

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

1. The International Narcotics Control Board, in compliance with the functions assigned to it under the Single Convention on Narcotic Drugs of 1961 and the relevant resolutions of the Economic and Social Council, examines on a regular basis issues affecting the supply of opiate raw materials and demand for opiates for licit requirements and endeavours to maintain a lasting balance between the two.

Consumption of opiates

2. Having fluctuated around 200 tons in morphine equivalent per annum in the years prior to 1991, global consumption of opiates has been relatively stable over the past five years (1995-1999), maintaining a level of between 238 and 247 tons in morphine equivalent. In 1999, total consumption reached 245.3 tons, the second highest in 20 years, as compared with the record amount of 246.5 tons attained in 1996.

3. Codeine constitutes the bulk of overall opiate consumption. It is mainly consumed in the form of preparations included in Schedule III of the 1961 Convention. In 1999, 189.3 tons of codeine in morphine equivalent were consumed, accounting for 77 per cent of global opiate consumption. The major consumer countries continued to be, in descending order, the United States of America, the United Kingdom of Great Britain and Northern Ireland, France, India, Canada and Germany, which together accounted for 52 per cent of global codeine consumption.

4. Morphine consumption underwent a steady and constant increase during the period 1984-1998, from an average of 2.2 tons per annum before 1984 to 20.5 tons in 1998. In 1999, morphine consumption fell for the first time in 15 years, to 19.5 tons, a decline mainly attributable to the United States. In view of the increasing use of oxycodone as an analgesic for the treatment of moderate and severe pain in that country, which accounted for 90 per cent of global oxycodone consumption, it is likely that global consumption of morphine will remain at the current level of 20 tons in the years to come. Global consumption of dihydrocodeine, having stabilized at about 30 tons in morphine equivalent per annum during the previous five years, remained near that level in 1999, with 29.3 tons in morphine equivalent; such consumption rose gradually from 11.8 tons in morphine equivalent to 26.8 tons over a ten-year period (1983-1993).

5. Global consumption of ethylmorphine has generally followed a downward trend over the last two decades, from an average of 6 tons in morphine equivalent per annum during the 1980s to approximately 2.3 tons in the last three years. Pholcodine consumption began to decline in 1997 to 6.3 tons in morphine equivalent, after having remained at around 7 tons in morphine equivalent for 12 consecutive years (1985-1996). In 1999, pholcodine consumption declined to 4.3 tons in morphine equivalent, the lowest ever recorded.

6. In view of the trends of recent years, annual aggregate consumption of opiates worldwide is likely to remain at the current level of around 240 tons in morphine equivalent.

Production of opiate raw materials

7. Global production of opiate raw materials has been on the rise since 1995, in terms of total area harvested and quantity produced. In 1999, the area harvested continued to increase, reaching 141,715 hectares (ha), as compared with an average of 75,000 ha in the previous four years. As a result, total production of opiate raw materials amounted to 406.7 tons in morphine equivalent, the highest ever recorded.

8. All major-producing countries reported increased production in 1999. India (plus 89 tons), with 118.3 tons produced, ranked first, accounting for 29 per cent of the global total, followed by Turkey (plus 10.4 tons) at 24 per cent, Australia (plus 5 tons) at 21 per cent, France (plus 14.2 tons) at 19 per cent and Spain (plus 10.5 tons) at 4 per cent.

9. On the basis of advance statistical data provided by the major producing countries for the year 2000, global production of opiate raw materials is likely to remain at a similar level to that of 1999, at approximately 400.8 tons in morphine equivalent. Of that amount, India accounted for 143.3 tons in morphine equivalent, or 36 per cent of the total, followed by Australia with 120.2 tons (30 per cent), France with 64 tons (16 per cent), Turkey with 38.4 tons (10 per cent) and Spain with 23.9 tons (6 per cent). Production in Turkey, which has shown considerable variation in the past, in particular during the last five years, was significantly reduced in 2000. Out of 70,000 ha estimated for that year, 25,787 ha were actually harvested, with a total production of 38.4 tons, a decrease of 60 per cent, as compared with 1999.

10. According to the estimates furnished by, and the previous years performance of, the major producing countries, global production for 2001 has been calculated at approximately 345 tons in morphine equivalent, to be achieved under normal weather conditions. Actual production may show a wide variation from that projection, depending very much on production in Turkey.

Utilization of opiate raw materials

11. The amounts of opium used for the extraction of alkaloids fluctuated widely over a period of 20 years (1980-1999), between a maximum of 109.3 tons in morphine equivalent in 1991 and a minimum of 46.9 tons in 1989. Following a continuous increase during the 1995-1998 period, utilization of opium fell to 85.4 tons in morphine equivalent in 1999, whereas utilization of concentrate of poppy straw continued its upward trend initiated in 1986, reaching 245.5 tons in morphine equivalent in 1999. In general, the patterns of use reflect the trend towards a larger proportion of the alkaloids being extracted from concentrate of poppy straw than from opium. The growing demand for thebaine, particularly in the United States, led to the increase in the utilization of concentrate of poppy straw manufactured from a new variety of opium poppy with high thebaine content in Australia.

12. Global utilization of opiate raw materials, which averaged 178.3 tons in morphine equivalent in the 1980s, began to rise, in 1990, from 204.6 tons in morphine equivalent to 304.5 tons in 1997. In 1999, the total amount of opiate raw materials used for the extraction of alkaloids reached 355.1 tons in morphine equivalent, the highest ever recorded. Of that amount, the United States accounted for 106.6 tons (30 per cent) in morphine equivalent; the United Kingdom, 75.1 tons (21 per cent); France, 53.1 tons (15 per cent); and Australia, 34.9 tons (10 per cent). Japan, India, South Africa, Spain and Turkey, in descending order, together accounted for 37.8 tons in morphine equivalent (12 per cent).

Balance between the production of opiate raw materials and the consumption of opiates

13. With 406.7 tons of opiate raw materials, in morphine equivalent, produced in 1999 and 400.8 tons projected for 2000, respectively, global production would exceed consumption by 161.4 tons in 1999 and by 160.8 tons in 2000.

Exports and imports of opiate raw materials

14. Opium exports by India have shown wide fluctuations over the last 20 years, ranging from 44 to 91 tons, in morphine equivalent. In 1999, total exports fell significantly to 56 tons compared to 82 tons in 1998, thus reversing the upward trend started in 1996. Despite a substantial reduction of 11 tons in morphine equivalent, the United States remained the major importer, with 49 tons. Japan, on the contrary, increased its imports to 18 tons in morphine equivalent, as compared with an average of 11 tons in the preceding seven years. Those two major importers, accounting for 96 per cent of total imports, were followed by France with 2.3 tons in morphine equivalent. The United Kingdom and Hungary did not import any opium in 1999, whereas the Russian Federation has not imported opium for six consecutive years.

15. Total exports of concentrate of poppy straw, which averaged 73 tons in morphine equivalent per annum from 1987 to 1993, started to rise in 1994 and, in 1999, jumped to a record amount of 173 tons in morphine equivalent as compared with 132 tons in 1998. The increased exports were attributable in particular to Turkey (plus 23.3 tons in morphine equivalent) and, to a lesser extent, to Australia (plus 6.7 tons) and Spain (plus 4.5 tons). In absolute terms, however, Australia topped the list, exporting 81 tons in morphine equivalent, followed by Turkey (68 tons) and Spain (13 tons), with the total amount accounting for 93 per cent of global exports. In 1999, France exported only 2.6 tons in morphine equivalent.

16. The United Kingdom and the United States continued to be the two leading importers of concentrate of poppy straw in 1999, accounting for 78 per cent of total imports. With 53 tons in morphine equivalent imported, the United States became the largest importer in 1999, thus surpassing the United Kingdom, which imported 46 tons, a decrease of 31 per cent compared to 1998.

Stocks of opiate raw materials

17. The increased production and reduced exports in 1999 led to a substantial increase in global stocks of opium at the end of that year, reaching 122 tons in morphine equivalent. Of that total, 95 tons, or 78 per cent, were held by India. The remainder was held, in descending order, by Japan (17 tons), the United States (7 tons), France (1.3 tons) and China (1.1 tons), in morphine equivalent. Global stocks of concentrate of poppy straw also continued to rise, amounting to 57 tons in morphine equivalent, as compared with 47 tons in 1998. Nevertheless, the stocks were still far below the current level of annual utilization. The United States held the largest stocks in 1999, with 21 tons (37 per cent) in morphine equivalent, followed by Turkey with 10 tons (17 per cent), Australia with 9 tons (16 per cent) and France with 7 tons (13 per cent).

Production of opiate raw materials,^a consumption of opiates and balance between the two, 1987-2001

(Area harvested in hectares; production, consumption and balance in tons of morphine equivalent)

Country	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 ^b
Australia															
Area harvested	3 274	3 462	5 011	5 581	7 155	8 030	6 026	6 735	8 139	8 360	9 520	11 491 ^c	13 533 ^d	20 645 ^e	17 544 ^f
Production	31.8	38.5	38.8	43.0	67.5	89.8	66.9	66.0	55.6	69.0	64.1	79.5	84.0	120.2	127.3
France															
Area harvested	3 300	3 113	2 644	2 656	3 598	3 648	4 158	4 431	4 918	5 677	6 881	7 884	7 913	7 819	7 619
Production	16.6	21.4	13.4	19.5	30.2	21.8	28.8	32.9	48.9	47.3	52.0	64.8	79.0	64.0	62.7
India															
Area harvested	22 823	19 858	15 019	14 253	14 145	14 361	11 907	12 694	22 798	22 596	24 591	10 098	29 163	29 700	27 000
Production	84.5	70.2	59.3	52.8	47.4	59.7	41.9	51.5	88.8	92.1	110.3	29.3	118.3	143.3	109.4
Spain															
Area harvested	3 252	2 935	2 151	1 464	4 200	3 084	3 930	2 539	3 622	1 180	1 002	1 640	3 913	5 698	3 571
Production	12.3	10.8	5.7	8.0	24.2	12.8	9.0	5.2	4.2	4.4	1.9	7.5	18.0	23.9	14.8
Turkey															
Area harvested	6 137	18 260	8 378	9 025	27 030	16 393	6 930	25 321	60 051	11 942	29 681	49 207	87 193	25 787	40 462
Production	9.2	24.7	7.2	13.3	57.9	18.7	7.8	41.1	75.2	16.1	38.3	86.7	97.1	38.4	55.9
Other countries															
Area harvested	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Production	30.3	36.9	18.4	38.0	31.2	14.9	13.2	21.5	25.5	16.9	6.1	7.3	10.3	11.0	11.0
Total area harvested	38 786	47 628	33 203	32 979	56 128	45 516	32 951	51 720	99 528	49 755	71 675	80 320	141 715	89 649	96 196
Total production (1)	184.7	202.5	142.8	174.6	258.4	217.7	167.6	218.2	298.2	245.8	272.7	275.1	406.7	400.8	381.1
Total consumption (2)	206.9	200.9	204.3	196.1	217.8	212.4	236.6	225.7	237.8	246.5	241.0	236.8	245.3	240.0	241.0
Balance ((1) - (2))	-22.3	1.6	-61.5	-21.5	40.6	5.3	-69.0	-7.5	60.3	-0.8	31.7	38.2	161.4	160.8	140.1

^aOpium or concentrate of poppy straw.

^bFigures for 2001 are International Narcotics Control Board projections.

^cIncludes 809 hectares of new variety of *Papaver somniferum* with high thebaine content.

^dIncludes 1,978 hectares of new variety of *Papaver somniferum* with high thebaine content.

^eIncludes 5,479 hectares of new variety of *Papaver somniferum* with high thebaine content.

^fIncludes 9,300 hectares of new variety of *Papaver somniferum* with high thebaine content.