

SUPPLY OF OPIATE RAW MATERIALS AND DEMAND FOR OPIATES FOR MEDICAL AND SCIENTIFIC PURPOSES

Introduction

1. The International Narcotics Control Board (INCB), in fulfilment of the functions assigned to it under the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol¹ and the relevant resolutions of the Economic and Social Council and the Commission on Narcotic Drugs, regularly examines issues affecting the supply of and the demand for opiates for licit requirements, and endeavours to ensure a standing balance between that supply and demand. The present section contains an analysis of the current situation based on the data provided by Governments.²

2. The analysis presented below has been prepared by examining the data on opiate raw materials and on opiates manufactured from those raw materials. In the analysis, raw materials rich in morphine and the opiates derived from them are, in accordance with the methodology adopted by INCB, considered separately from raw materials rich in thebaine and the opiates derived from them. The cultivation of opium rich in codeine is reported separately for two countries in table 1, but in the global calculation of supply and demand it is included in table 2, together with opium rich in morphine, pending the development of a system for the calculation of codeine equivalency. Global supply of opiate raw materials is measured by the levels of stocks and production. Global demand for opiate raw materials is assessed on the basis of data on total utilization of opiate raw materials for the manufacture of all opiates (see para. 24 below). Data concerning total consumption and stocks of opiates are also included, as appropriate.

3. The present analysis complements the comments on the reported statistics for individual opiate raw materials obtained from opium poppy (opium, poppy straw and concentrate of poppy straw) and for the opiates obtained from them. Readers are invited to turn to those comments, in part two of the present report, for more in-depth information on long-term developments concerning the individual substances. The main focus of the analysis is on the last four years for which statistical data are available. For 2015 and 2016, the data on production are based on advance statistical information and estimates received from the

main producing countries,³ while the data on the demand for opiate raw materials and the opiates derived from them are INCB projections based on past trends, taking into account relevant estimates furnished by Governments.

4. Finally, INCB examines the trends in global consumption of all opiates and synthetic opioids over the 20-year period from 1995 to 2014. This analysis provides a historical perspective on the relative importance of opiates, which are derived from opium poppy, in the global consumption of opioids.

Supply of opiate raw materials

Cultivation of opium poppy for the extraction of alkaloids

5. Table 1 provides information on the area cultivated with opium poppy (*Papaver somniferum*) for the extraction of alkaloids in the main producer countries; data on varieties rich in morphine, thebaine and codeine are listed separately, where applicable. For all types of raw materials, the estimated area of cultivation is given for each year that is available. Data on the area sown and the area actually harvested are given for the years for which such data are available.

6. In 2014, the area sown with opium poppy rich in morphine in major producing countries decreased from the levels of the previous year in Australia and France but increased slightly in Turkey and stayed the same in India and Spain. In Hungary, the area actually harvested more than doubled in 2014. In Australia, the actual harvested area decreased by 37 per cent compared with the previous year, which may be attributed to a shift in Australia towards cultivating opium poppy rich in codeine. The actual harvested area of opium poppy rich in morphine in France was 11 per cent less than the previous year. In 2014, the actual area harvested in Turkey decreased by 18 per cent compared with the previous year.

7. India is the only opium-producing country included in the present analysis.⁴ After reducing its cultivation of opium poppy by 75 per cent in 2013, India maintained

¹United Nations, *Treaty Series*, vol. 976, No. 14152.

²The analysis excludes data on China and the Democratic People's Republic of Korea, which produce opiate raw materials solely for domestic use. It also excludes data on the utilization of seized opium that was released for licit use in the Islamic Republic of Iran and on the demand for opiates derived from such opium.

³Those data have been adjusted, as necessary, to reflect industrially recoverable alkaloid content in the raw materials in question.

⁴The information on opium is based on advance official information provided by India to INCB in February 2015. Those data are being followed up with the Government.

Table 1. Area cultivated with opium poppy rich in morphine, opium poppy rich in thebaine and opium poppy rich in codeine, 2011-2016

(Estimated area, as confirmed by the International Narcotics Control Board, area sown and area harvested, in hectares)

	2011	2012	2013	2014	2015 ^a	2016 ^b
Australia						
Opium poppy rich in morphine						
Estimated area	14 050 ^c	15 960 ^c	11 100 ^c	11 008	15 080	11 410
Area sown	11 832 ^c	11 194 ^c	12 407 ^c	8 890	8 008	..
Actual area harvested	10 973 ^c	8 352	11 484 ^c	7 210	7 410	..
Opium poppy rich in thebaine						
Estimated area	13 580	12 390	12 000	17 600	9 700	7 375
Area sown	13 165	12 191	16 139	14 015	9 531	..
Actual area harvested	13 024	11 559	15 399	12 135	9 099	..
Opium poppy rich in codeine						
Estimated area	—	—	—	2 900	5 220	662
Area sown	—	—	—	2 549	4 542	..
Actual area harvested	—	—	—	2 117	4 450	..
Opium poppy rich in morphine, thebaine and codeine						
Total estimated area	27 630	28 350	23 100	31 508	30 000	19 447
Total area sown	24 997	23 385	28 546	25 454	22 081	..
Total actual area harvested	23 997	19 911	26 883	21 462	20 959	..
France						
Opium poppy rich in morphine						
Estimated area	8 978	11 000	11 000 ^c	11 000	8 700	5 895
Area sown	9 370	8 960	10 625 ^c	9 900	8 827	..
Actual area harvested	8 592	8 680	10 209 ^c	9 060	8 450	..
Opium poppy rich in thebaine						
Estimated area	3 922	2 000	2 000	2 000	—	945
Area sown	930	1 210	900	950	—	..
Actual area harvested	110	1 190	741	908	—	..
Opium poppy rich in codeine						
Estimated area	—	—	—	2 050	3 000	3 500
Area sown	—	—	—	2 050	2 994	..
Actual area harvested	—	—	—	1 859	2 827	..
Opium poppy rich in morphine, thebaine and codeine						
Total estimated area	12 900	13 000	13 000	15 050	11 700	12 000
Total area sown	10 300	10 170	11 525	12 900	11 821	..
Total actual area harvested	8 702	9 870	10 950	11 827	11 000	..
Hungary						
Opium poppy rich in morphine						
Estimated area	7 000	9 500	11 800	8 500	11 000	7 300
Area sown	7 972	10 005	7 008	6 534	6 210	..
Actual area harvested	6 025	3 929	2 600	5 560	5 120	..
Opium poppy rich in thebaine						
Estimated area	3 720	3 000	5 100	—	2 500	2 500
Area sown	2 399	3 351	3 252	—	790	..
Actual area harvested	1 532	911	1 300	—	460	..

Table 1. (continued)

	2011	2012	2013	2014	2015 ^a	2016 ^b
Opium poppy rich in morphine and thebaine						
Total estimated area	10 720	12 500	16 900	8 500	13 500	9 800
Total area sown	10 371	13 356	10 260	6 534	7 000	..
Total actual area harvested	7 557	4 840	3 900	5 560	5 580	..
India						
Opium poppy rich in morphine						
Total estimated area	22 000	21 220	5 240	5 893	16 000	6 900
Total area sown	17 262	16 021	5 859	5 794 ^d	5 938	..
Total actual area harvested	16 518	12 092	5 619	5 329 ^d	5 423	..
Spain						
Opium poppy rich in morphine						
Estimated area	8 500	10 000	10 100	9 742	9 790 ^e	10 020
Area sown	9 771	8 762	8 700	8 521	..	..
Actual area harvested	9 488	8 762	8 700	8 521	..	..
Opium poppy rich in thebaine						
Estimated area	5 500	2 000	3 800	4 306	4 551	5 980
Area sown	186	3 572	3 574	5 201	..	..
Actual area harvested	186	3 572	3 574	5 201	..	..
Opium poppy rich in morphine and thebaine						
Total estimated area	14 000	12 000	13 900	14 048	14 341	16 000
Total area sown	9 957	12 334	12 274	13 722	..	..
Total actual area harvested	9 674	12 334	12 274	13 722	..	..
Turkey						
Opium poppy rich in morphine						
Total estimated area ^f	70 000	70 000	70 000	70 000	70 000	70 000
Total area sown	61 368	37 252	36 576	39 976	66 912	..
Total actual area harvested	54 911	13 511	32 277	26 621	61 591	..

Note: A field shaded in red signifies that the corresponding total estimated area for opium poppy rich in morphine, thebaine and codeine has been exceeded. Two dots (..) indicate that data are not available. Figures not based on official reports (form B and form C) are in italics.

^aFigures for area sown and actual area harvested in 2015 are based on advance data submitted by Governments to the International Narcotics Control Board.

^bFigures for 2016 are based on estimates submitted by Governments to the Board.

^cFigures for the area cultivated with morphine-rich opium poppy in Australia and France include cultivation of an opium poppy variety rich in codeine. For 2014, 2015 and 2016, given the increase in the cultivation of opium poppy rich in codeine, those data are presented separately.

^dThe total area sown and actual area harvested are based on advance official information provided by India to INCB in February 2015. Those data are being followed up with the Government.

^eEstimate referring to the data submitted in form B for 2015. Those data are being followed up with the Government.

^fEstimate referring to the maximum area available for cultivation.

almost the same level in 2014, with an actual harvested area of 5,329 hectares. The total area of opium poppy rich in morphine sown in major producing countries was 69 per cent of the total estimated area.

8. In 2014, the cultivation of opium poppy rich in thebaine, in terms of area actually harvested, increased in France (by 23 per cent) and Spain (by 46 per cent), and decreased in Australia (by 21 per cent). Hungary did not cultivate any opium poppy rich in thebaine in 2014. The total area sown in major producing countries was 84 per cent of the total estimated area.

9. The actual area harvested for opium poppy rich in codeine in 2014 was 2,117 hectares for Australia and 1,859 hectares for France. The total area of opium poppy rich in codeine sown in those countries was 93 per cent of the total estimated area. Both countries are expected to increase their cultivation further in 2015.

10. The advance data for 2015 show a 12 per cent increase in the total estimated area of opium poppy rich in morphine harvested in major producing countries. This can be attributed to the expected increase in the area harvested in Turkey (an increase of 131 per cent) in 2015. In 2015, the

cultivation of opium poppy rich in thebaine, measured in terms of area harvested, is expected to decrease in Australia by 25 per cent and increase in Spain by 46 per cent. France is not expected to cultivate opium poppy rich in thebaine in 2015. However, Hungary is expected to resume cultivation of that variety of opium poppy in 2015, after a break in 2014. Both Australia and France, being the only countries among the major producers that are cultivating opium poppy rich in codeine, are expected to increase their cultivation in 2015.

11. For 2016, estimates for cultivation of opium poppy rich in morphine will increase relative to 2015 only in Spain, and decrease in most of the major producing countries. Cultivation of opium poppy rich in morphine is expected to stay at the same level in Turkey. With regard to the cultivation of opium poppy rich in thebaine, Australia decreased its estimate, whereas France and Spain increased the area to be used for the cultivation of that variety of opium poppy. The estimated area for Hungary for 2016 is the same as in 2015. Australia forecast a dramatic decrease in the cultivation of opium poppy rich in codeine for 2016, from 5,220 hectares in 2015 to 662 hectares in 2016, while France is projecting an increase.

12. The Board noted the increased cultivation of opium poppy rich in noscapine in some producing countries and decided to request all countries to report appropriately on the quantity of opiates under international control that were obtained from the cultivation of that or any other variety of opium poppy.

Production of opiate raw materials

13. Tables 2 and 3 provide an overview of global production of and demand for morphine-rich and thebaine-rich opiate raw materials, respectively, for the period 2011-2016.

14. The total production of morphine-rich opiate raw materials in the main producing countries increased to 534 tons⁵ in morphine equivalent in 2014 (see table 2). Australia continued to be the largest producer in 2014, with 176 tons, followed by France, Spain and Turkey, in descending order. Australia accounted for 33 per cent of global production in terms of morphine equivalent.

15. Global production of opiate raw materials rich in morphine is expected to be about 626 tons in morphine equivalent in 2015. Of that quantity, poppy straw will account for 596 tons (95 per cent) and opium will account

⁵The analysis is based predominantly on raw materials obtained from opium poppy rich in morphine but includes the morphine alkaloid contained in opium poppy rich in thebaine and in opium poppy rich in codeine whenever appropriate.

for 30 tons (5 per cent). The main producers in 2015 will be France (33 per cent of total production), followed by Turkey (18 per cent), Australia (18 per cent) and Spain (11 per cent). This will be the first time in recent years that Australia is not the major producer. France, Turkey, Australia and Spain together are expected to account for about 80 per cent of global production of opiate raw materials rich in morphine in 2015.

16. Based on the information submitted by the Governments of the main producing countries in form B for 2016, it is estimated that global production of opiate raw materials rich in morphine will increase to 739 tons in morphine equivalent in 2016, mainly as a result of the increase in the estimates of Australia, which is expected to return to being the main producer, and of Spain.

17. In 2014, the global production of opiate raw materials rich in thebaine was 363 tons⁶ in thebaine equivalent (see table 3). In 2014, Australia accounted for 74 per cent of the global total, Spain for 21 per cent, France for 3 per cent, and India and Hungary for 1 per cent each. Compared with the previous year, Spain more than doubled its production, to 77 tons in 2014. While production decreased in Australia (from 312 to 268 tons) and Hungary (from 4 to 2 tons) in 2014, it increased slightly in France (from 9 to 12 tons). In India, the amount of thebaine obtained directly from opium decreased slightly from 4 tons in 2013 to 3 tons in 2014.

18. Global production of opiate raw materials rich in thebaine is expected to increase to about 376 tons in thebaine equivalent in 2015 because of the limited increase in France and Hungary. Australia, France and Spain are expected to account for about 95 per cent of the global production of opiate raw materials rich in thebaine in 2015.

19. Production of thebaine-rich raw materials in 2016 is expected to decrease to 309 tons. This will result mainly from the expected decrease in the production of Australia (by approximately 35 per cent). As in previous years, the actual production of opiate raw materials in 2015 and 2016 may differ considerably from the estimates, depending on weather and other conditions.

Global stocks of opiate raw materials and of opiates derived from them

20. As shown in table 2, stocks of opiate raw materials rich in morphine (poppy straw, concentrate of poppy straw and opium) amounted to about 495 tons in morphine

⁶The analysis is based predominantly on raw materials obtained from opium poppy rich in thebaine but includes the thebaine alkaloid contained in opium poppy rich in morphine whenever appropriate.

equivalent at the end of 2014. Those stocks were considered sufficient to cover 13 months of expected global demand by manufacturers at the 2015 level of demand. In 2014, Spain was the country with the largest stocks of opiate raw materials (113 tons in morphine equivalent, mainly in the form of poppy straw and concentrate of poppy straw), followed by France (111 tons), Turkey (61 tons), India (60 tons, all in the form of opium), Australia (55 tons) and the United States (38 tons). Those six countries together accounted for 89 per cent of global stocks of opiate raw

materials rich in morphine. The remaining stocks were held in other producing countries and in countries importing opiate raw materials.

21. Stocks of opiate raw materials rich in thebaine (poppy straw, concentrate of poppy straw and opium) increased to about 287 tons in thebaine equivalent by the end of 2014. Those stocks are sufficient to cover the expected global demand by manufacturers in 2015 for about 14 months (see table 3). Australia and the United States accounted for

Table 2. Opiate raw materials rich in morphine: production, demand, balance between the two^a and stocks, in tons of morphine equivalent, 2011-2016

	2011	2012	2013	2014	2015 ^b	2016 ^c
Australia						
Production	113	174	190	176	112	209
France						
Production	71	92	101	119	204	163
Hungary						
Production	13	9	7	15	36	22
India						
Production	87	83	44	31	30	34
Spain						
Production	73	83	83	87	70	177
Turkey						
Production	164	14	67	43	113	96
Other countries						
Production	20	22	24	63	61	38
(1) Total production	541	477	516	534	626	739
Demand for						
Opium	59	59	57	49	40 ^d	35 ^d
Poppy straw and concentrate of poppy straw	354	397	395	422	420 ^d	445 ^d
(2) Total demand for opiate raw materials	413	456	452	471	460^d	480^d
(3) Total demand for opiates for medical and scientific purposes^e	391	415	373	416	410^d	420^d
Balance, (1) minus (2)	128	21	64	63	166^d	259^d
Balance, (1) minus (3)	150	62	143	118	216^d	319^d
Stocks of						
Opium	113	132	97	77	..	..
Poppy straw	285	241	321	277	..	..
Concentrate of poppy straw	95	110	128	141	..	..
Total stocks of opiate raw materials	493	483	546	495	661	920
Total stocks of all opiates	369	428	509	574	..	..

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

^aFor more information about the balance between supply (stocks and production) of and demand for opiate raw materials rich in morphine, see para. 29.

^bFigures for 2015 are based on advance data submitted by Governments to the Board.

^cFigures for 2016 are based on estimates submitted by Governments to the Board.

^dEstimated by the secretariat of the Board.

^eExcluding demand for substances not covered by the 1961 Convention as amended by the 1972 Protocol.

Table 3. Opiate raw materials rich in thebaine: production, demand, balance between the two^a and stocks, in tons of thebaine equivalent, 2011-2016

	2011	2012	2013	2014	2015 ^b	2016 ^c
Australia						
Production	230	231	312	268	268	174
France^d						
Production	10	14	9	12	20	21
Hungary						
Production	3	3	4	2	11	17
Spain^d						
Production	22	31	34	77	73	93
India						
Thebaine extracted from opium	9	8	4	3	3	3
Other countries						
Thebaine extracted from poppy straw (M)	1	1	1	1	1	1
(1) Total production	275	288	364	363	376	309
Demand for						
Opium	6	6	6	5	6 ^e	6 ^e
Poppy straw and concentrate of poppy straw	220	255	229	197	234 ^e	254 ^e
(2) Total demand for opiate raw materials	226	261	235	202	240^e	260^e
(3) Total demand for opiates for medical and scientific purposes^f	107	124	108	151	160^e	180^e
Balance, (1) minus (2)	49	27	129	161	136	49
Balance, (1) minus (3)	168	164	256	212	216	129
Stocks						
Opium	11	13	10	8	..	..
Poppy straw	85	81	160	127	..	..
Concentrate of poppy straw	83	89	95	152	..	..
Total stocks of opiate raw materials	179	183	265	287	423	472
Total stocks of all opiates	196	225	233	225	..	..

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

^aFor more information about the balance between supply (stocks and production) of and demand for opiate raw materials rich in thebaine, see para. 30.

^bFigures for 2015 are based on advance data submitted by Governments to the Board.

^cFigures for 2016 are based on estimates submitted by Governments to the Board.

^dIn France and Spain, large quantities of thebaine alkaloid are extracted from poppy straw rich in morphine in addition to those derived from poppy straw rich in thebaine.

^eEstimated by the secretariat of the Board.

^fExcluding demand for substances not covered by the 1961 Convention as amended by the 1972 Protocol.

about 80 per cent of the world total in 2014, while countries with lower production levels and countries importing those raw materials held the remaining stocks.

22. Global stocks of opiates based on morphine-rich raw materials, mainly in the form of codeine and morphine, held at the end of 2014 (574 tons in morphine equivalent) were sufficient to cover global demand for those opiates for about 17 months. On the basis of data reported by Governments, total stocks of both opiates

and opiate raw materials are fully sufficient to cover demand for medical and scientific purposes for morphine-based opiates.

23. Global stocks of opiates based on thebaine-rich raw material (oxycodone, thebaine and a small quantity of oxymorphone) decreased to 225 tons in thebaine equivalent at the end of 2014 and were sufficient to cover global demand for medical and scientific purposes for thebaine-based opiates for about 17 months.

Demand for opiates

24. As described below, INCB measures demand for opiates in two ways: (a) in terms of the utilization of opiate raw materials, in order to reflect the demand by manufacturers; and (b) in terms of global consumption of all opiates controlled under the 1961 Convention for medical and scientific purposes.⁷

Demand for opiate raw materials by manufacturers measured as utilization of raw materials

25. In 2014, global demand for opiate raw materials rich in morphine increased to 471 tons in morphine equivalent but is expected to decrease slightly in 2015 because of the decrease in demand for opium. It is expected to increase again in 2016 from about 460 tons in 2015 to about 480 tons in 2016.

26. Global demand by manufacturers for opiate raw materials rich in thebaine has been decreasing since 2012, probably as a result of restrictions on prescription drugs introduced in the United States, the main market. In 2014, total demand decreased to 202 tons of thebaine equivalent, from 235 tons in 2013. Global demand for raw materials rich in thebaine is expected to rise to about 240 tons of thebaine equivalent in 2015 and reach 260 tons in 2016.

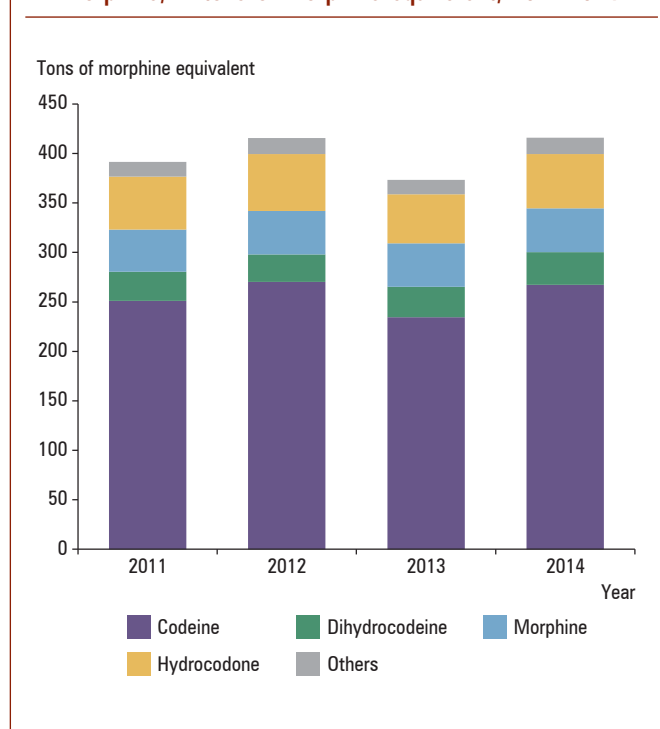
Demand for opiates measured as consumption

27. Figure I presents a breakdown of the demand in terms of consumption of morphine-based opiates, expressed in morphine equivalent, for the main narcotic drugs. Codeine and hydrocodone are the most-consumed opiates manufactured from morphine. Global demand for morphine-based opiates has increased, with fluctuations since 2011, reaching 416 tons in morphine equivalent in 2014.

28. Demand for thebaine-based opiates is concentrated mainly in the United States and has increased sharply since the late 1990s. Similar to the case of morphine-based

⁷Prior to 2003, INCB measured the global demand only by global consumption of major opiates controlled under the 1961 Convention, expressed in morphine equivalent. However, by using that approximation the following were excluded: (a) demand for less commonly used narcotic drugs; (b) demand for substances that are not controlled under the 1961 Convention but are manufactured from opiate raw materials and for the consumption of which data are not available to INCB; and (c) fluctuations in the utilization of raw materials due to developments in the market anticipated by the manufacturers, such as expectations of sales of opiates, expected changes in prices of raw materials or opiates and so on.

Figure I. Consumption of opiates manufactured from morphine, in tons of morphine equivalent, 2011-2014



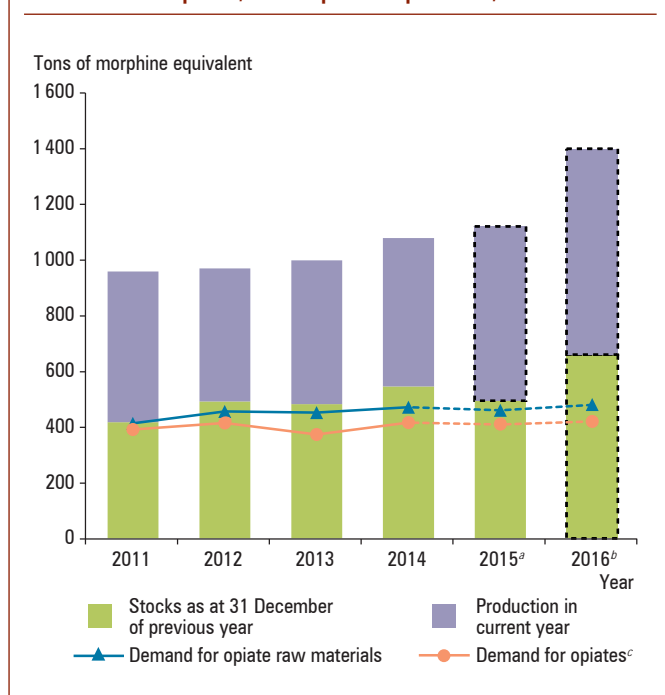
opiates, the global demand for thebaine-based opiates increased in 2014, to 151 tons. It is likely to rise in future years, partly because the consumption of such opiates is expected to increase in countries other than the United States. Global demand is anticipated to reach approximately 160 tons of thebaine equivalent in 2015 and 180 tons in 2016.

Balance between the supply of and demand for opiate raw materials

29. The global production of opiate raw materials rich in morphine has exceeded the global demand for those raw materials since 2009. As a result, stocks have been increasing, albeit with fluctuations. In 2014, stocks decreased to 495 tons in morphine equivalent and were sufficient to cover the expected global demand for about 13 months (see figure II).⁸ In 2015, global production of opiate raw materials rich in morphine is expected to exceed global demand again, with the result that global stocks of those raw materials will further increase in 2016. Stocks are expected to reach 661 tons by the end of 2015, which is equivalent to about 17 months of expected global demand at the 2016 level of demand (although not all data are available for a complete forecast). For 2016, producing countries have indicated that they plan to increase production. Stocks

⁸Because of a change in format, figures II and III are not directly comparable with the figures that appeared as figures II and III in editions of this technical publication before 2008.

Figure II. Supply of and demand for opiate raw materials rich in morphine, in morphine equivalent, 2011-2016



^aData for production and demand for 2015 are based on advance data (dotted line) submitted by Governments.

^bData for 2016 are based on estimates (dotted line) submitted by Governments.

^cExcluding substances not covered by the 1961 Convention as amended by the 1972 Protocol.

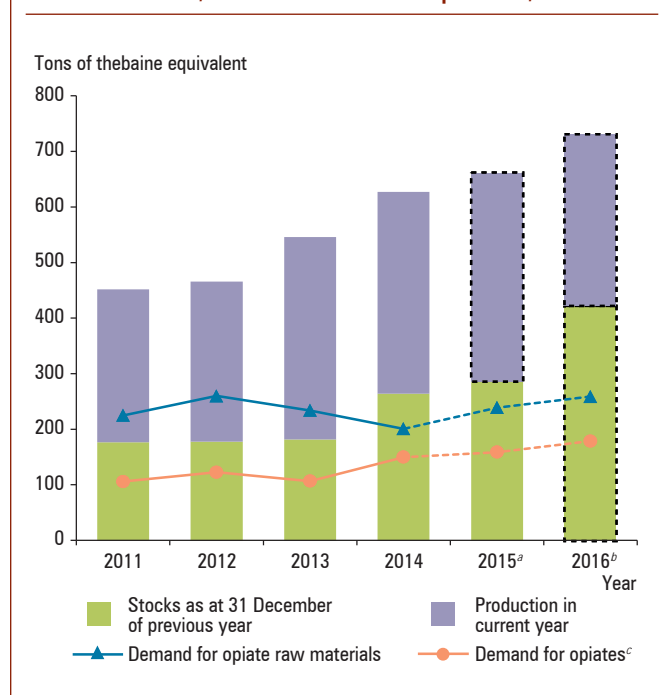
are anticipated to reach about 920 tons at the end of 2016, sufficient to cover several months more than one year of expected global demand. The global supply of opiate raw materials rich in morphine (stocks and production) will remain fully sufficient to cover global demand.

30. In 2014, global production of opiate raw materials rich in thebaine was again higher than demand, leading to an increase in stocks (287 tons) at the end of 2014, equivalent to global demand for 14 months (see figure III). Production is expected to increase in 2015 and then to decrease in 2016. By the end of 2015, global stocks of opiate raw materials rich in thebaine will likely reach 423 tons, sufficient to cover global demand for about 20 months, and at the end of 2016 may reach 472 tons, sufficient to cover global demand for several months more than one year. The global supply of opiate raw materials rich in thebaine (stocks and production) will be more than sufficient to cover global demand in 2015 and 2016.

Trends in consumption levels of opioids

31. Figure IV presents the global consumption levels of opiates and synthetic opioids over the 20-year period from 1995 to 2014. The figure reflects data including buprenorphine and pentazocine, which are opioids controlled under

Figure III. Supply of and demand for opiate raw materials rich in thebaine, in tons of thebaine equivalent, 2011-2016



^aData for production and demand for 2015 are based on advance data (dotted line) submitted by Governments.

^bData for 2016 are based on estimates (dotted line) submitted by Governments.

^cExcluding substances not covered by the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol.

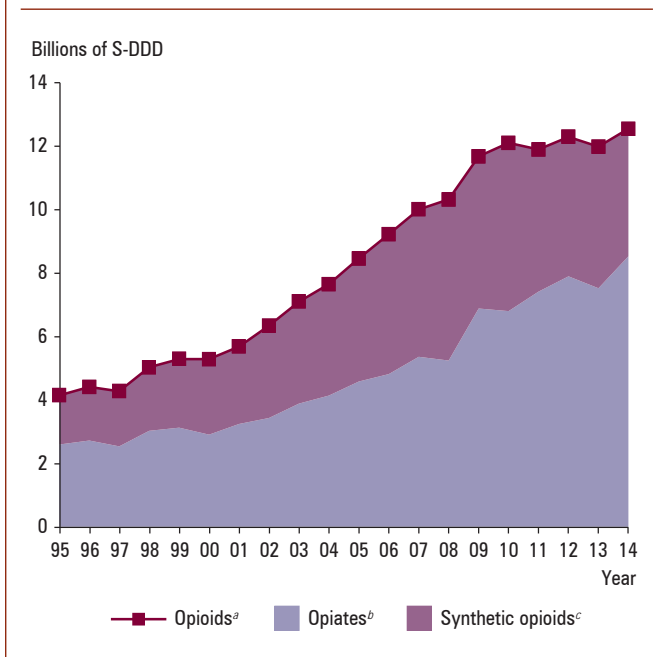
the Convention on Psychotropic Substances of 1971.⁹ To allow the aggregation of consumption data for substances having different potencies, the consumption levels are expressed in billions of defined daily doses for statistical purposes.¹⁰

32. Over the past 20 years, the global consumption of opioids has more than tripled. The share of consumption of opiates in the total consumption of opioids fluctuated from 63 per cent in 1995 to 52 per cent in 2006 and rose again to 68 per cent in 2014. As a result, the share of synthetic opioids, which are used for the same indications as opiates, increased from 37 per cent in 1995 to 49 per cent in 2008 but declined to 32 per cent in 2014. Between 2011 and 2014, the ratio between the consumption of opiates and synthetic opioids stabilized at about 64 per cent on average for opiates and 36 per cent for synthetic opioids. The overall trend indicates that the demand for opiates is expected to increase in the future, but it is not clear if their share in the total consumption of opioids will increase or decline in relation to the consumption of synthetic opioids.

⁹United Nations, *Treaty Series*, vol. 1019, No. 14956.

¹⁰See the explanatory notes to tables XIV.1.a-i, XIV.2 and XIV.3 for an explanation of defined daily doses for statistical purposes and for the method used to calculate those consumption levels; see also table XIV.3 for further details on developments in consumption levels.

Figure IV. Global consumption of opioids,^a expressed in billions of defined daily doses for statistical purposes (S-DDD), 1995-2014



^aOpioids: opiates and synthetic opioids.

^bIncluding buprenorphine, an opiate controlled under the Convention on Psychotropic Substances of 1971.

^cIncluding pentazocine, a synthetic opioid controlled under the Convention on Psychotropic Substances of 1971.

33. Throughout the period, the supply of opiate raw materials from which opiates were obtained was considered sufficient to satisfy the current level of demand as estimated by Governments. In addition, both production and stocks continue to increase. Some of those estimates are considered to be inadequate for a number of countries, and data collected and analysed by INCB show that the consumption of drugs for pain relief and other medical purposes is still low in most countries. About 5.5 billion people still have limited or no access to medicines containing narcotic drugs, such as codeine or morphine, leaving 75 per cent of the world population without access to proper pain relief treatment. About 92 per cent of morphine used worldwide is consumed in countries in which only 17 per cent of the world population lives: primarily the United States, Canada, Western Europe, Australia and New Zealand.

34. The imbalance in the availability of opioid analgesics is particularly worrying, as the latest data show that many of the conditions that require pain management, particularly cancer, are prevalent and increasing in countries where those medications are not readily available.

35. The overall goal of the international drug control conventions is a well-functioning national and international system for managing the availability of narcotic drugs that provide relief from pain and suffering by ensuring the safe delivery of the best affordable drugs to those patients who need them and, at the same time, preventing the diversion of drugs for the purpose of abuse.