2.2 Opium/heroin





2.2.1 Production

Cultivation

In 2009, the area under opium poppy cultivation decreased by 15% from 2008. Similar to the year before, this was mainly due to a large decrease in opium poppy cultivation in Afghanistan, which was not offset by increases in Myanmar and the Lao People's Democratic Republic. In Afghanistan, where in 2009 two thirds (66%) of global opium poppy cultivation were concentrated, cultivation continued to be concentrated mainly in the south and west of the country. Over half of the opium poppy area (57%) was located in only one province, Hilmand, although most of the decrease in cultivation from 2008 took place in the same province, in the so-called *food zone* where farmers were supported with wheat seeds and fertilizers. Almost the entire Afghan opium poppy-cultivating area was located in provinces characterized by high levels of insecurity. In 2009, eradication remained at the relatively low level of 2008. A preliminary assessment indicated that opium poppy cultivation in 2010 may remain at about the 2009 lev $el.^1$

In Pakistan, Afghanistan's neighbour, the 2009 opium poppy cultivation remained at about the same level of less than 2,000 ha as in previous years. Myanmar, the second largest opium poppy cultivating country (17% of global cultivation) experienced the third consecutive yearly increase in cultivation, although the level remains much lower than in the 1990s and early 2000s. Most of the cultivation area was concentrated in the eastern part

1 UNODC/Ministry of Counter Narcotics, *Afghanistan Opium Survey* 2010. Winter Rapid Assessment, February 2010. of the country (Shan State). Opium poppy cultivation in the Lao People's Democratic Republic remained at a low level of about 2,000 ha with no significant changes since 2005. Mexico remains the third largest cultivating country, showing a large increase in the area under opium poppy cultivation between 2007 and 2008.

Fig. 106: Global opium poppy cultivation (ha),



Reports on eradication of opium poppy and seizures of poppy plant material indicate the existence of illicit opium poppy cultivation in many other countries and

| | | Culti | auon | or op | ium p | օրին զ | and pi | ouuci | | opiati | cs, 13 | 35-20 | 55 | | |
|--|---------|---------|---------|---------|---------|-----------------|-----------------------|----------|----------|----------|--------------|---------|---------|---------|---------|
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| | | | | | CUL | FIVATION | ^(a) IN HEC | TARES | | | | | | | |
| SOUTH-WEST ASIA | | | | | | | | | | | | | | | |
| Afghanistan (b) | 53,759 | 56,824 | 58,416 | 63,674 | 90,583 | 82,171 | 7,606 | 74,100 | 80,000 | 131,000 | 104,000 | 165,000 | 193,000 | 157,000 | 123,000 |
| Pakistan ^(c) | 5,091 | 873 | 874 | 950 | 284 | 260 | 213 | 622 | 2,500 | 1,500 | 2,438 | 1,545 | 1,701 | 1,909 | 1,779 |
| Subtotal | 58,850 | 57,697 | 59,290 | 64,624 | 90,867 | 82,431 | 7,819 | 74,722 | 82,500 | 132,500 | 106,438 | 166,545 | 194,701 | 158,909 | 124,779 |
| SOUTH-EAST ASIA | | | | | | | | | | | | | | | |
| Lao PDR (d) | 19,650 | 21,601 | 24,082 | 26,837 | 22,543 | 19,052 | 17,255 | 14,000 | 12,000 | 6,600 | 1,800 | 2,500 | 1,500 | 1,600 | 1,900 |
| Myanmar ^(e) | 154,070 | 163,000 | 155,150 | 130,300 | 89,500 | 108,700 | 105,000 | 81,400 | 62,200 | 44,200 | 32,800 | 21,500 | 27,700 | 28,500 | 31,700 |
| Thailand ^(f) | 168 | 368 | 352 | 716 | 702 | 890 | 820 | 750 | | | | | | | |
| Viet Nam ^(f) | 1,880 | 1,743 | 340 | 442 | 442 | | | | | | | | | | |
| Subtotal | 175,768 | 186,712 | 179,924 | 158,295 | 113,187 | 128,642 | 123,075 | 96,150 | 74,200 | 50,800 | 34,600 | 24,000 | 29,200 | 30,100 | 33,600 |
| LATIN AMERICA | | | | | | | | | | | | | | | |
| Colombia ^(g) | 5,226 | 4,916 | 6,584 | 7,350 | 6,500 | 6,500 | 4,300 | 4,153 | 4,026 | 3,950 | 1,950 | 1,023 | 715 | 394 | 356 |
| Mexico ⁽ⁿ⁾ | 5,050 | 5,100 | 4,000 | 5,500 | 3,600 | 1,900 | 4,400 | 2,700 | 4,800 | 3,500 | 3,300 | 5,000 | 6,900 | 15,000 | n.a. |
| Subtotal | 10,276 | 10,016 | 10,584 | 12,850 | 10,100 | 8,400 | 8,700 | 6,853 | 8,826 | 7,450 | 5,250 | 6,023 | 7,615 | 15,394 | 15,394 |
| OTHER ^(I) | | | | | | | | | | | | | | | |
| Combined | 5,025 | 3,190 | 2,050 | 2,050 | 2,050 | 2,479 | 2,500 | 2,500 | 3,074 | 5,190 | 5,212 | 4,432 | 4,184 | | |
| Other countries | | | | | | | | | | | | | | 8,600 | 7,600 |
| TOTAL | 249,919 | 257,615 | 251,848 | 237,819 | 216,204 | 221,952 | 142,094 | 180,225 | 168,600 | 195,940 | 151,500 | 201,000 | 235,700 | 213,003 | 181,373 |
| | | | | | РОТ | ENTIAL O | | ODUCTIO | ON IN ME | | IS () | | | | |
| SOUTH-WEST ASIA | | | | | | | | | | | | | | | |
| Afghanistan ^(b) | 2,335 | 2,248 | 2,804 | 2,693 | 4,565 | 3,276 | 185 | 3,400 | 3,600 | 4,200 | 4,100 | 6,100 | 8,200 | 7,700 | 6,900 |
| Pakistan ^(c) | 112 | 24 | 24 | 26 | 9 | 8 | 5 | 5 | 52 | 40 | 36 | 39 | 43 | 48 | 44 |
| Subtotal | 2,447 | 2,272 | 2,828 | 2,719 | 4,574 | 3,284 | 190 | 3,405 | 3,652 | 4,240 | 4,136 | 6,139 | 8,243 | 7,748 | 6,944 |
| SOUTH-EAST ASIA | | | | | | | | | | | | | | | |
| Lao PDR ^(d) | 128 | 140 | 147 | 124 | 124 | 167 | 134 | 112 | 120 | 43 | 14 | 20 | 9 | 10 | 11 |
| Myanmar ^(e) | 1,664 | 1,760 | 1,676 | 1,303 | 895 | 1,087 | 1,097 | 828 | 810 | 370 | 312 | 315 | 460 | 410 | 330 |
| Thailand ^(f) | 2 | 5 | 4 | 8 | 8 | 6 | 6 | 9 | | | | | | | |
| Viet Nam " | 4 000 | 9 | 2 | 2 | 2 | 4 000 | 4 007 | 040 | 020 | 440 | 200 | 225 | 400 | 400 | 244 |
| Subtotal | 1,803 | 1,914 | 1,829 | 1,437 | 1,029 | 1,260 | 1,237 | 949 | 930 | 413 | 320 | 330 | 469 | 420 | 341 |
| | | | | | | | | | | | | | | | |
| Colombia ^(g) | 71 | 67 | 90 | 100 | 88 | 88 | 80 | 52 | 50 | 49 | 24 | 13 | 14 | 10 | 9 |
| Mexico (") | 53 | 54 | 46 | 60 | 43 | 21 | 91 | 58 | 101 | 73 | /1 | 108 | 149 | 325 | n.a. |
| Subtotal | 124 | 121 | 136 | 160 | 131 | 109 | 1/1 | 110 | 151 | 122 | 95 | 121 | 163 | 335 | 335 |
| OTHER ^(I) | | | | | | | | | | | | | | | |
| Combined Other countries ^(k) | 78 | 48 | 30 | 30 | 30 | 38 | 32 | 56 | 50 | 75 | 63 | 16 | 15 | 139 | 134 |
| TOTAL | 4,452 | 4,355 | 4,823 | 4,346 | 5,764 | 4,691 | 1,630 | 4,520 | 4,783 | 4,850 | 4,620 | 6,610 | 8,890 | 8,641 | 7,754 |
| NON-PROCESSED OPIU | M (I) | | | | | | | | | 1,382 | 1,317 | 2,228 | 3,698 | 3,070 | 2,895 |
| | | | | | POTEN | | IUFACTU | RE OF HE | EROIN IN | METRIC . | | | | | |
| AVAIL. OUTSIDE AFGH. | 445 | 436 | 482 | 435 | 576 | 469 | 163 | 452 | 478 | 495 | 472 | 606 | 735 | 724 | 634 |
| TOTAL ⁽ⁿ⁾ | | | | | | | | | | 529 | 472 | 629 | 757 | 752 | 657 |

Table 14 Clobal illigit aultivation

(b)

Opium poppy harvestable after eradication. Afghanistan, sources: before 2003: UNODC; since 2003: National Illicit Crop Monitoring System supported by UNODC. Pakistan, sources: ARQ, Government of Pakistan, US Department of State Lao PDR, sources: 1995: US Department of State; 1996-1999: UNODC; since 2000: National Illicit Crop Monitoring System supported by UNODC.

Myanmar, sources: before 2001: US Department of State; since 2001: National Illicit Crop Monitoring System supported by UNODC. Due to continuing low cultivation, figures for Viet Nam (as of 2000) and Thailand (as of 2003) were included in the category "Other". (e) (f)

Colombia, sources: before 2000: various sources, since 2000: Government of Colombia. Production: In Colombia, opium is produced as opium latex, which has a higher

moisture content than opium produced in other regions of the world. The figures presented refer to dry opium. For 2008 and 2009, dry opium production in Colombia was calculated based on regional yield figures and conversion ratios from US Department of State/DEA. (h)

was calculated based on regional yield figures and conversion ratios from US Department of State/DEA. Figures derived from US Government surveys. The Government of Mexico reported a gross opium poppy cultivation of 19,147 hectares (2006) and estimated gross opium production at 211 mt (2006), 122 mt (2007), 144 mt (2008) and 162 mt (2009). These gross figures are not directly comparable to the net figures presented in this table. The Government of Mexico is not in a position to confirm the US figures as it does not have information on the methodology used to calculate them. Reports from different sources indicate that illicit opium poppy cultivation also exists in other countries and regions, including Algeria, the Baltic countries, Balkan coun-tries, Egypt, Guatemala, Iraq, Lebanon, Peru, the Russian Federation and other C.I.S. countries, South Asia, Thailand, Ukraine, Venezuela, Viet Nam, as well as in Central Asia and the Caucasus region. Starting 2008, a new methodology was introduced to estimate opium poppy cultivation and opium/heroin production in these countries. This new series is listed unter "Other countries". The estimates are higher than the previous figures but have a similar order of magnitude. A detailed description of the estimation methodology is available in the online version of the World Drug Report 2010. Potential production refers to the amount of oven-dry opium with unknown morphine content that could be produced if all opium poppy cultivated in an area in one were was harvested in the traditional method of lancing the opium group or advector opium or latex.

(j) year was harvested in the traditional method of lancing the opium capsules and collecting the opium gum or latex

In some countries, poppy straw is used to produced acetylated opium rather than opium gum. However, for reasons of comparability, it was assumed that all opium poppy cultivation is used for opium gum production. This estimate represent the amount of opium, which remains opium and is not processed into morphine or heroin. It refers only to Afghan opium as for other countries, (k)

the amount of opium which is not processed into morphine or heroin could not be estimated. For years before 2004, no such estimate was available for Afghanistan. Since 2004: Potential heroin production available outside Afghanistan. Estimates for Afghanistan only include heroin and morphine available for export, i.e. after deducting local consumption and seizures, based on the Afghanistan Opium Surveys. The amount of Afghan opium estimated to remain available as opium is not included in this (m)

figure. For all other countries, it is assumed that all opium gets converted into heroin, disregarding the fact that some opium may be consumed as such or as morphine. This series contains all heroin potentially manufactured world-wide, including the heroin and morphine consumed and seized in Afghanistan. The amount of Afghan opium estimated to remain available as opium (potential opium, not processed) is not included in this figure. (n)

(o)

Potential manufacture refers to the amount of heroin of unknown purity that could be produced if the total potential opium production was converted into heroin, exclud-ing the opium which is consumed as such and is not processed. Key informant surveys in Afghanistan indicated that 7 kg of air-dry opium are needed to manufacture 1 kg of brown heroin base of unknow purity. Typical purities found in seized heroin base in Afghanistan range from 50% to 80%. Assuming 10%-15% moisture content in air-dry opium, 7 kg of air-dry opium correspond to 6.0 to 6.3 of oven-dry opium. With the indicated typical base purity of 50% to 80%, between 7.4 kg and 12.6 kg of oven-dry opium would be needed to produce 1 kg of 100% pure heroin base in Afghanistan. A DEA study on heroin laboratory efficiency in Colombia estimated that indeed 8 kg of oven-dry opium were needed to produce 1 kg of 100% pure heroin HCl, corresponding to an overall laboratory efficiency of 67.2% from opium (latex) to heroin HCl. This suggests that the currently used ratios for oven-dry opium to heroin 7:1 (Afghanistan), 8:1 (Colombia in recent years) and 10:1 (rest of the world) could indeed provide an estimate of pure heroin production. However, the heroin estimates provided are still considered to refer to "heroin of unknown purity" as not enough is know about the laboratory efficiency in most producing countries.

Table 15: Reported opium poppy eradication in selected countries (ha), 1995-2009

* Although eradication took place in 2004, it was not officially reported to UNODC Source: ARQ, Government reports, reports of regional bodies, INCSR

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Afghanistan | | | | | 400 | 121 | | | 21,430 | * | 5,103 | 15,300 | 19,047 | 5,480 | 5,351 |
| Colombia | 3,466 | 6,885 | 6,988 | 2,901 | 8,249 | 9,254 | 2,385 | 3,577 | 3,266 | 3,866 | 2,121 | 1,929 | 375 | 381 | 546 |
| Egypt | | | | | | | | 15 | 34 | 65 | 45 | 50 | 98 | 121 | |
| Guatemala | | | | | | | | | | | 489 | 720 | 449 | 536 | 1,345 |
| India | | | 29 | 96 | 248 | 153 | 18 | 219 | 494 | 167 | 12 | 247 | 8,000 | 624 | 2,420 |
| Lao PDR | | | | | | | | | 4,134 | 3,556 | 2,575 | 1,518 | 779 | 575 | 651 |
| Lebanon | | | | | | | | | 4 | 67 | 27 | | 8 | | |
| Mexico | 15,389 | 14,671 | 17,732 | 17,449 | 15,461 | 15,717 | 15,350 | 19,157 | 20,034 | 15,926 | 21,609 | 16,890 | 11,046 | 13,095 | 11,471 |
| Myanmar | 3,310 | 1,938 | 3,093 | 3,172 | 9,824 | 1,643 | 9,317 | 7,469 | 638 | 2,820 | 3,907 | 3,970 | 3,598 | 4,820 | 4,087 |
| Nepal | | | | | | | | 19 | 19 | | | 1 | | 21 | 35 |
| Pakistan | | 867 | 654 | 2,194 | 1,197 | 1,704 | 1,484 | | 4,185 | 5,200 | 391 | 354 | 614 | 0 | 16 |
| Peru | | | | 4 | 18 | 26 | 155 | 14 | 57 | 98 | 92 | 88 | 88 | 23 | 32 |
| Thailand | 580 | 886 | 1,053 | 716 | 808 | 757 | 832 | 989 | 767 | 122 | 110 | 153 | 220 | 285 | 201 |
| Venezuela (Bolivarian Rep. of) | 148 | 51 | 266 | 148 | 137 | 215 | 39 | 0 | 0 | 87 | 154 | 0 | 0 | 0 | |
| Viet Nam | 477 | 1,142 | 340 | 439 | | 426 | | 125 | 100 | 32 | | | 38 | 99 | 45 |

regions.² In countries where information was available on eradication and seizures of opium poppy plants but not on the area under cultivation between 2003 and 2009, a methodology was developed to estimate opium poppy cultivation. This indirect method does not allow for individual country estimates, but can provide an estimate of the total level of opium cultivation in this residual group of countries which for 2009 amounted to 7,600 ha, equivalent to 4% of global cultivation. A detailed description of the estimation methodology is included in the methodology chapter, available on the UNODC website at www.unodc.org/wdr.

Production

In 2009, global potential opium production was estimated at 7,755 mt, a decrease by 10% from 2008. Over one third (37%) was estimated to be available on the drug market as opium, the remainder being converted into morphine and heroin. This would correspond to a potential heroin production of 657 mt. This is the

Without detailed information on the circumstances of poppy straw 2 seizures, the seizure as such is not proof of illicit opium poppy cultivation. The material could be diverted from licit cultivation or originate from another country. Between 2003 and 2009, on average 18 countries/territories reported eradication and/or seizures of opium poppy, suggesting the existence of opium poppy cultivation, among them: Algeria, Argentina, Armenia, Australia, Austria, Bangladesh, Belarus, Costa Rica, Ecuador, Egypt, Estonia, Guatemala, India, Japan, Kazakhstan, Kyrgyzstan, Latvia, Lebanon, Lithuania, the former Yugoslav Republic of Macedonia, the Republic of Moldova, Nepal, Norway, Peru, Poland, Romania, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, the Bolivarian Republic of Venezuela, Viet Nam and the Palestinian Territory. Source: UNODC ARQ and IDS, US State Department, International Narcotics Control Strategy Report (INCSR).

Fig. 107: Global potential opium production (mt), 1995-2009

Note: The 2009 estimate for 'Rest of the world' is provisional as limited information was available for some countries and regions.



second consecutive decrease since 2007, when global opium production reached a peak of 8,890 mt, with an estimated potential heroin production of 757 mt.

Opium yields in Afghanistan remained very high in 2009. The potential opium production was estimated at 6,900 mt. About 56% of the total opium production was estimated to be potentially exported as morphine and heroin, corresponding to 548 mt in heroin equiva-

lent.³ Afghanistan remained by far the largest opiumproducing country, representing 89% of the global illicit opium production. Despite the increase in cultivation, opium production in Myanmar decreased by 20% to only 330 mt, due to lower yields.

Laboratories

Only eight countries reported destruction of clandestine opiate-processing laboratories in 2008. In addition to countries where opium production takes place, such as Afghanistan (69 laboratories), Myanmar (5), Mexico (1) and Peru (1), destruction of clandestine opiate processing laboratories were reported from Belarus (1), Greece (2), New Zealand (1) and the Russian Federation (1). Much higher numbers were reported in 2007 (639). However, most of these laboratories were small-scale kitchen laboratories reported by the Russian Federation, many of which produced acetylated opium from poppy straw, which is commonly consumed in this subregion only. It can be assumed that most heroin production still occurs in countries where opium poppy is cultivated or in their close proximity.

Precursor chemicals

Illicit morphine and heroin production requires large quantities of precursor chemicals such as acetic anhydride, a substance which is essential in the refinement of morphine to heroin. All acetic anhydride used for heroin production in Afghanistan has to be smuggled into the country as no known production facilities of the substance exist in the country nor is there any reported legitimate use of this chemical.⁴

Large amounts of acetic anhydride seizures were reported in 2008, mainly from European and Western Asian countries (Afghanistan, Pakistan, the Syrian Arab Republic and Turkey), totalling 199,344 litres (57,308 l in 2007).⁵ Large amounts were also seized in East and South-East Asia (China, the Republic of Korea and Myanmar). In South America, Colombia regularly reports seizures of acetic anhydride. Increased international control and cooperation helped to prevent the diversion of large amounts of precursors. The seizures and related information confirmed that large-scale trafficking of morphine and heroin precursors to Afghanistan and neighbouring countries occurred but also to other opium producing countries. The controls in place seem to have led to a high price level of acetic anhydride in Afghanistan (US350/l - US400/l), which is thought to have become a major cost factor in the production of heroin.⁶

³ A detailed description of the methodology of the Afghanistan opium and heroin estimates can be found in UNODC/Government of Afghanistan (Ministry of Counter Narcotics), *Afghanistan Opium Survey 2009*, December 2009.

⁴ Information on precursor seizures stems mainly from the International Narcotics Control Board, E/INCB/2009/1.

⁵ The total reported seizure amount does not include seizures from Afghanistan, which were not officially reported to the INCB. Seizures were reported to UNODC by Afghan authorities, at 14,234 l of acetic anhydride in 2008.

⁶ UNODC/Ministry of Counter Narcotics, Afghanistan Opium Survey 2009, December 2009.

2.2.2 Seizures

In 2008, seizures of opium continued to increase steadily, together with heroin seizures, which rose for the second consecutive year, albeit less sharply. In contrast, morphine seizures continued the declining trend which started in 2007. Although heroin seizures have followed a generally increasing trend since 2002, they have been clearly outpaced by growth in global opium seizures. This is mainly due to the contribution of the Islamic Republic of Iran, which has registered increases in both heroin and opium seizures, accounting for an overwhelming proportion of global opium seizures.

Globally, interdiction of opium is concentrated in the area around Afghanistan, while seizures of processed heroin are far more geographically dispersed. Not surprisingly, the closer the substance is to the final product (heroin), the more ubiquitous it becomes. Moreover, opium consumption is to be found mainly in the Near and Middle East/South-West Asia.

Total heroin seizures are driven by various factors, including law enforcement efforts, as well as the global supply of heroin, which in turn depends on the global production of heroin and opium. However, global heroin seizures tend to respond to changes in production levels with a longer time lag than opium as a result of the time taken to process the opium into heroin and to traffic it. Therefore, the effect of production on seizures is visible later, and may also be less prononced. The distinction can be observed, for example, in the sharp decline of opium production in 2001, which resulted in a sharp drop in opium seizures the same year, and in a much less pronounced decline in heroin the following year. Over the period 2001-2008, heroin seizure totals were more strongly correlated with opium production estimates in the previous year, while in the case of opium, the best correlation is observed with the average opium production in the current and previous years. This suggests that the interception rate for heroin can be best assessed if calculated by comparing global seizures with the production estimated for the year before.

The difficulties in calculating the global heroin interception rate are further compounded by the necessity to adjust for purity in heroin production estimates⁷ as well as heroin seizures – a complication which does not arise in the case of opium.



7 The available heroin production estimates refer to heroin of unknown purity.





Source: UNODC ARQ/DELTA (seizure data), UNODC (production estimates)



The interception rate for opium⁸ rose slightly in 2008, from 17% in 2007 to 19%. On the other hand, the ratio of the other opiate seizures (heroin and morphine) to estimated potential heroin production in the previous year dropped from 15% in 2007 to 12% in 2008.⁹

Opium

Global opium seizures have risen steadily for six consecutive years, from 95.7 mt in 2002 to almost seven

- 8 Calculated as the ratio of global opium seizures in a given year to the estimated global supply of opium not processed into heroin or morphine. The supply is estimated by the average of production in the given year and the preceding year.
- 9 In previous years, UNODC estimated a single interception rate for opiates, which expressed total opiate seizures in a given year, converted into heroin equivalents, as a percentage of potential heroin production (excluding, since 2004, seizures and consumption in Afghanistan) in the same year.



times more - 646 mt - in 2008, equivalent to consistent annual increases of 37%. The growth has mainly been driven by the quantities seized in the Islamic Republic of Iran, which continues to report by far the largest opium seizures worldwide. Most of the remaining seizures happened in Afghanistan and Pakistan. These three countries together accounted for more than 97% of global seizures in 2007 and 2008.

Every year from 1996 to 2008, the Islamic Republic of Iran accounted for more than two thirds of annual global opium seizures. For six consecutive years, increasing quantities of opium were seized in this country (from 73 mt in 2002 to 561 mt in 2008), setting the trend for the global total. According to preliminary data, in 2009 seizures stabilized, standing at 579 mt.¹⁰

10 Islamic Republic of Iran, Drug Control Headquarters, Drug Control



Fig. 111: Comparison of global opiate seizures with global production estimates

Source: UNODC ARQ/DELTA (seizure data), UNODC (production estimates)



* Data for 2009 for the Islamic Republic of Iran are preliminary Source: UNODC ARQ/DELTA



Opium seizures in Afghanistan fell from 52.5 mt in 2007 to 42.8 mt¹¹ in 2008. Given the large amounts of opium being produced in Afghanistan, these levels imply a disproportionately low seizure rate. Based on data gathered by UNODC, in 2008, opium seizures mainly took place in the provinces of Hilmand (20.8 mt), Nangarhar (9.8 mt), Kandahar (4.1 mt) and Hirat (3.4 mt). Afghanistan reported seizures of 35.7 mt in 2009. How-

in 2009.



ever, this may not include seizures made by international forces in collaboration with Afghan forces - in the first half of 2009 only, military operations seized 50 mt of opium.¹²

In line with the trend in the Islamic Republic of Iran, opium seizures in Pakistan rose more than tenfold over the period 2004-2008, from 2.5 mt in 2004 to 27.2 mt in 2008. Pakistan also reported seizures of 6.9 mt of opium poppy straw in 2007, and more than 10 times this quantity - 81.7 mt - in 2008.

Morphine

For the second consecutive year, in 2008, global morphine seizures fell by more than one third, dropping from 27.4 mt in 2007 to 17.3 mt. The decline over the 2006-2008 period was mainly due to a notable downward trend in Pakistan. Seizures of morphine in Pakistan fell sharply in 2007, from 32.7 mt in 2006 to 11.0 mt, and even further in 2008, to 7.3 mt – the lowest level since 2002. The downward trend was in sharp contrast with increasing opium seizures in the same country.

In 2008, the largest quantity of morphine was seized by the Islamic Republic of Iran, where seizures amounted to 9.0 mt,¹³ essentially stable at the 2007 level (9.7 mt). However, according to preliminary data,¹⁴ in 2009, seizures almost doubled, rising to 16.1 mt.

¹¹ UNODC Afghanistan country office.

¹² UNODC/Government of Afghanistan (Ministry of Counter Narcotics), *Afghanistan Opium Survey 2009*, December 2009.

¹³ Islamic Republic of Iran, Drug Control Headquarters, *Drug Control in 2009.*



Source: UNODC Annual Reports Questionnaires data supplemented by other sources Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



Fig. 114: Comparison of morphine and opium seizure trends in Pakistan (mt), 2004-2008

Note: Data are presented for the purposes of a comparison of trends over time, not quantities, across different drug types. In no sense should 1 ton of opium be considered equivalent to 1 ton of morphine (in particular not in terms of potential heroin manufacture). Source: UNODC ARQ/DELTA



Fig. 115: Global heroin seizures, 1998-2008



■ Rest of the world

- South Asia
- North America
- East Europe
- Central Asia and Transcaucasian countries
- East and South-East Asia
- West & Central Europe
- Southeast Europe
- Near and Middle East /South-West Asia



Fig. 116: Correlation of heroin seizures in Turkey with opium and heroin seizures in the Islamic Republic of Iran, 2000-2004 and 2004-2008

Heroin

In 2008, global heroin seizures reached a record level of 73.7 mt, up from 65.5 mt in 2007, registering the second consecutive year-on-year increase. Heroin seizures remained much less geographically concentrated than seizures of opium and morphine, with large quantities of heroin being seized in the subregion of the Near and Middle East/South-West Asia (39% of the global total), South-East Europe (24%), West and Central Europe (10%), East and South-East Asia (7.3%), Central Asia and Transcaucasian countries (7.3%), East Europe (5.4%) and North America (3.1%).

The global increase in heroin seizures over the 2006-2008 period was driven mainly by continued burgeon-

ing seizures in the Islamic Republic of Iran and Turkey. In 2008, these two countries accounted for more than half of global heroin seizures, and registered, for the third consecutive year, the highest and second highest seizures worldwide, respectively. By 2008, heroin seizures in the Islamic Republic of Iran had climbed to 23.1 mt.¹⁵ According to preliminary data, in 2009 heroin seizures may have stabilized, amounting to 23.4 mt.¹⁶ In Turkey, seizures rose from 13.2 mt in 2007 to 15.4 mt in 2008.

¹⁵ Islamic Republic of Iran, Drug Control Headquarters, *Drug Control in 2009.*

¹⁶ Ibid.



Fig. 117: Destination of heroin seizure cases reported by Pakistan, 2007 and 2008

Turkey remained a major gateway for heroin destined for West and Central Europe. A comparison of heroin seizures in Turkey with opiate seizures in the neighbouring Islamic Republic of Iran reveals notable patterns. Over the 2000-2004 period, heroin seizures in Turkey were more strongly correlated with opium seizures than with heroin seizures in the Islamic Republic of Iran, suggesting that the supply of heroin in Turkey was sourced to a significant extent from opium transiting the Islamic Republic of Iran. In contrast, over the 2004-2008 period, the correlation was remarkably strong with both heroin and opium seizures in the Islamic Republic of Iran, and the discrepancy could no longer be observed, thus making it plausible that traffickers in the two countries were ultimately drawing from a common supply of heroin.

Following a significant decline over the 2004-2007 period, heroin seizures in China appeared to stabilize in 2008, amounting to 4.3 mt in 2008, only slightly less than the level in 2007 (4.6 mt). China reported that West African (especially Nigerian) syndicates were trafficking large quantities of heroin, as well as methamphetamine, to China, especially through Guangdong province.

Heroin seizures fell both in Afghanistan, from 5.0 mt¹⁷ in 2007 to 2.8 mt¹⁵ in 2008, and in Pakistan, from 2.9 mt in 2007 to 1.9 mt in 2008 – the lowest level in Pakistan since 1981. On the other hand, in 2008 seizures reached the highest levels on record in Uzbekistan (1.5 mt) and Kazakhstan (1.6 mt), while remaining essentially stable in Tajikistan (1.6 mt).

Further indications of changing trafficking patterns in Pakistan can be observed from an analysis of significant individual heroin seizures reported by this country. Among those cases in which a country other than Pakistan was identified as the destination, the proportion of consignments intended for Malaysia had never exceeded 1% prior to 2006. In contrast, this proportion rose to 9% in 2007 and 22% in 2008. Similarly, the proportion of consignments intended for China had never exceeded 1% prior to 2005, but rose to 28% in 2006. However, this proportion then declined to 10% in 2007 and 4% in 2008.

In West and Central Europe, heroin seizures remained stable for the second year in a row, at 7.7 mt in 2008. Seizures in the Russian Federation rose in 2007, from 2.5 mt in 2006 to 2.9 mt, and again in 2008, to 3.4 mt. Seizures in the United States fell from 2.4 mt in 2007 to 2.0 mt in 2008, nevertheless remaining higher than the level in 2005 and 2006 (1.7 mt).



2.2.3 Prices

Opium farm-gate prices and opium production

Both heroin (wholesale) and opium (farm-gate) prices in Afghanistan have decreased noticeably over the last years, but not at the same speed. A comparison between the two price trends reveals that the ratio of heroin to opium prices between 2006 and 2009 has indeed increased, as opium prices were falling more rapidly than heroin prices. Without knowing the composition and purity of the heroin sold at the reported prices this trend is difficult to interpret. Potentially, a large ratio could indicate a larger profit margin for drug traffickers involved in heroin production. On the other hand, prices for precursors seemed to have reached a very high level in 2009, when acetic anhydride, a key element of the conversion process, was sold at US\$350 to US\$400 per litre. Thus, the high prices for inputs could (partly) be compensated by paying less for opium, as the market did not allow an increase in heroin prices. Another possible explanation is that the quality of the opium (morphine content) is lower and more opium is needed to produce the same amount of heroin.



The declining opium prices in Afghanistan are not always mirrored by price trends in neighbouring countries. As one can expect, opium price levels in neighbouring countries are higher than in Afghanistan, as a result of transport costs and risk premiums. The opium wholesale price in Peshawar, Pakistan, seems to best reflect price developments in Afghanistan whereas opium price trends in the Islamic Republic of Iran and Tajikistan seem to be subject to additional factors.

Farm-gate prices of opium in Afghanistan have been on the decline in recent years, reflecting production increases in Afghanistan and a high level of global opium production, to which Afghanistan is the main contributor. The price decline was steepest in years of large production increases in Afghanistan and has ebbed off since 2008, despite a decline in production, probably reflecting the still very high level of global opium production since 2006 and the existence of opium stocks.

Prices in Colombia, where prices refer to opium latex which has a higher moisture content than opium gum, are not directly comparable to prices in Afghanistan and Myanmar, where they refer to air-dried opium gum. Converted into air-dried opium equivalents, per kilo prices in Colombia would roughly be double to triple the price in Myanmar, which is already far higher than the price in Afghanistan. Two observations can be made: First, farm-gate prices of opium in Myanmar, the second largest opium producing country, and in Colombia, which has a small but regionally important production, showed constant increases over the last five years and do not reflect the strong increase in global opium production. Second, price levels differ strongly in these three regions, with Afghanistan having the lowest prices, Myanmar a price level five times higher than Afghanistan, and Colombia (in dry opium equivalents about US\$930/kg) about three times higher than Myanmar or 15 times higher than Afghanistan. The opium prices in Colombia are close to the opium price levels observed in Thailand and the Lao People's Democratic Republic of over US\$1,000/kg since 2008.

The disconnect between farm-gate prices and global production trends supports the hypothesis of the existence of separate regional markets, where prices reflect the local/regional rather than global opium production levels and trends.



Fig. 119: Opium prices in South and Central Asia (US\$/kg), 2006-2009



Source: National monitoring systems supported by UNODC in Afghanistan and Myanmar, DIRAN/Government of Colombia



Heroin wholesale and retail prices

Wholesale prices of heroin (not adjusted for purity) follow the well-known trafficking routes from South-West Asia to Europe, and from South America and Mexico to the United States and Canada. In 2008, wholesale prices ranged from US\$2,400 per kg in Afghanistan to US\$10,300-US\$11,800 per kg in Turkey and an average of US\$44,300 per kg in West and Central Europe. In the Americas, a largely self-sufficient market for heroin, prices ranged from US\$10,000 per kg in Colombia to US\$45,000-US\$70,000 per kg (for heroin of South American origin) in the United States and US\$119,000 per kg in Canada. The price in Mexico, US\$35,000 per kilogram, is possibly influenced by two

Fig. 121: Opium production and prices in cultivating areas in Lao People's **Democratic Republic, Myanmar and** Thailand, 2002-2009

Source: National monitoring systems supported by UNODC in Lao People's Democratic Republic and Myanmar, Government of Thailand



contrasting factors – the proximity to the consumer market of the United States, which can arguably raise the price, and the local production of heroin in Mexico,¹⁸ which would be expected to lower the price.

Over the 2005-2008 period, heroin retail prices in key European markets, when adjusted for purity and inflation, displayed a marked sensitivity to the wholesale price in Turkey, confirming the role of this country as a

¹⁸ Mexico is also believed to be a transit point for heroin from South America to the United States.



Fig. 122: Heroin wholesale prices (not adjusted for purity) in Africa, Asia and Europe, 2008





major gateway for heroin entering Europe. A notable exception was the United Kingdom, where the adjusted price remained largely stable. This may reflect the different trafficking patterns for heroin reaching the United Kingdom, as opposed to continental Europe.¹⁹

In the United States, high wholesale purity and low prices, as well as other indicators, suggest that heroin remains widely available in the country, and that the availability is increasing in some areas. Moreover, the

Fig. 124: Trends in purity- and inflation-adjusted heroin prices in selected European countries, 2005-2008 (indexed, baseline 2005)

* France did not register a variation in purity over the period 2005-2008. Note: purity-adjusted prices are UNODC estimates based on reported prices and purities.



▲ Germany retail price, purity- and inflation-adjusted (Euro)
 ● France retail price, purity- and inflation-adjusted (Euro)*
 ● Turkey wholesale price, purity- and inflation-adjusted (Euro)
 ● UK retail price, purity- and inflation-adjusted (pound)

results of the Heroin Signature Program (HSP) of the US Drug Enforcement Agency point to an increase in the availability of heroin from Mexico. The wholesale purity of heroin of Mexican origin was at its highest (40%) since 2005, while Mexican heroin represented 39% (by weight) of all heroin analysed through the HSP, the highest percentage since 1987.²⁰

¹⁹ The United Kingdom assessed that, in 2008, 25% of the heroin in its market was trafficked from Pakistan, as opposed to the Balkan route. Other factors may also distinguish the UK market from continental Europe.

²⁰ National Drug Intelligence Center, United States Department of Justice, National Drug Threat Assessment 2010, February 2010.

2.2.4 Consumption

In 2008, UNODC estimates that between 12.8 and 21.9 million people globally used opiates over the past 12 months, with the prevalence ranging between 0.3% and 0.5% of the world's population aged 15-64. The range of the estimated prevalence did not change from 2007, but the range of the lower bound of the estimated number of annual users decreased, reflecting an increased uncertainty in South Asia and Africa, but also a possible decrease in the total number of users observed, particularly in Europe. More than half of the estimated opiate users are in Asia. Despite significant growth in the production of opiates in recent years, global consumption remains relatively stable, as also perceived by national experts.

Opiate consumption in East and South-East Asia is stabilizing, but it remains a problematic drug group in many parts of the region

While most countries/territories in East and South-East-Asia have reported some decrease, between 2.8 and 5 million people aged 15 to 64 are estimated to have used opiates in the past year in the subregion. Opiates, and especially heroin, is still reported as the most prevalent drug in China, Indonesia, Malaysia and Myanmar. The highest prevalence of opiate use of 1.3% and 1.2%



respectively in this subregion are estimated to be found in Malaysia (among the population aged 15-64, 2002) and Macao, China (among the population aged 15-64, 2003) respectively. In Malaysia, a similar prevalence of injecting drug use among the population aged 15-64 is reported with an HIV prevalence of 10.3% among this

Fig. 126: Global trend in the perception of opiate use: cumulative unweighted average* as reported by national experts

* The graph measures the trend from countries reporting an increase or decrease in drug use. It does not measure the trend in terms of number of drug users.



| Region/Subregion | Estimated number of users annually (lower) | - | Estimated number of users annually (upper) | Percent of population age 15-64 (lower) | - | Percent of population age 15-64 (upper) | | | | | |
|---------------------------|--|---|--|---|---|---|--|--|--|--|--|
| Africa | 680,000 | - | 2,930,000 | 0.1 | - | 0.5 | | | | | |
| Eastern Africa | 150,000 | - | 1,730,000 | 0.1 | - | 1.3 | | | | | |
| North Africa | 130,000 | - | 540,000 | 0.1 | - | 0.4 | | | | | |
| Southern Africa | 240,000 | - | 320,000 | 0.2 | - | 0.3 | | | | | |
| West and Central Africa | 160,000 | - | 340,000 | 0.1 | - | 0.2 | | | | | |
| Americas | 2,290,000 | - | 2,440,000 | 0.4 | - | 0.4 | | | | | |
| Caribbean | 60,000 | - | 90,000 | 0.2 | - | 0.3 | | | | | |
| Central America | 100,000 | - | 110,000 | 0.4 | - | 0.4 | | | | | |
| North America | 1,290,000 | - | 1,380,000 | 0.4 | - | 0.5 | | | | | |
| South America | 840,000 | - | 870,000 | 0.3 | - | 0.3 | | | | | |
| Asia | 6,460,000 | - | 12,540,000 | 0.2 | - | 0.5 | | | | | |
| Central Asia | 340,000 | - | 340,000 | 0.7 | - | 0.7 | | | | | |
| East/South-East Asia | 2,830,000 | - | 5,060,000 | 0.2 | - | 0.3 | | | | | |
| Near and Middle East | 1,890,000 | - | 3,820,000 | 0.8 | - | 1.5 | | | | | |
| South Asia | 1,390,000 | - | 3,310,000 | 0.2 | - | 0.4 | | | | | |
| Europe | 3,290,000 | - | 3,820,000 | 0.6 | - | 0.7 | | | | | |
| Eastern/South-East Europe | 2,210,000 | - | 2,460,000 | 0.8 | - | 0.9 | | | | | |
| Western/Central Europe | 1,090,000 | - | 1,370,000 | 0.4 | - | 0.5 | | | | | |
| Oceania | 120,000 | - | 150,000 | 0.5 | - | 0.6 | | | | | |
| Global | 12,840,000 | - | 21,880,000 | 0.3 | - | 0.5 | | | | | |

| Table | 6: Estimated number of people who used opiates at least once in the past year an | 10 |
|--------------|--|----|
| | prevalence of opiate use in the population aged 15-64, by region, 2008 | |

Fig. 127: Range of estimated numbers and annual prevalence of opiate use globally and by region



group.²¹ Except for Myanmar, there is no new information on opiate consumption available for 2008 in the subregion. Higher than global average prevalence of opiate use is reported in Myanmar, where opium-producing villages have a higher consumption rate than non-producing villages.²² In Myanmar, heroin use is still

21 Mathers B., Degenhardt L., Phillips B., Wiessing L., Hickman M., Strathdee A., Wodak A., Panda S., Tyndall M., Toufik A.and Mattick R., on behalf of the Reference Group to the United Nations on HIV and Injecting Drug Use, "Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review," *The Lancet*, 2008; 372:1733-1745.

22 UNODC, Opium poppy cultivation in South-East Asia, December



less widespread than opium use, but data suggest that heroin use may have increased in recent years.²³ Opium use among the population aged 15 and older has decreased from 2% among men to 1.4%, and from 0.2% among women in 2008 to 0.1% in 2009. On the other hand, heroin use has increased from 0.1% in 2008 to 0.3% in 2009.²⁴

23 Ibid.

24 UNODC, *Opium poppy cultivation in South-East Asia*, December 2008.

^{2009.}

²³ IDIU

Opiate use in Central and South-West Asia remains the highest

Most countries in these subregions have opiate use prevalence rates that are higher than the world average. New information was available for Afghanistan, where a sharp increase was observed in opiate use, and in Azerbaijan, showing a slight decrease (from a 0.3% annual prevalence rate among the population aged 15-64 in 2006 to 0.2% in 2008). Last year's drug use survey conducted in Afghanistan suggests that the country has one of the highest opiate use prevalence rates in the world, ranging between 2.3% and 2.9% of the population aged 15-64 (between 285,000 and 360,000 users). Opium is the most commonly used opiate, with estimates ranging between 200,000 and 250,000 regular users. The number of heroin users in Afghanistan is estimated between 100,000 and 135,000. The opiate use prevalence in the Islamic Republic of Iran in 1999 was reported as 2.8% of the population, and more than 2 million people were estimated to be regular opiate users. However, experts in the Islamic Republic of Iran perceive that there has been a slight decrease in opiate use over the last years.²⁵ Both in Afghanistan and the Islamic Republic of Iran, opium remains the preferred opiate, while heroin remains the main opiate in the rest of the subregion. In Pakistan, the opiate use prevalence rate was reported as 0.7% or an estimated 630,000 people who had used opiates in the past year in 2006.²⁶

In Central Asia, Kazakhstan in particular has a high opiate use prevalence rate (1% in 2006), followed by Uzbekistan and Kyrgyzstan (0.8% each). Estimates for Tajikistan (0.5%) and Turkmenistan (0.3%) are lower.²⁷ Injecting drug use is reportedly one of the preferred methods in Central Asia, with increasing numbers also reported in Pakistan and the Islamic Republic of Iran. Injecting drug use is fuelling the HIV epidemic among injecting drug users in the region. The highest HIV prevalence among injecting drug users in the region is reported from Uzbekistan, Tajikistan, the Islamic Republic of Iran and Pakistan.²⁸

South Asia

No new information was available for South Asia in 2008, and the lack of accurate, up to date information on the prevalence of opiate use among the general population in India makes uncertain the estimate of the number of users for this subregion. In a national survey in 2001, a high prevalence rate was observed among Indian males (monthly prevalence rate of 0.7% among the male population 12-60 years old), but the lack of information on female opiate use prevents the calculation of a generally accepted, internationally comparable prevalence rate.²⁹ In the region, Bangladesh and Bhutan have opiate prevalence rates close to the world average (around 0.4%). In Bangladesh, India and Nepal, illicit use of opioids such as buprenorphine, especially through

| Mathers B., et al, on behalf of the Reference Group to the United Nations on HIV and Injecting Drug Use | | | | | | | | | | | |
|---|-------------|--------------------------|--------------|--|------|------|--|--|--|--|--|
| | Estimated n | umber of people drugs | e who inject | Prevalence of HIV among people who inject drugs (%) | | | | | | | |
| | Low | Mid | High | Low | Mid | High | | | | | |
| Afghanistan | 6,870 | 6,900 | 6,930 | 1.7 | 3.4 | 5.1 | | | | | |
| I.R. of Iran | - | - | 180,000 | 5 | 15 | 25 | | | | | |
| Pakistan | 125,000 | 130,460 | 150,000 | 9.6 | 10.8 | 13.6 | | | | | |
| Kazakhstan | - | - | 100,000 | 8 | 9.2 | 10.4 | | | | | |
| Kyrgyzstan | - | - | 25,000 | 2.4 | 8.0 | 13.6 | | | | | |
| Tajikistan | - | - | 17,000 | 11.5 | 14.7 | 17.9 | | | | | |
| Uzbekistan | - | - | 80,000 | 11.7 | 15.6 | 19.5 | | | | | |

Table 17: Number of injecting drug users and HIV prevalence among those who inject drugs

Source: UNODC and the Paris Pact Initiative. Illicit Drug Trends in Pakistan, April 2008: UNODC Global Assessment Programme on Drug Use:

- 25 Islamic Republic of Iran, Annual Reports Questionnaire: Extent, patterns and trends of drug abuse, 2008.
- 26 UNODC and the Paris Pact Initiative, Illicit Drug Trends in Pakistan, April 2008; UNODC Global Assessment Programme on Drug Use/ Ministry of Narcotics Control of the Government of Pakistan, Anti-Narcotics Force of the Government of Pakistan, Problem Drug Use in Pakistan, Results from the year 2006 National Assessment, Tashkent, 2007.

27 UNODC, HIV and AIDS and Injecting Drug Use in Central Asia: From Evidence to Action, country reports for Kyrgyzstan, Tajikistan and Uzbekistan.

- Mathers B., Degenhardt L., Phillips B., Wiessing L., Hickman M., 28 Strathdee A., Wodak A., Panda S., Tyndall M., Toufik A. and Mattick R., on behalf of the Reference Group to the United Nations on HIV and Injecting Drug Use, "Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review," The Lancet, 2008; 372:1733-1745.
- 29 Previous UNODC estimates put the rate at around 0.4% for the year 2001.

Fig. 128: Annual opiate users in Asia, 2007-2008 Source: UNODC ARQ

injecting, is reportedly common.³⁰ In Sri Lanka, smoking heroin remains the preferred method of use.

2007

Other than Israel, most of the countries in Middle East have reportedly negligible opiate use. However, this is also due to the fact that there is limited data on drug use and treatment demand from the region.

East and South-East Europe as a subregion has the second highest number of opiate users, ranging between 2.2 and 2.5 million people

The subregion on the whole seems to have one of the highest prevalence rates in the world (0.8% to 0.9% of the population aged 15-64), though individual country estimates must be treated with caution. The Russian

Federation and Ukraine are the two countries in the subregion with the highest estimated number of opiate users. In the Russian Federation, the number of opiate users are estimated between 1.6 and 1.8 million (1.6% prevalence) and in Ukraine, between 325,000 and 425,000 (1.16% prevalence). The only country reporting new information in 2008 was the Republic of Moldova, showing an increase from a 0.1% annual prevalence rate in 2007 to 0.15% in 2008. Both the Russian Federation and Ukraine have some of the highest HIV prevalence rates among injecting drug users (37.2% and 41.8%, respectively).³¹ The other countries in the region have opiate use prevalence rates either equivalent to or lower than the world average.

European data suggest that while heroin use is decreasing its associated harm is growing

In West and Central Europe, the opiate use prevalence is estimated between 0.4% and 0.5% of the general population, with the corresponding number of opiate users between 1 and 1.4 million. The 2008 range shifted slightly down from the one estimated in 2007, when the number of opiate users was estimated between 1.2 and 1.5 million, reflecting a decrease in most of the countries which reported new estimates in 2008. Scotland and Estonia are the two countries with high prevalence of opiate use in West and Central Europe (1.5% among the population aged 15-64).

While overall heroin use may be stable or declining in West and Central Europe, problems associated with heroin abuse seem to increase. Based on a sample of 19 countries, the overall number of primary heroin users entering treatment increased between 2002 and 2007. More than half of the reporting countries recorded

Table 18: Expert perception of the opiates us trend between 2007 and 2008

2008

| Region | Member States providing perception data | Member States perception response rate | Use problem increased* | Percent use problem increased | Use problem stable | Percent use prob- lem stable | Use problem decreased* | Percent use problem decreased | | | | |
|----------|---|--|------------------------------|--|--------------------------|------------------------------------|------------------------------|--|--|--|--|--|
| Africa | 12 | 23% | 6 | 50% | 2 | 17% | 4 | 33% | | | | |
| Americas | 12 | 34% | 6 | 50% | 5 | 42% | 1 | 8% | | | | |
| Asia | 28 | 62% | 11 | 39% | 11 | 39% | 6 | 21% | | | | |
| Europe | 31 | 69% | 9 | 29% | 19 | 61% | 3 | 10% | | | | |
| Oceania | 1 | 7% | 0 | | 1 | | 0 | | | | | |
| Global | 84 | 44% | 32 | 38% | 38 | 45% | 14 | 17% | | | | |

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* Identifies increases/ decreases ranging from either some to strong, unweighted by population.

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30 UNODC, Rapid Situation and Response Assessment of drugs and HIV in Bangladesh, India, Nepal and Sri Lanka – a regional report, 2007.

31 Mathers B., Degenhardt L., Phillips B., Wiessing L., Hickman M., Strathdee A., Wodak A., Panda S., Tyndall M., Toufik A. and Mattick R, on behalf of the Reference Group to the United Nations on HIV and Injecting Drug Use, "Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review," *The Lancet*, 2008; 372:1733-1745.



increasing numbers of drug-induced deaths, mostly associated with opioid use, between 2006 and 2007.³² Spain, Portugal, Italy and France are the countries with the highest prevalence of HIV among injecting drug users (39.7%, 15.6%, 12.1% and 12.2% respectively).³³

Opiates use remains problematic in North America with increasing problems in the abuse of prescription opioids

In North America, the highest prevalence of heroin use was reported from the United States in 2000 (0.58% of the population aged 15-64).³⁴ Household survey data suggest that the level of heroin use remained rather stable until 2008. Other heroin abuse indicators, including heroin treatment admissions and drug overdose deaths involving heroin, had, however, increased in some parts of the United States in 2008.³⁵ Non-medical use of prescription opioids, although stable over the past years, remains a major problem across the United States. In 2008, 6.2 million people (aged 12 and older) had used prescription medication in the month prior to the survey.³⁶ Significantly increasing trends in the use of prescription and over-the-counter drugs, including oxycodone and hydrocodone among teens,³⁷ is reported. From 1999 to 2006 the number of fatal poisonings

- 32 EMCDDA, Annual Report 2009: the state of the drugs problem in Europe, Lisbon 2009.
- 33 Reference group to United Nations on HIV and Injecting Drug Use.
- 34 US ONDCP, 2000.
- 35 NIDA, *Epidemiological Trends in Drug Abuse*, Proceedings of the Community Epidemiology Work Group, Highlights and Executive Summary, January 2009.
- 36 US DHHS, SAMHSA, National Survey on Drug Use and Health (NSDUH), 2008 highlights.
- 37 NIDA, Monitoring the Future Survey, Overview of 2009 Findings.

Fig. 130: Opioid-related deaths in the USA, 1999-2006

Source: Warner M., Chen L. and Makuc D. M., Increase in

Fatal Poisonings involving opioid analgesics in the United States 1999-2006, National Centre for Health Statistics



involving opioid analgesics more than tripled from 4,000 to 13,800 deaths.³⁸

In Canada, while the overall prevalence of opiate³⁹ use is 0.3% of the population, heroin use has also been overshadowed by abuse of prescription opioids.⁴⁰

- 38 CDC/NCHS, Warner, M., Chen , L-H, et al. Increase in Fatal Poisonings Involving Opioid Analgesics in the United States, 1999 – 2006, NCHS Data Brief No. 2, September 2009.
- 39 Opiates refer to one of a group of alkaloids derived from the opium poppy. The term excludes synthetic opioids (WHO Lexicon of alcohol and drug terms).
- 40 RCMP, Reports on the Illicit Drug Situation in Canada, 2008.

What is known about opiate use in the Pacific Islands?

While there is limited information on drug use from the smaller Pacific Islands, the United States Centers for Disease Control and Prevention has conducted surveys among high school students in the Pacific Island US territories. Within the territories, the results from the Marshall Islands are quite astonishing. The lifetime prevalence of injecting drugs is reported as 15.8%, while the lifetime prevalence of heroin use is reported as 11.6% among the 9th-12th grade students. These are one of the highest rates of injecting and heroin use among secondary school students in the world and would call for serious prevention and other interventions for the Marshall Island students.

Source: Lippe J., Brener N., et al Youth Risk Behaviour Surveillance – Pacific Island United States Territories, 2007 Surveillance Summaries November 21, 2008/55 (SS212):28-56 (Centers for Disease Control and Prevention, Atlanta, Georgia, USA)

In South America, the highest prevalence of opioids⁴¹ use was reported by Brazil and Chile (0.5% of the population between 15 and 64 years, with corresponding numbers of 640,000 and 57,000, respectively). In both cases, prescription opioids constitute the key problem while abuse of heroin is still extremely low. In Chile, the 2008 estimate (0.5%) represents an increase from the 0.3% reported in 2006. For the first time, Costa Rica reported data on prevalence of opioid users showing that in 2006, 2.7% of the population aged 12-70 used opioids at least once during the preceding year. However, this estimate needs to be reviewed with caution as it includes use of preparations that include all methylphenidatetype and anorexigenous stimulants prepared with codeine.⁴² Other countries in the region have low opiate use prevalence rates ranging from 0.1% in Ecuador to 0.3% in the Plurinational State of Bolivia. In South America, most countries report use of synthetic opioids rather than heroin.

Opioid use in Oceania increased

The number of opiate and opioid users in Oceania in 2008 ranged between 120,000 and 150,000 people, an increase from 2007 when 90,000 people were estimated

- 41 Opioid is the generic term applied to alkaloids from the opium poppy, and their synthetic analogues. The opium alkaloids and their semi-synthetic derivatives include morphine, diacetylmorphine, codeine and oxycodone as well as fentany, methadone, pethidine, and pentazocine, (WHO Lexicon of alcohol and drug terms).
- 42 Organization of American States, Inter American Drug Abuse Control Commission (CICAD), Multilateral Evaluation Mechanism (MEM) Governmental Expert Group (GEG): Evaluation of Progress in Drug Control 2003-2004.

to have used the substances at least once in the previous year. The higher estimate reflects a sharp increase observed in New Zealand, where the annual prevalence among 16-64 year olds reached 1.1% in 2008 from 0.4% observed in 2006. With the new estimate, New Zealand has a much higher prevalence than Australia. In New Zealand, street morphine and street methadone are the most widely available and used opioids.⁴³ In Australia, currently there is no indication of heroin use returning to the levels of use seen prior to the 2001 heroin shortage. Nevertheless, heroin-related overdose cases are commonly observed. Non-medical use of opioids including methadone, buprenorphine, morphine and oxycodone remain common, however.⁴⁴

Opiate use is perceived to be increasing in Africa

There are an estimated 680,000 to 2.9 million opiate users in Africa. This wide range reflects missing data and information on opiate use from most parts of the continent. Experts from half of the responding African states perceived increasing opiate use, which likely reflected, in part, the increasing role of African countries as transit areas for heroin from Afghanistan to Europe. Opiates are the second most common drug group in terms of numbers of individuals seeking treatment.⁴⁵ Mauritius, Kenya and Egypt are the countries in the region with the highest prevalence of opiate use (1.9%, 0.7% and 0.4% respectively.⁴⁶) Mauritius also has high prevalence of injecting drug use and a concentrated HIV epidemic among these users.⁴⁷ South Africa is the only country with a drug use surveillance system based on treatment demand (the South African Community Epidemiology Network on Drug Use - SACENDU). During the first half of 2009, in South Africa, treatment admissions for heroin problems have remained stable or declined in some parts of the reporting regions; but data also show far higher levels than a decade ago.48

- 43 Wilkins C., Griffiths R. and Sweetsur P., *Recent Trends in illegal drug use in New Zealand*, 2006 2008, Findings from the Illicit drug monitoring system (IDMS).
- 44 Stafford J, Sindiicich N. et al, *Australian drug trends 2008.* Findings from the Illicit drug reporting system (IDRS).
- 45 World situation with regard to drug abuse Report of the Secretariat (E/CN/2010/2) para. 21.
- 46 The estimates in Mauritius are derived from a Rapid Assessment Study and adjusted for age by UNODC, in Kenya extrapolated from the information form the data from Reference group to the UN on HIV and Injecting Drug Users, 2009 and in Egypt derived from a national household survey.
- 47 Abdool R., Sulliman R. and Dhannoo M., "The injecting drug use and HIV/AIDS nexus in the Republic of Mauritius," *African Journal* of Drug & Alcohol Studies, 5(2), 2006.
- 48 Pluddemann A., Parry C., Bhana A., et al, Alcohol and Drug Abuse Trends, January – June 2009, Phase 26, South African Community Epidemiology Network on Drug Use (SACENDU) 26 November 2009.







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Map 18: Ranking of opiates in order of prevalence, 2008 (or latest year available)