

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

1. The International Narcotics Control Board (INCB), in fulfilment of the functions assigned to it under the Single Convention on Narcotic Drugs of 1961¹ 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

Introduction

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 such materials are, in accordance with the methodology adopted by INCB, considered separately from raw materials rich in thebaine and the opiates derived from them. 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 paragraph 19 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 shown above 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 for more in-depth information on long-term developments concerning the individual substances (see pages 71-93 above). The main focus of the analysis is on the present situation, including the last four years for which statistical data are available. For the years 2010 and 2011, 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 and taking into account relevant estimates furnished by Governments.

¹United Nations, *Treaty Series*, vol. 520, No. 7515.

²The analysis excludes data on China and the Democratic 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 in the Islamic Republic of Iran and 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.

4. Finally, in this section INCB examines the trends in global consumption of all opiates and synthetic opioids over the 20-year period from 1990 to 2009. The findings derived from the analysis complement the comments on reported statistics on individual substances and reflect the changes over time in 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 below 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 and those rich in thebaine are listed separately, where applicable. For both types of raw materials, the estimated area of cultivation is given for each year. Data on the area sown and the actual area harvested are given for the years for which such data are available.

6. In 2009, the area sown with opium poppy rich in morphine increased over the previous year in all major producing countries except Spain. The actual area harvested increased in all major producing countries except Hungary; the increase was most significant in France (increase of 82 per cent), India (234 per cent) and Turkey (144 per cent). India is the only opium-producing country included in the present analysis. In Hungary, the actual area harvested declined by 16 per cent. In 2009, cultivation of opium poppy rich in thebaine increased in all three producing countries. The figures for area sown were close to those for the estimated area. The actual area harvested almost doubled in Spain and increased by 23 per cent in Australia and by 18 per cent in France.

7. The advance data for 2010 show a rise in the cultivation of opium poppy rich in morphine, with the actual area harvested increasing in all main producer countries except Spain. The area harvested more than doubled in Australia and increased by almost 160 per cent in Hungary and by about 40 per cent in France and India. Cultivation of opium poppy rich in thebaine rose in Australia, while in France the actual area harvested dropped to less than one fourth of the level of the previous year, and it also declined in Spain.

Table 1. Area cultivated with opium poppy rich in morphine and opium poppy rich in thebaine, 2006-2011

(Estimated area, area sown and area harvested, in hectares)

| | 2006 | 2007 | 2008 | 2009 | 2010 ^a | 2011 ^b |
|--|---------------|---------------|---------------|---------------|-------------------|-------------------|
| Australia | | | | | | |
| Opium poppy rich in morphine^c | | | | | | |
| Estimated area | 4 900 | 4 982 | 5 250 | 10 506 | 12 770 | 14 050 |
| Area sown | 4 084 | 5 033 | 4 885 | 5 447 | 10 463 | .. |
| Actual area harvested | 3 457 | 4 661 | 4 108 | 4 299 | 9 127 | .. |
| Opium poppy rich in thebaine | | | | | | |
| Estimated area | 5 300 | 3 872 | 9 700 | 11 857 | 11 650 | 13 580 |
| Area sown | 5 566 | 4 168 | 8 024 | 10 439 | 11 441 | .. |
| Actual area harvested | 4 839 | 3 837 | 7 807 | 9 594 | 10 922 | .. |
| Opium poppy rich in morphine^c and thebaine | | | | | | |
| Total estimated area | 10 200 | 8 854 | 14 950 | 22 363 | 24 420 | 27 630 |
| Total area sown | 9 650 | 9 201 | 12 909 | 15 886 | 21 904 | .. |
| Total actual area harvested | 8 296 | 8 498 | 11 915 | 13 893 | 20 049 | .. |
| France | | | | | | |
| Opium poppy rich in morphine | | | | | | |
| Estimated area | 9 100 | 5 150 | 3 650 | 7 500 | 8 000 | 8 978 |
| Area sown | 6 664 | 3 211 | 3 744 | 6 837 | 9 800 | .. |
| Actual area harvested | 6 632 | 3 198 | 3 683 | 6 718 | 9 400 | .. |
| Opium poppy rich in thebaine | | | | | | |
| Estimated area | 1 000 | 1 000 | 2 650 | 2 500 | 5 000 | 3 922 |
| Area sown | 1 464 | 2 874 | 2 551 | 3 002 | 700 | .. |
| Actual area harvested | 1 444 | 2 707 | 2 534 | 2 993 | 700 | .. |
| Opium poppy rich in morphine and thebaine | | | | | | |
| Total estimated area | 10 100 | 6 150 | 6 300 | 10 000 | 13 000 | 12 900 |
| Total area sown | 8 128 | 6 085 | 6 295 | 9 839 | 10 500 | .. |
| Total actual area harvested | 8 076 | 5 905 | 6 217 | 9 711 | 10 100 | .. |
| Hungary^d | | | | | | |
| Opium poppy rich in morphine | | | | | | |
| Estimated area | 12 000 | 13 000 | 12 500 | 15 500 | 8 000 | 7 000 |
| Area sown | 5 672 | 6 724 | 3 983 | 8 204 | 6 498 | .. |
| Actual area harvested | 4 322 | 3 269 | 2 262 | 1 910 | 4 950 | .. |
| Opium poppy rich in thebaine | | | | | | |
| Estimated area | — | — | — | — | 3 000 | 3 720 |
| Area sown | — | — | — | — | — | .. |
| Actual area harvested | — | — | — | — | — | .. |
| Opium poppy rich in morphine and thebaine | | | | | | |
| Total estimated area | 12 000 | 13 000 | 12 500 | 15 500 | 11 000 | 10 720 |
| Total area sown | 5 672 | 6 724 | 3 983 | 8 204 | 6 498 | .. |
| Total actual area harvested | 4 322 | 3 269 | 2 262 | 1 910 | 4 950 | .. |
| India | | | | | | |
| Opium poppy rich in morphine | | | | | | |
| Total estimated area | 7 300 | 6 220 | 4 680 | 11 262 | 22 000 | 22 000 |
| Total area sown | 7 089 | 6 158 | 4 680 | 11 020 | .. | .. |
| Total actual area harvested | 6 976 | 5 913 | 2 653 | 8 853 | 12 237 | .. |

Table 1. (continued)

| | 2006 | 2007 | 2008 | 2009 | 2010 ^a | 2011 ^b |
|--|---------------|---------------|---------------|---------------|---------------------------|---------------------------|
| Spain | | | | | | |
| Opium poppy rich in morphine | | | | | | |
| Estimated area | 6 002 | 7 600 | 6 000 | 6 590 | 7 000 | 8 500 |
| Area sown | 2 300 | 5 865 | 8 000 | 7 000 | 8 383 | .. |
| Actual area harvested | 2 146 | 5 606 | 5 507 | 6 875 | 6 315 | .. |
| Opium poppy rich in thebaine | | | | | | |
| Estimated area | 1 000 | — | 2 500 | 4 410 | 5 000 | 5 500 |
| Area sown | — | 1 482 | 2 000 | 5 000 | 3 529 | .. |
| Actual area harvested | — | 1 482 | 2 537 | 4 925 | 3 498 | .. |
| Opium poppy rich in morphine and thebaine | | | | | | |
| Total estimated area | 7 002 | 7 600 | 8 500 | 11 000 | 12 000 | 14 000 |
| Total area sown | 2 300 | 7 347 | 10 000 | 12 000 | 11 912 | .. |
| Total actual area harvested | 2 146 | 7 088 | 8 044 | 11 800 | 9 813 | .. |
| Turkey | | | | | | |
| Opium poppy rich in morphine | | | | | | |
| Total estimated area | 70 000 | 70 000 | 70 000 | 70 000 | 70 000^e | 70 000^e |
| Total area sown | 60 000 | 38 850 | 35 104 | 60 328 | 55 296 | .. |
| Total actual area harvested | 42 023 | 24 603 | 20 042 | 48 893 | 51 897 | .. |

Note: A red field signifies that the corresponding estimate has been exceeded. Two dots (..) indicate that data are not available. Figures that are not based on official reports (Form B and Form C) are in italics. Areas of land smaller than 20 hectares are not included in the table.

^aFigures for area sown and actual area harvested in 2010 are based on advance data submitted by Governments to the International Narcotics Control Board.

^bFigures for 2011 are based on estimates submitted by Governments to the International Narcotics Control Board.

^cFigures for the area cultivated with morphine-rich opium poppy in Australia include cultivation of an opium poppy variety rich in codeine in 2010 (estimated area: 800 hectares; sown: 613 hectares; actually harvested: 580 hectares) and 2011 (estimated area: 360 hectares).

^dHungary also cultivates opium poppy rich in narcotine in 2010 (area sown: 4,989 hectares; actual area harvested: 2,600 hectares) and 2011 (estimated area: 3,000 hectares).

^eEstimate referring to the maximum area available for cultivation.

8. For 2011, cultivation of opium poppy rich in morphine in most producer countries is anticipated to increase (Australia, France and Spain) or remain unchanged (India and Turkey). With regard to the cultivation of opium poppy rich in thebaine, Australia and Spain estimate an increase in 2011, while France estimates a decline in cultivation. Hungary estimates an area of 3,720 hectares of cultivation of opium poppy rich in thebaine in 2011; that would be the first time that such a significant level of thebaine-rich opium poppy was cultivated in that country.

Production of opiate raw materials

9. Tables 2 and 3 below provide an overview of global production of and demand for morphine-rich and thebaine-rich opiate raw materials for the period 2006-2011. The total production of morphine-rich opiate raw materials in the main producing countries increased to 428 tons⁴ in morphine equivalent in 2009, reversing the trend of declining production that had prevailed since 2004. This increase was due to the expansion of

cultivation in the main producing countries (see paragraph 6 above). Turkey became the leading producer in 2009, accounting for 31 per cent of global production. It was followed by France (20 per cent), Spain (16 per cent), Australia (14 per cent), India (11 per cent) and Hungary (1 per cent).

10. Global production of opiate raw materials rich in morphine is expected to be about 503 tons in morphine equivalent in 2010 (see table 2). Of this quantity, 440 tons (87 per cent) will be accounted for by poppy straw and 63 tons (13 per cent) by opium. Turkey (25 per cent of total production), Australia (24 per cent), France (18 per cent), India (13 per cent) and Spain (11 per cent) will be the main producers in 2010. These five countries are expected to account together for about 91 per cent of global production of opiate raw materials rich in morphine in 2010.

11. According to the information submitted by the Governments of the main producing countries, global production of opiate raw materials rich in morphine is estimated to increase further to 695 tons in morphine equivalent in 2011, mainly as a result of the expanded production planned in Australia, France and India.

⁴The 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 whenever appropriate.

Table 2. Opiate raw materials rich in morphine: production, demand, balance between the two^a and stocks, in tons of morphine equivalent, 2006-2011

| | 2006 | 2007 | 2008 | 2009 | 2010 ^b | 2011 ^c |
|---|------------|-------------|-------------|------------|-------------------|-------------------|
| Australia | | | | | | |
| Production | 70 | 58 | 35 | 60 | 122 | 254 |
| France | | | | | | |
| Production | 56 | 20 | 36 | 84 | 92 | 120 |
| Hungary | | | | | | |
| Production | 17 | 14 | 10 | 5 | 13 | 20 |
| India | | | | | | |
| Production | 38 | 30 | 15 | 45 | 63 | 115 |
| Spain | | | | | | |
| Production | 17 | 75 | 68 | 70 | 57 | 80 |
| Turkey | | | | | | |
| Production | 106 | 30 | 48 | 134 | 126 | 76 |
| Other countries | | | | | | |
| Production | 12 | 25 | 21 | 30 | 30 ^d | 30 ^d |
| (1) Total production | 316 | 252 | 233 | 428 | 503 | 695 |
| Demand | | | | | | |
| Opium | 68 | 70 | 61 | 54 | 70 | 70 |
| Poppy straw and concentrate of poppy straw | 332 | 334 | 311 | 332 | 350 | 370 |
| (2) Total demand for opiate raw materials | 400 | 404 | 372 | 386 | 420 | 440 |
| (3) Total demand for opiates for medical and scientific purposes^e | 299 | 330 | 322 | 379 | 385 | 390 |
| Balance (1) minus (2) | -84 | -152 | -139 | 42 | 83 | 255 |
| Balance (1) minus (3) | 17 | -78 | -89 | 49 | 118 | 305 |
| Stocks | | | | | | |
| Opium | 178 | 124 | 77 | 74 | .. | .. |
| Poppy straw | 370 | 297 | 233 | 257 | .. | .. |
| Concentrate of poppy straw | 177 | 112 | 69 | 79 | .. | .. |
| Total stocks of opiate raw materials | 725 | 533 | 379 | 410 | 493 | 748 |
| Total stocks of all opiates | 283 | 337 | 360 | 370 | .. | .. |

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

^aFor the balance between supply (stocks and production) of and demand for opiate raw materials rich in morphine, see paragraph 24 below.

^bFigures for 2010 are based on advance data submitted by Governments to the International Narcotics Control Board.

^cFigures for 2011 are based on estimates submitted by Governments to the International Narcotics Control Board.

^dEstimated by the secretariat of the International Narcotics Control Board.

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

12. Subsequent to the expansion of cultivation in the producing countries, in 2009 the global production of opiate raw materials rich in thebaine increased by more than one third, to 241 tons⁵ in thebaine equivalent (see table 3). Australia accounted for 59 per cent of the global total, Spain for 26 per cent and France for 13 per cent.

13. Global production of opiate raw materials rich in thebaine is expected to amount to about 276 tons in

⁵The 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.

thebaine equivalent in 2010, owing to a significant increase in planned production in Australia. Australia, Spain and France are expected to account together for about 97 per cent of the global production of opiate raw materials rich in thebaine in 2010.

14. Continued expansion in production is also anticipated for thebaine-rich materials in 2011, reaching about 383 tons. As in previous years, the actual production of opiate raw materials in 2011 may differ considerably from the estimates, depending on weather and other conditions.

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

15. As shown in table 2, stocks of opiate raw materials rich in morphine (poppy straw, concentrate of poppy straw and opium) amounted to about 410 tons in morphine equivalent at the end of 2009. These stocks would be sufficient to cover the expected global demand in 2010 for 12 months. In 2009, Turkey continued to be the

country with the largest stocks of opiate raw materials (65 tons in morphine equivalent, in the form of poppy straw and concentrate of poppy straw); it was followed by Spain (57 tons), India (51 tons, in the form of opium, expressed in morphine equivalent) and France and the United Kingdom (50 tons each). Those five countries together accounted for 67 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.

Table 3. Opiate raw materials rich in thebaine: production, demand, balance between the two^a and stocks, in tons of thebaine equivalent, 2006-2011

| | 2006 | 2007 | 2008 | 2009 | 2010 ^b | 2011 ^c |
|---|------------|------------|------------|------------|-------------------|-------------------|
| Australia | | | | | | |
| Production | 58 | 70 | 113 | 142 | 210 | 252 |
| France^d | | | | | | |
| Production | 11 | 13 | 17 | 30 | 11 | 41 |
| Hungary | | | | | | |
| Production | 1 | 1 | 1 | 1 | 2 | 3 |
| Spain^d | | | | | | |
| Production | 2 | 22 | 45 | 63 | 46 | 74 |
| India | | | | | | |
| Thebaine extracted from opium | 4 | 3 | 1 | 4 | 6 | 11 |
| Other countries | | | | | | |
| Thebaine extracted from poppy straw (M) | 1 | 1 | 1 | 1 | 1 ^e | 2 ^e |
| (1) Total production | 77 | 110 | 178 | 241 | 276 | 383 |
| Demand for | | | | | | |
| Opium | 7 | 7 | 6 | 7 | 7 | 7 |
| Poppy straw and concentrate of poppy straw | 119 | 106 | 120 | 172 | 243 | 253 |
| (2) Total demand for opiate raw materials | 126 | 113 | 126 | 178 | 250 | 260 |
| (3) Total demand for opiates for medical and scientific purposes^f | 55 | 67 | 69 | 100 | 120 | 140 |
| Balance (1) minus (2) | -49 | -3 | 52 | 63 | 26 | 123 |
| Balance (1) minus (3) | 22 | 43 | 109 | 140 | 155 | 243 |
| Stocks | | | | | | |
| Opium | 18 | 13 | 8 | 8 | .. | .. |
| Poppy straw | 43 | 38 | 81 | 118 | .. | .. |
| Concentrate of poppy straw | 27 | 44 | 41 | 44 | .. | .. |
| Total stocks of opiate raw materials | 88 | 95 | 130 | 170 | 196 | 319 |
| Total stocks of all opiates | 141 | 126 | 133 | 157 | .. | .. |

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

^aFor the balance between supply (stocks and production) of and demand for opiate raw materials rich in thebaine, see paragraph 25, below.

^bFigures for 2010 are based on advance data submitted by Governments to the International Narcotics Control Board.

^cFigures for 2011 are based on estimates submitted by Governments to the International Narcotics Control 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 International Narcotics Control Board.

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

16. Stocks of opiate raw materials rich in thebaine (poppy straw, concentrate of poppy straw and opium) increased to about 170 tons in thebaine equivalent at the end of 2009 as a result of production in excess of utilization in that year. These stocks are sufficient to cover the expected global demand in 2010 for 8 months (see table 3). Australia, France, Spain and India together accounted for about 77 per cent of the world total in 2009, while the countries importing those raw materials held the remaining stocks.

17. Global stocks of opiates based on morphine, mainly in the form of codeine and morphine, held at the end of 2009 (370 tons) were sufficient to cover global demand for those opiates for almost one year, even in the absence of additional opiates being manufactured from opiate raw materials.

18. Global stocks of opiates based on thebaine (oxycodone, thebaine and a small quantity of oxymorphone) have increased significantly in recent years, although with fluctuations. At the end of 2009, those stocks stood at 157 tons of thebaine equivalent and were sufficient to cover global demand for such opiates for about 16 months.

Demand for opiates

19. 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.⁶

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

20. Global demand for opiate raw materials rich in morphine has increased, with fluctuations, by an average of about 2 per cent per year over the past decade, reaching 386 tons of morphine equivalent in 2009. In 2010 and 2011, global demand is expected to increase again. Global demand for opiate raw materials rich in morphine is anticipated to be about 420 tons in 2010 and 440 tons in 2011.

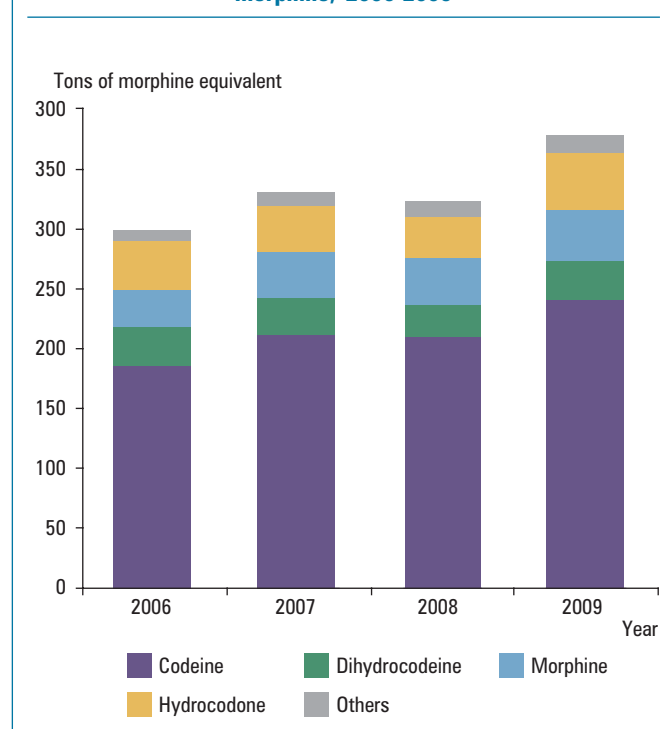
⁶Prior to 2003, INCB measured the global demand only by global consumption of major opiates controlled under the 1961 Convention, expressed in morphine equivalent. However, by using that approximation the following were excluded: (a) demand for less commonly used narcotic drugs; (b) demand for substances that are not under control of 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.

21. Global demand for opiate raw materials rich in thebaine has also been increasing in recent years, albeit with fluctuations. In 2009, total demand increased significantly to 178 tons of thebaine equivalent. Global demand for raw materials rich in thebaine is expected to rise steeply to about 250 tons of thebaine equivalent in 2010 and reach 260 tons in 2011.

Demand for opiates measured as consumption

22. Figure I presents a breakdown of the demand for morphine-based opiates, expressed in morphine equivalent, for the main narcotic drugs. Global demand for morphine-based opiates has continued to increase, with some fluctuations. In 2009, global demand for opiates used for medical and scientific purposes amounted to 379 tons. That demand is expected to increase further, including in countries where consumption of opiates was low in the past. As a result, global demand for opiates based on morphine may reach 385 tons in 2010 and 390 tons in 2011.

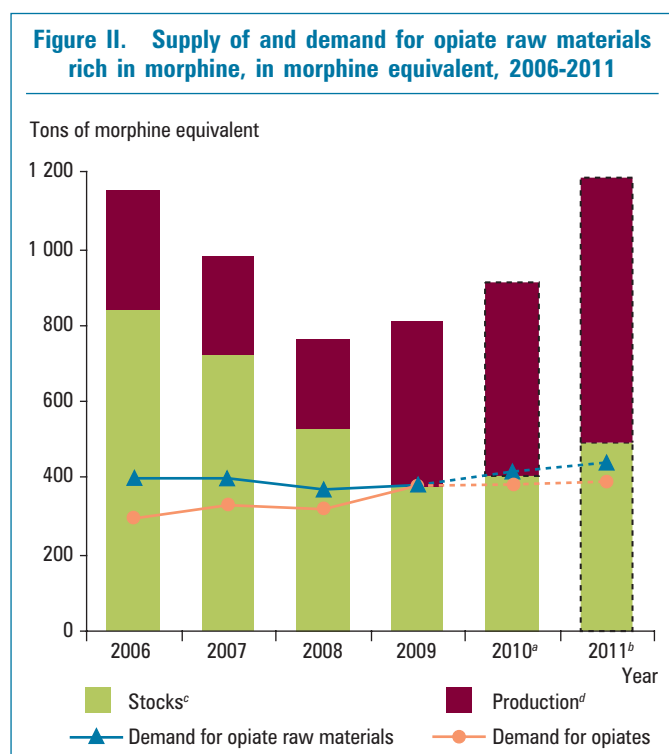
Figure I. Consumption of opiates manufactured from morphine, 2006-2009



23. Demand for thebaine-based opiates, which was concentrated mainly in the United States and which has increased sharply since the late 1990s, increased further, to 100 tons, in 2009 and is likely to continue to rise, partly because the consumption of such opiates is expected to spread to other countries. Global demand is anticipated to reach approximately 120 tons of thebaine equivalent in 2010 and 140 tons in 2011.

Balance between the supply of and demand for opiate raw materials

24. Although global production of opiate raw materials rich in morphine had been lower than global demand for those raw materials in the period 2006-2008, production exceeded demand in 2009. As a result, stocks increased and at the beginning of 2010 stood at about 410 tons, sufficient to cover the expected global demand for 12 months (see figure II).⁷ In 2010, global production of opiate raw materials rich in morphine is expected to again exceed global demand, meaning that global stocks of those raw materials will further increase in 2010. Stocks are expected to reach 493 tons by the beginning of 2011, which is equivalent to the global demand for about 13 months. For 2011, producing countries plan to increase production. Stocks are anticipated to reach about 748 tons at the end of 2011, sufficient to cover global demand for about 20 months. The global supply of opiate raw materials rich in morphine (stocks and production) will remain fully sufficient to cover global demand.



^aData for production and demand for 2010 are based on advance data (dotted line) submitted by Governments.

^bData for 2011 are based on estimates (dotted line) submitted by Governments.

^cStocks as at 1 January of each year.

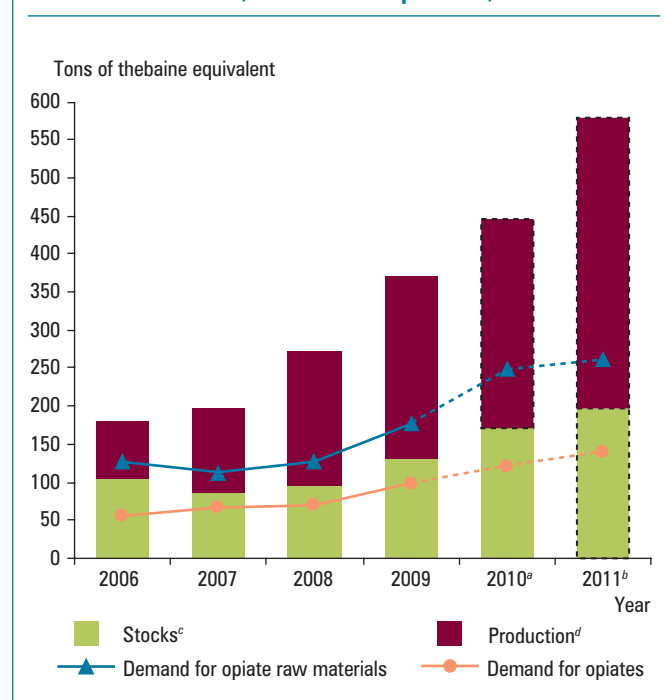
^dExcluding substances not covered by the 1961 Convention as amended by the 1972 Protocol.

25. In 2009, global production of opiate raw materials rich in thebaine was again higher than demand, leading

⁷Because of a change in format, figures II and III are not directly comparable with the figures that appeared as figures II and III in this technical publication before 2008.

to an increase in stocks (to 170 tons) at the beginning of 2010, equivalent to global demand for 8 months (see figure III). Production is expected to continue to grow in 2010 and 2011 and global stocks of opiate raw materials rich in thebaine will likely reach, at the beginning of 2011, a level sufficient to cover global demand for 9 months and, at the end of 2011, a level sufficient to cover about 15 months. The global supply of opiate raw materials rich in thebaine (stocks and production) will be fully sufficient to cover global demand.

Figure III. Supply of and demand for opiate raw materials rich in thebaine, in thebaine equivalent, 2006-2011



^aData for production and demand for 2010 are based on advance data (dotted line) submitted by Governments.

^bData for 2011 are based on estimates (dotted line) submitted by Governments.

^cStocks as at 1 January of each year.

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

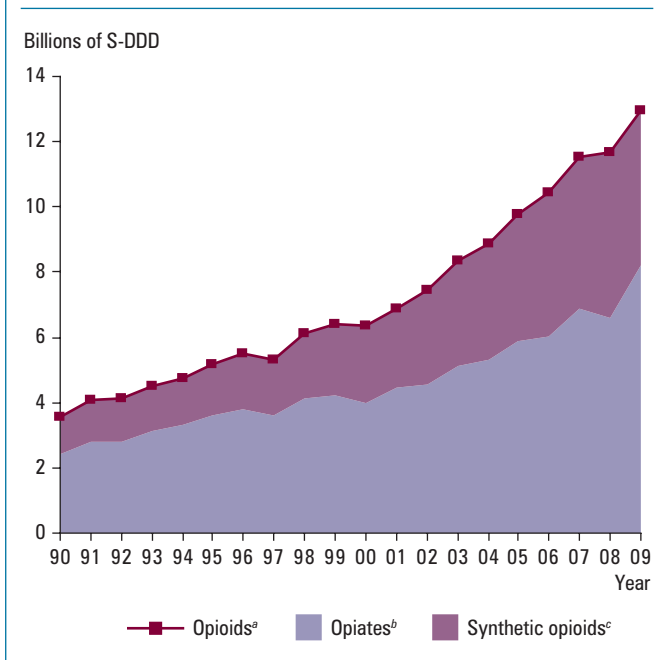
Trends in consumption levels of opioids

26. Figure IV presents the global consumption levels of opiates and synthetic opioids over the 20-year period from 1990 to 2009. The figure reflects data including buprenorphine and pentazocine, which are opioids controlled under the Convention on Psychotropic Substances of 1971.⁸ 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.⁹

⁸United Nations, *Treaty Series*, vol. 1019, No. 14956.

⁹See the explanatory notes to tables XIV.1-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 in billions of defined daily doses for statistical purposes (S-DDD), 1990-2009



^aOpioids: opiates and synthetic opioids.

^bIncluding buprenorphine, an opiate controlled under the 1971 Convention.

^cIncluding pentazocine, a synthetic opioid controlled under the 1971 Convention.

27. The global consumption of opioids increased more than 3.5 times during the period under consideration. The consumption of opiates, expressed in defined daily doses for statistical purposes, increased steadily, more than tripling during the period. Throughout the period, the supply of opiate raw materials from which opiates were obtained was sufficient to cover the increasing demand. The consumption of synthetic opioids, which are used for the same indications as opiates, more than quadrupled. As a result, the share of consumption of opiates in the total consumption of opioids declined from 68 per cent in 1990 to 63 per cent in 2009. The demand for opiates is expected to increase steadily in the future, while its share in the total consumption of opioids will further decline, owing to the expected faster growth in the consumption of synthetic opioids.