease in the risk of illicit activities following the suspension of aerial spraying, the expectations in some communities of receiving compensation for replacing coca bush cultivation, and a reduction in alternative development interventions, which has undergone a period of transition from an approach based on crop elimination to an approach based on promoting the rule of law.¹

1 UNODC and Colombia, *Colombia: Monitoreo de Territorios Afectados por Cultivos Ilícitos 2016* (July 2017), p. 139.

The overall number of dismantled laboratories used for the manufacture of coca and cocaine products in Colombia more than doubled, from 2,334 in 2013 to 4,842 in 2016 (95 per cent of which were manufacturing coca paste and cocaine base, while 5 per cent were manufacturing cocaine hydrochloride),² the largest number ever reported. Seizures of cocaine hydrochloride more than doubled in Colombia, from 167 tons in 2013 to a record 378 tons in 2016; in addition, 43 tons of coca paste and cocaine base were intercepted in 2016.³ Eradication (manual eradication and spraying) fell, from more than 213,000 ha in 2006 to 69,000 ha in 2013 and less than 18,000 ha in 2016, while aerial spraying ceased in October 2015. Farmers cultivating coca bush may have felt that the threat of eradication had diminished, and some of them may have therefore felt emboldened to take collective action to block potential manual eradication efforts and were thus inclined to increase their coca bush production.⁴

Signs of increases in traditional coca bush cultivation areas in Peru

Following a decline that began in 2011, the area under coca bush cultivation in Peru increased to 43,900 ha in 2016, which was equivalent to 21 per cent of the global area under coca bush cultivation.

In 2016, Peru's coca bush production took place mainly to the east of Lima, across the Andes, in the Valle de los Ríos Apurímac, Ene y Mantaro (70 per cent) and further away in La Convención y Lares (14 per cent). By contrast, most of Peru's coca bush production in the 1980s and 1990s took place in Alto Huallaga, in central Peru. By 2016, Alto Huallaga accounted for just 4 per cent of the total area under coca bush cultivation in Peru. However, the long-term downward trend came to an end in 2016 when the area under cultivation in Alto Huallaga rose, from a low level, by 45 per cent from the previous year. None of the two main coca bush cultivation areas today (Valle de los Ríos Apurímac, Ene y Mantaro, and La Convención y Lares) were subject to eradication in 2016.⁵

2 Ibid., p. 151.

3 Ibid., p. 154.

4 Ibid., p. 14.

5 UNODC and the National Commission for Development

The downward trend in coca bush cultivation in the Plurinational State of Bolivia has also come to an end

The Plurinational State of Bolivia accounted for 10 per cent of global coca cultivation in 2016, when the area under coca bush cultivation in that country rose by 14 per cent, to 23,100 ha, returning to the level reported in 2013. The increase in 2016 ended the downward trend that started in 2010⁶ and which was the result of, among other factors, a government policy based on “voluntary” reductions in coca bush cultivation in the coca-growing areas,^{7, 8, 9} which went in parallel with eradication (as reported by the Government), particularly in national parks and other areas outside accepted cultivation areas. Overall, coca bush eradication almost doubled in the Plurinational State of Bolivia, from around 6,000 ha per year over the period 2005–2009 to around 11,000 ha per year over the period 2011–2015, then decreased to 6,600 ha of eradication in 2016, coinciding with the increase in cultivation reported that year.¹⁰

Global cocaine manufacture reached a record level in 2016

As a consequence of large increases in the areas under coca bush cultivation and improved cocaine manufacture know-how in the main coca leaf-producing areas, global cocaine manufacture is estimated to have reached an all-time high of some 1,410 tons in 2016, an increase of 25 per cent from the previous year. Most cocaine manufacture takes place in Colombia where, purely on the basis of estimated coca leaf production, cocaine manufacture

and Life without Drugs (DEVIDA) of Peru, *Peru: Monitoreo de Cultivo de Coca 2016* (November 2017).

6 UNODC and the Plurinational State of Bolivia, *Estado Plurinacional de Bolivia: Monitoreo de Cultivos de Coca 2015* (July 2016).

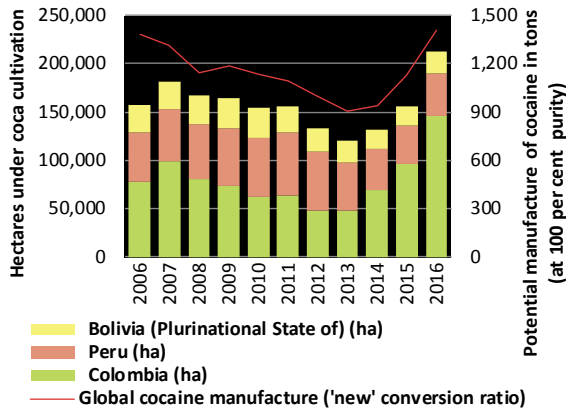
7 Ibid.

8 Plurinational State of Bolivia, Ministry of Rural Development, Agriculture, Livestock and the Environment, Agreement between the national Government and coca producers (14 September 2008).

9 Robert Lessmann, “Bolivien: zwischen Modellfall und Unregierbarkeit”, in *Bolivien Staatszerfall als Kollateralschaden*, Thomas Jäger, ed. (Wiesbaden, Germany, VS Verlag für Sozialwissenschaften, 2009), p. 54.

10 UNODC and the Plurinational State of Bolivia, *Estado Plurinacional de Bolivia: Monitoreo de Cultivos de Coca 2015*, p. 52.

FIG. 1 Global coca cultivation and cocaine manufacture, 2006–2016



Source: UNODC, coca cultivation surveys in Bolivia (Plurinational State of), Colombia and Peru, 2014 and previous years.

reached an estimated 866 tons in 2016. This represents a 34 per cent increase from the previous year, and a threefold increase over the entire period 2013–2016. Cocaine manufactured from coca leaf production in Peru and Bolivia (Plurinational State of) also increased in 2016, although at a slower pace.

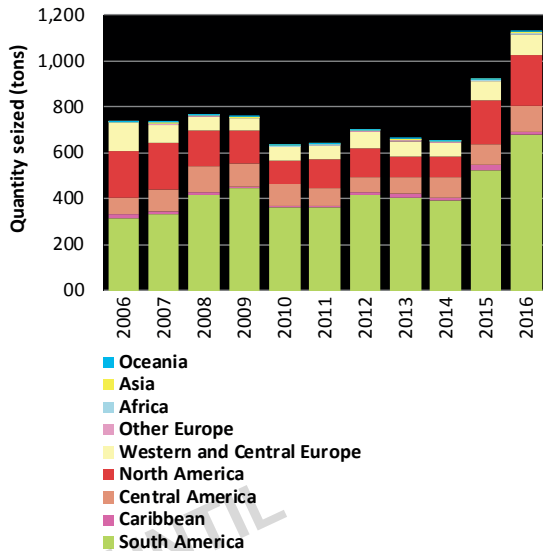
At record levels in 2016, the largest quantity of cocaine seized was in the Americas and Western Europe, but seizure quantities are rising sharply in other regions

The quantity of cocaine seized worldwide in 2016 rose by 23 per cent from the previous year to reach, at 1,129 tons,¹¹ the highest level ever reported.

The Americas continued to account for the vast majority of the cocaine intercepted worldwide in 2016 (more than 90 per cent of the total quantity seized), of which South America accounted for 60 per cent of the total (more than half of which was seized in Colombia). North America, led by seizures made in the United States (18 per cent), accounted for less than one fifth of the global total, and Central America accounted for 11 per cent of cocaine seized, most of which was seized in Panama. The next largest portion of the cocaine seized in 2016 was reported in Western and Central Europe (8 per

11 This quantity is of cocaine seized with varying levels of purity. It is not comparable with the estimated amount manufactured, which is provided for cocaine of 100 per cent purity.

FIG. 2 Global quantities of cocaine seized,^a by region (and some subregions), 2006–2016



Source: UNODC, responses to the annual report questionnaire.

^a Includes cocaine hydrochloride, coca paste and base, and “crack” cocaine; not adjusted for purity.

cent), with the largest national total of cocaine seizures, for the first time ever, being that seized in Belgium (3 per cent of the global total), followed by Spain (1 per cent) and the Netherlands (1 per cent).

Most increases in the quantities of cocaine seized in 2016 took place outside the main cocaine destination markets of North America and Western and Central Europe, reflecting the ongoing spread of cocaine trafficking to emerging markets. For example, the quantity of cocaine seized in Asia tripled from 2015 to 2016, with most growth reported in South Asia, where the quantity seized increased tenfold, and in East and South-East Asia. The quantity of cocaine seized in the Near and Middle East/South-West Asia doubled in 2016.

The quantity of cocaine seized in Africa also doubled in 2016, most of that increase being reported in countries in North Africa, where the quantity of cocaine seized had a sixfold increase in 2016 from the previous year and accounted for 69 per cent of the quantity seized in the region. This contrasts with previous years, when cocaine was mainly seized in West and Central Africa.

Marked increases were reported in South-Eastern Europe, where the quantity of cocaine seized more than tripled in 2016 from the previous year. The quantity of cocaine seized in Europe as a whole rose by 11 per cent in 2016.

The quantity of cocaine seized in Oceania rose by more than 75 per cent from 2015 to 2016, with Australia accounting for 98 per cent of all cocaine intercepted in Oceania.

Cocaine continues to be trafficked primarily from South America to North America and Western and Central Europe, but trafficking routes to other subregions are proliferating

Seizure data suggest that most cocaine is trafficked from the Andean countries to the main consumer markets of North America and Western and Central Europe. Although seizures of cocaine trafficked to other subregions are comparatively small, they suggest that cocaine trafficking to those subregions may be increasing rapidly, contributing to the proliferation of trafficking routes across the globe. In some countries in those subregions, law enforcement agencies may still be unfamiliar with cocaine trafficking as they are more used to focusing on other drugs with long-established markets. In such cases, seizure patterns may hide significant unreported cocaine trafficking.

The primary cocaine trafficking flow continues to be that from the Andean countries to North America, particularly from Colombia to the United States, which continues to be reported as the main destination country for cocaine shipments intercepted in South America. Data of the United States Drug Enforcement Administration showed that 92 per cent of the cocaine seizure samples analysed in 2016 originated in Colombia and 6 per cent originated in Peru,¹² with about 80 per cent being trafficked via the Pacific Ocean and the rest via the Atlantic Ocean (including by transiting the Caribbean corridor).¹³ The predominance of trafficking via the Pacific Ocean is likely due to the concentration of coca leaf production and cocaine manufacture in

southern Colombia, from where the closest access to the sea are the Pacific ports of Colombia and of neighbouring Ecuador. The cocaine has typically been trafficked from Colombia to Central America and Mexico, often using ships and semi-submersible vessels, and then from Mexico across the border into the United States by car or truck, mostly by Mexican organized crime groups. In 2016, however, the United States authorities reported that more cocaine was seized at sea (46 per cent of the total) than on land (41 per cent);¹⁴ by comparison, in 2013, 81 per cent of cocaine seized was being trafficked by land and 12 per cent by sea. This suggests that in 2016, less cocaine was being trafficked overland via Mexico into the United States. In fact, according to data reported by the United States, the proportion of cocaine trafficked into the United States via Mexico fell from 70 per cent of all cocaine inflows in 2013 to 39 per cent in 2016.¹⁵

In 2016, most of the cocaine destined for Canada was trafficked via the Caribbean; mostly via Jamaica and the Dominican Republic. Cocaine also transited the United States before reaching Canadian markets.¹⁶

The second largest cocaine trafficking flow worldwide is that from the Andean countries to Western and Central Europe. Over the period 2012–2016, Colombia was the departure country most often mentioned in connection with seized cocaine destined for European markets (20 per cent of all mentions in the responses to the annual report questionnaire by European countries to the question on countries of origin, departure and transit outside Europe), followed by Brazil (16 per cent) and Ecuador and the Dominican Republic (9 per cent each). Within Europe, Spain and the Netherlands were the countries most frequently reported as countries of transit, followed by Germany and Belgium.

Seizures of cocaine reported to have entered Europe via African transit countries were less frequent: they accounted for 6 per cent of mentions in the responses to the annual report questionnaire by European

12 United States Department of Justice, Drug Enforcement Administration, *2017 National Drug Threat Assessment* (October 2017), p. 87.

13 *Ibid.*, p. 93.

14 A further 8 per cent of the cocaine was intercepted while it was being sent by mail, and 4 per cent while being trafficked by air in 2016 (UNODC, annual report questionnaire data).

15 UNODC, annual report questionnaire data.

16 UNODC, annual report questionnaire data.

countries regarding Africa countries as countries of origin, departure or transit of cocaine over the period 2012–2016. Cocaine trafficking flows to Africa are primarily directed towards countries in West and Central Africa (5 per cent), often for shipment onward to Europe and, to a lesser extent, to Southern Africa (1 per cent). Brazil was the single most frequently mentioned country of departure for cocaine intercepted in all the subregions of Africa in the period 2012–2017. Overall, 2 per cent of all mentions by countries in the Americas mentioned countries in Africa as destination countries for cocaine seized in the period 2012–2016.

Cocaine seized in Asia over the period 2012–2016 also seems primarily to have departed from or transited Brazil. This applies to the two main cocaine destination subregions of Asia, the Near and Middle East/South-West Asia and East and South-East Asia, as well as to Central Asia and Transcaucasia. Seized cocaine trafficked in Asia often transited the United Arab Emirates, while the most frequently mentioned final destination countries in Asia are China (including Hong Kong, China), followed by Israel.

Cocaine flows to Oceania are predominantly directed towards Australia. Based on reported quantities of cocaine seized in Australia in the period 2012–2016, the most important departure countries for cocaine shipments to Australia were the United States, Chile, Brazil, Argentina and Canada.¹⁷ That cocaine is being trafficked from the United States and Canada to Australia is likely due to the fact that the wholesale price of cocaine in Australia is higher than in North America. Cocaine wholesale prices in the United States ranged from \$4,000 to \$50,000 per kilogram in 2016, and in Canada from \$41,000 to \$59,000, while in Australia they ranged from \$137,000 to \$222,000 per kilogram.¹⁸

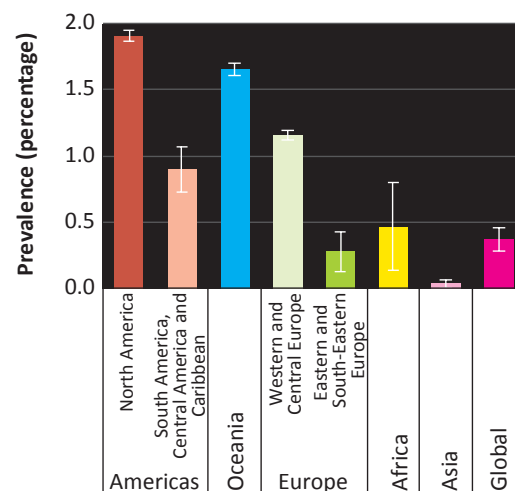
Given the existing trafficking routes, most of the cocaine interceptions take place at sea or close to it. Some 70 per cent of all cocaine seized (reported to UNODC by Member States as significant individual drug seizures) over the period 2012–2016 (cocaine hydrochloride and cocaine base) had been or was

intended to be trafficked by sea (seized in international waters, territorial waters, seaports, maritime zones, beaches, vessels, boats and shipping containers). A further 15 per cent of the total quantity of cocaine intercepted was seized at airports, and the remaining 15 per cent was seized on land routes (roads, highways, vehicles, streets, warehouses, post offices, bars, residences, offices, etc.).¹⁹

Cocaine use is still concentrated in the Americas and Europe, and is on the increase

In 2016, the global number of past-year cocaine users is estimated to have increased by almost 7 per cent from the previous year, to 18.2 million (range: 13.9–22.9 million), with increases reported in most regions. More than half of all cocaine users reside in the Americas, mostly North America (34 per cent of the global total), and almost one quarter reside in Europe, mostly in Western and Central Europe (about one fifth of the global total). Africa and, to a lesser extent, Asia and Oceania together may account for the remaining quarter of all cocaine users, but there are significant error margins for these estimates due to the lack of data in many countries in Africa and Asia.

FIG. 3 Estimated annual prevalence rates of cocaine use among the population aged 15–64 years, 2016



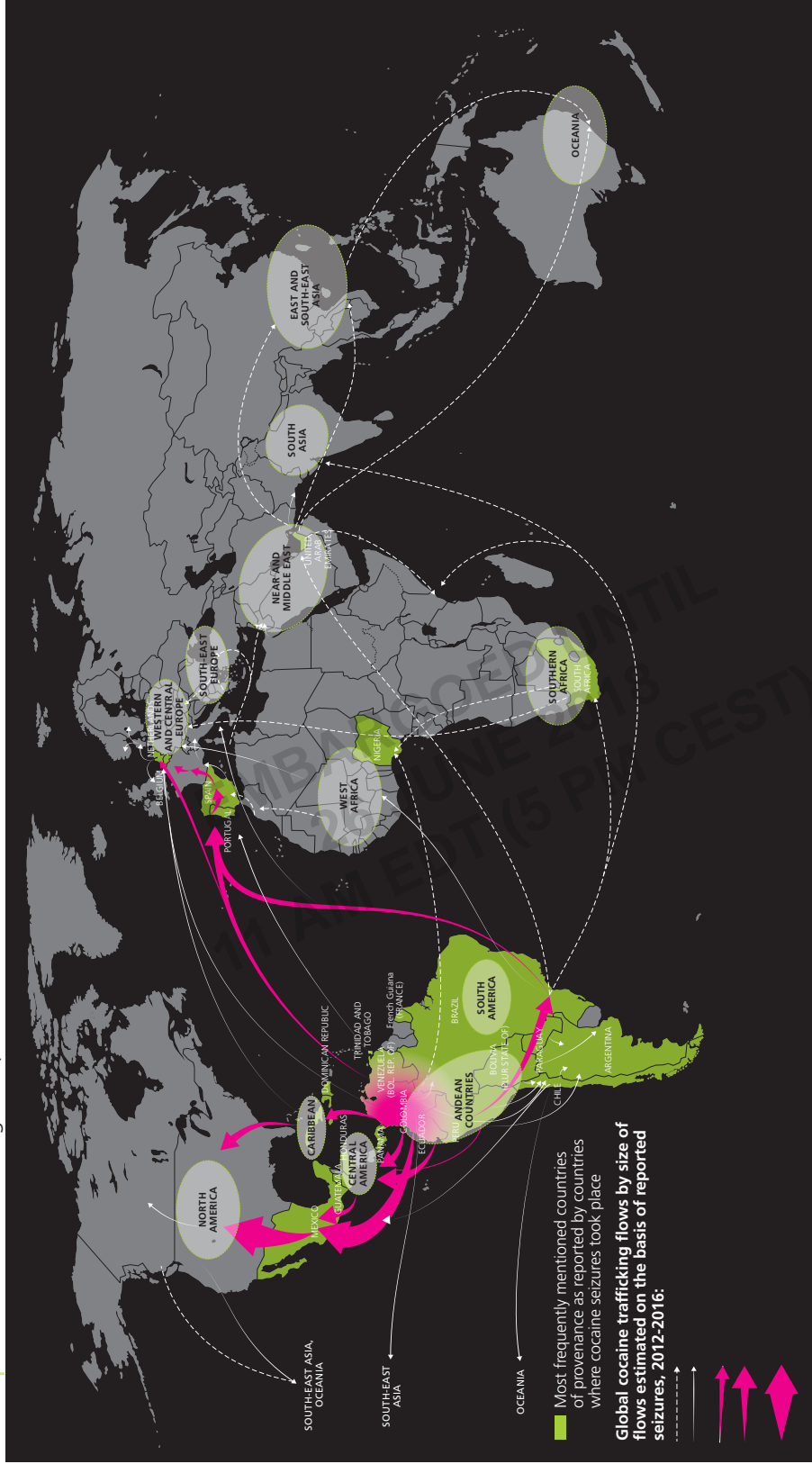
Source: UNODC estimates based on annual reports questionnaire data and other government reports.

17 Australian Criminal Intelligence Commission, *Illicit Drug Data Report 2015–16* (Canberra, June 2017), p. 98; and the Commission's illicit drug data reports of previous years.

18 Australian Criminal Intelligence Commission, *Illicit Drug Data Report 2015–16*, p. 102.

19 UNODC, the individual drug seizure database.

MAP 1 | Main cocaine trafficking flows, 2012–2016

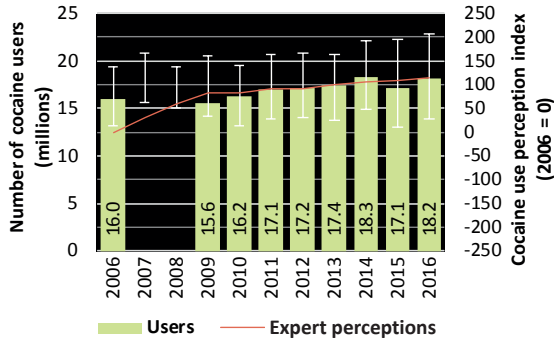


Sources: UNODC, responses to the annual report questionnaire and individual drug seizure database.

Notes: The size of the trafficking flow lines is based on the amount of cocaine seized in a subregion and the number of mentions of countries from where the cocaine has departed (including reports of "origin" and "transit") to a specific subregion over the period 2012–2016. The trafficking flows are determined on the basis of country of origin/departure, transit and destination of seized drugs as reported by Member States in the annual report questionnaire and individual drug seizure database: as such, they need to be considered as broadly indicative of existing trafficking routes while several secondary flows may not be reflected. Flow arrows represent the direction of trafficking; origins of the arrows indicate either the area of manufacture or the one of last provenance, end points of arrows indicate either the area of consumption or the one of next destination of trafficking.

The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute concerning sovereignty over the Falkland Islands (Malvinas).

FIG. 4 Trends in the number of annual cocaine users and cocaine use perception index, 2006–2016



Source: UNODC estimates based on annual report questionnaire data.

Note: For calculation methods and details, see the online methodology section of the present report.

Global annual prevalence of cocaine use was estimated at roughly 0.4 per cent of the global population aged 15–64 years in 2016, albeit with substantial variations from region to region. The subregion with the highest prevalence of cocaine use continues to be North America, where high prevalence rates are reported by the United States (2.4 per cent of the population aged 15–64 years) and Canada (1.5 per cent). Oceania as a whole also has a high prevalence of cocaine use, with prevalence of cocaine use in Australia among the population aged 14 years and older at 2.5 per cent. In Western and Central Europe, prevalence of cocaine use in the United Kingdom (2.3 per cent the population aged 16–59 years), Spain (2.0 per cent the population aged 15–64 years in 2015) and the Netherlands (1.9 per cent of the population aged 15–64 years in 2015) is also high.

Because only a limited number of countries provide new estimates every year,²⁰ error margins are so wide that it would be premature to draw conclusions about statistically significant increases. However, expert perceptions on changes in cocaine use²¹ suggest an upward trend in cocaine use worldwide over the period 2006–2016. Although reported in all regions, the increase appears to have been most noticeable, especially in 2016, in the Americas, Africa and Asia.

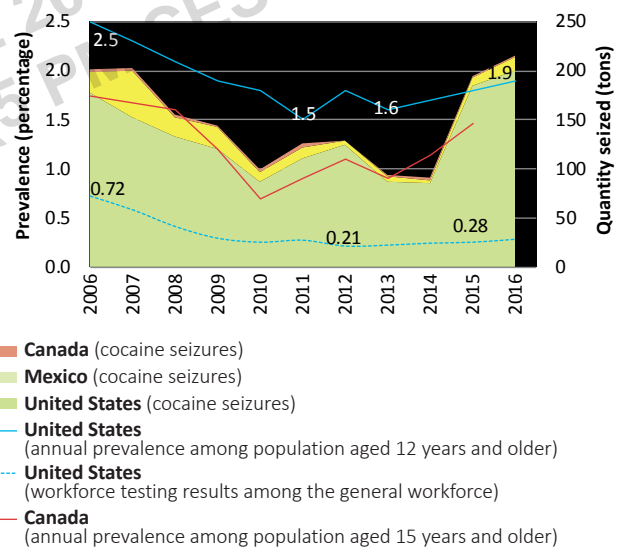
20 On average, 20–25 countries every year report new drug use estimates to UNODC.

21 See the online methodological annex of the present report.

Continued growth in the North American cocaine market

Most indicators in North America, the world's largest cocaine market, point to an expansion of the cocaine market from 2013 onwards, mirroring the changes in Colombia when the long-term downward trend in cocaine manufacture was reversed. The annual prevalence of cocaine use among the general population in Canada and the United States has been increasing since 2013. Further, data in the United States have shown an increase since 2013 in urine samples of the workforce that tested positive for cocaine, while from 2013 to 2016 the number of people initiating cocaine use rose by 80 per cent, returning to the level reported in 2002.²² The quantity of cocaine seized in the United States rose by more than 40 per cent, and by almost 50 per cent in North America as a whole, over the same period (2013–2016).

FIG. 5 Seizures of cocaine in North America and annual prevalence of cocaine use in the United States and Canada, 2006–2016



Source: UNODC, annual report questionnaire data; Substance Abuse and Mental Health Services Administration of the United States, *National Household Survey on Drug Use and Health*; Quest Diagnostics; Quest Diagnostics Drug Testing Index for 2016 and previous years; Health Canada, Canadian Alcohol and Drug Use Monitoring Survey; and Statistics Canada, Canadian Tobacco, Alcohol and Drugs Survey, 2015.

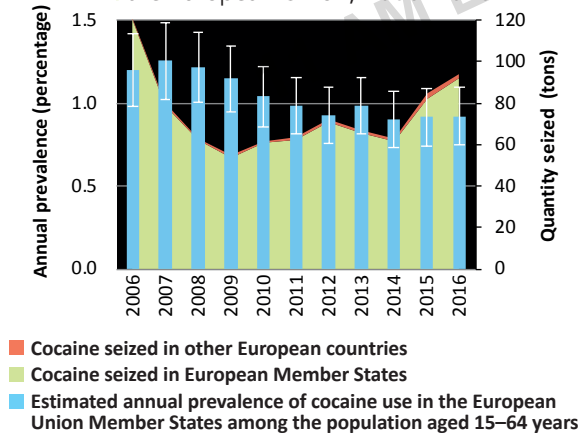
22 Substance Abuse and Mental Health Services Administration of the United States, *Key Substance Use and Mental Health Indicators in the United States: Results from the 2016 National Survey on Drug Use and Health*.

The number of cocaine-related deaths in the United States doubled over the period 2013–2016, rising from less than 5,000 to more than 10,000. However, since most of those deaths were related to the use of cocaine in combination with synthetic opioids (66 per cent in 2015,²³ up from 45 per cent in 2006),²⁴ they cannot be attributed exclusively to cocaine consumption.

Likely expansion of the cocaine market in Europe

The overall prevalence of cocaine use in the European Union is about half the rate reported in the United States. Based on limited data, the prevalence of cocaine use in Europe is perceived to have remained relatively stable in recent years, but there are also indications that the supply of cocaine to Europe has been increasing again. For example, although the quantity of cocaine seized in Europe fell from the peak of 121 tons seized in 2006 to 55 tons in 2009, it then almost doubled, to 94 tons in 2016, and rose by 50 per cent from 2014 to 2016. European Union countries accounted for 98 per cent of all the cocaine seized in Europe in 2016, as well as for the bulk of cocaine consumption in the region. UNDOC estimates that some 70 per cent

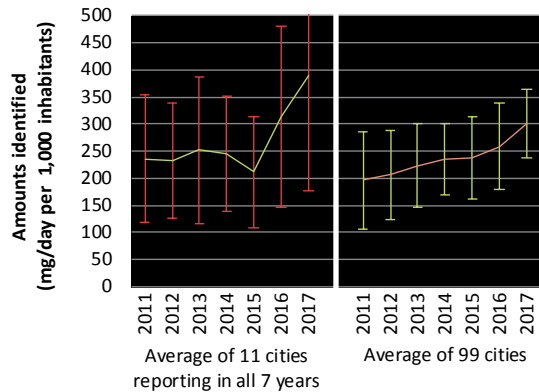
FIG. 6 Seizures of cocaine in Europe and annual prevalence of cocaine use in the European Union, 2006–2016



Source: UNDOC calculations based on annual report questionnaire data; and EMCDDA.

23 No breakdown of cocaine-related deaths for 2016 was available at the time of writing this report.
 24 United States, National Institute on Drug Abuse, National Center for Health Statistics, CDC Wonder, National overdose deaths from select prescription and illicit drugs, 2017.

FIG. 7 Benzoylcegonine found in wastewater per 1,000 inhabitants in Europe (based on data from 99 European cities), 2011–2017



Source: UNODC calculations based on information from Sewage Analysis CORe Group—Europe (SCORE).

Note: Data included are from the analysis of wastewater in 27 European countries over the period 2011–2017. For calculation methods and details, see the online methodology section of the present report.

of all European cocaine users reside in European Union countries and more than 85 per cent in Western and Central Europe.

In contrast to prevalence surveys, which suggest that past-year cocaine use has remained rather stable, wastewater analysis points to a likely expansion of the European cocaine market in terms of the quantity consumed in recent years. The analysis of benzoylcegonine (a cocaine metabolite) in wastewater undertaken in cities across West, Central and South-Eastern Europe points to a growth in cocaine consumption over the period 2011–2017, particularly in the last two years of that period.

After growing until 2016, the cocaine market in Oceania may now be stabilizing

Conducted in 2016, the latest household survey in Australia confirmed a long-term upward trend in cocaine use in Oceania, with an annual prevalence of cocaine use of 2.5 per cent of the population aged 14 years and older in 2016,²⁵ which is relatively high by global standards. A number of other cocaine indicators have also shown an upward trend in recent years, including positive drug tests of detainees and

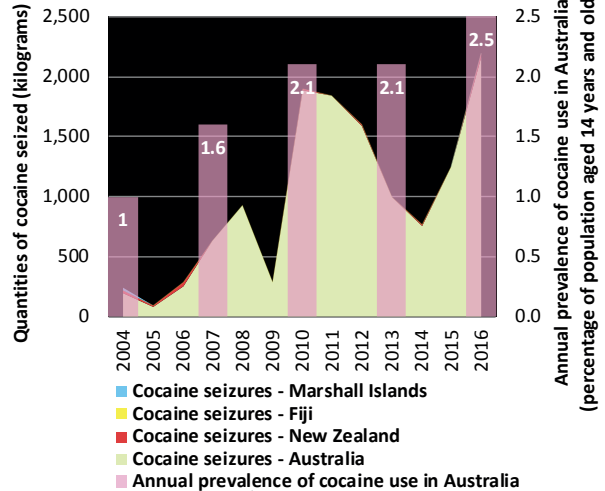
25 Australian Institute of Health and Welfare, 2016 National Drug Strategy Household Survey.

use of cocaine among “ecstasy” users in Australia.²⁶ In parallel, the quantities of cocaine seized have also increased, reaching a record level in Oceania (notably in Australia) in 2016, as did the number of cocaine seizures and the number of cocaine-related arrests.

By contrast, cocaine purity decreased in Australia’s main cocaine market, New South Wales (although prices increased slightly in Australia as a whole) in 2016, when the perceived availability of cocaine (by injecting drug users and regular “ecstasy” users) also decreased.²⁷ Taken together with the slight increase in wholesale prices in 2016,²⁸ this suggests a possible reduction in the availability of cocaine in Australia in 2016. Moreover, the analysis of wastewater data in Australia showed that cocaine consumption in 2017 had stabilized close to the level reported in late 2016.²⁹

Despite very high prevalence rates in Australia, treatment demand for cocaine use in Oceania as a whole seems to be low,³⁰ suggesting that, compared with the North American and the European markets, the number of people experiencing drug use disorders from cocaine use may be limited. Indeed, while the annual prevalence of cocaine use in Australia is three times that reported in the European Union, wastewater analysis suggests that the amount of cocaine consumed per capita (average benzoylecgonine content in wastewater per 1,000 inhabitants) in Australia is clearly below the European average.³¹ The price of cocaine in Australia, already very high compared with the markets in other developed countries,³² may be a factor behind the comparatively low consumption of cocaine, leading to fewer cocaine use disorders in Australia than in other major cocaine markets.

FIG. 8 Annual prevalence of cocaine use in Australia and cocaine seizures in the Oceania region, 2004–2016



Source: UNODC, annual report questionnaire data; and Australian Institute of Health and Welfare, 2016 *National Drug Strategy Household Survey*.

26 Australian Criminal Intelligence Commission, *Illicit Drug Data Report 2015–16*, pp. 91–108.

27 *Ibid.*, pp. 91–108.

28 *Ibid.*, p. 102.

29 Australian Criminal Intelligence Commission, *National Wastewater Drug Monitoring Program*, Report No. 3 (November 2017), p. 40.

30 UNODC, annual report questionnaire data.

31 SCORE, Sewage Analysis CORE Group–Europe (SCORE) and Australian Criminal Intelligence Commission, *National Wastewater Drug Monitoring Program*, Report No. 3 (November 2017).

32 Australian Criminal Intelligence Commission, *Illicit Drug Data Report 2015–16*, p. 102.