D. ILLICIT OPIATE MARKET

Overview

Afghanistan maintained its position as the lead producer and cultivator of opium globally. With a global total of over 236,000 hectares under cultivation, illicit cultivation of opium poppy reached peak levels in 2012, surpassing the 10-year high recorded in 2007. This was mainly the result of increases in Afghanistan and Myanmar (the two main producers). A preliminary assessment of opium poppy cultivation trends in Afghanistan in 2013 revealed that such cultivation is likely to increase in the main opium growing regions, which would be the third consecutive increase since 2010.[62] Mexico remained the largest grower of opium poppy in the Americas. An overview of global potential production of opium and manufacture of heroin, as well as country data on opium poppy cultivation and eradication and opium production can be found in Annex II.

The fluctuations which characterized opium production in Afghanistan in recent years, also affected Europe, the main market for opiates. Heroin use decreased in Western and Central Europe, which can be ascribed to a change in the structure of the market, which has seen decreased supply, increased law enforcement activity and an ageing user population, combined with an increase in the availability of treatment. However, the same does not apply to the non-medical use of prescription opioids.

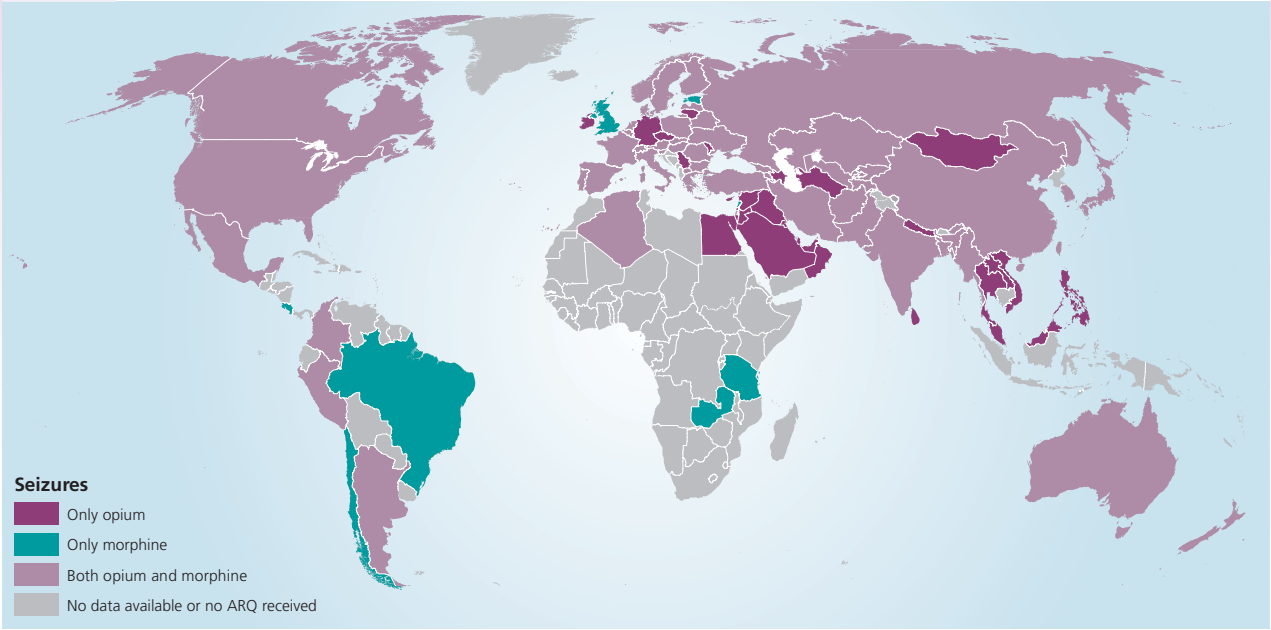
There are indications that more Afghan opiates are being trafficked on routes other than the Balkan route (which goes through Iran (Islamic Republic of) and Turkey to Europe) and the northern route (through Central Asia and the Russian Federation). As these other routes go southward from Afghanistan, either through Pakistan or through Iran (Islamic Republic of), they are known collectively as the "southern route".

East Africa may be developing into a hub for onward trafficking, with maritime trafficking playing an increasingly important role compared with trafficking by air and courier. A relatively new route has developed through the Middle East via Iraq, while a stronger flow of Afghan opiates towards East and South-East Asia has been observed. These markets have traditionally been supplied by opiates from within the subregion.

Continued inconsistency in the information available from the Americas on opiate production and flows makes an analysis of the situation difficult – while Mexico has the greater potential production of opium, it is Colombia that is reported as the main supplier of heroin to the United States. The Canadian market seems to be supplied by producers from Asia.

Typically, opium is converted into heroin in or close to the countries where opium poppy is cultivated and, by and large, seizure patterns reflect this. However, opium poppy eradication and opium and morphine seizures are reported in a wide range of countries other than the main opium-producing countries, albeit usually in comparatively small

Map 4. Opium and morphine seizures between 2007 and 2011



Source: UNODC Annual Reports Questionnaire supplemented by other sources.

Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Sudan and South Sudan has not yet been determined.

62 United Nations Office on Drugs and Crime and Afghanistan, Ministry of Counter-Narcotics, "Afghanistan: opium risk assessment 2013" (April 2013).

quantities. This phenomenon should be investigated further in order to improve understanding of the global scope of the opiates market.

Revision of opium production estimates in Afghanistan for the period 2006-2009

UNODC has undertaken an exercise to improve the quality of data on opium production in Afghanistan, a process that has also led to a re-examination of the estimates for the period 2006-2009, which were consequently revised downwards.

Survey work and its supervision in the field have become increasingly difficult, in part owing to the deteriorating security situation in the main opium poppy-growing areas in the south of Afghanistan, coupled with a dramatic increase in poppy cultivation and the size of the area surveyed after 2005. It has become more and more difficult for surveyors to comply with the opium yield survey protocol, which is designed for data collection on the ground.

UNODC sought expert advice and undertook an extensive study that led to the development of statistical tests for gauging the reliability of opium yield survey data.[63] After successfully establishing procedures for quality control, opium yield data for the period 2006-2009, a particularly challenging period, were reviewed, which resulted in a downward revision of the yield estimates and a corresponding decrease in the opium production estimates. The revision did not, however, have an impact on production trends in those years, nor did it change Afghanistan's position as the world's leading producer of opium.[64]

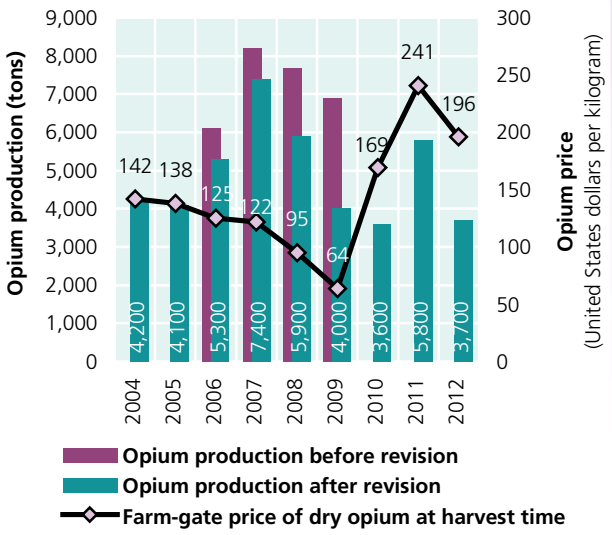
Despite the downward revision, the level of opium production in Afghanistan in 2007, 2008 and 2011 can be considered to be exceptionally high. Years with relatively low levels of production, such as 2009, 2010 and 2012, reduced the assumed "overproduction" in those years.

This could explain why farm-gate opium prices in Afghanistan rose rapidly after mid-2009 (the first year with a comparatively low harvest after several years of record production), from only $64 per kilogram to $169 per kilogram after the 2010 harvest failed, owing to weather conditions and plant disease. After a relatively high level of opium production in 2011, prices went down but remained at a much higher level than before 2010, as the 2012 opium harvest turned out to be below average. In 2012, due to a combination of disease of opium poppy and adverse weather conditions, opium production in Afghanistan was estimated at only 3,700 tons, 36% less than in 2011.

63 See United Nations Office on Drugs and Crime and Afghanistan, Ministry of Counter-Narcotics, *Afghanistan: Opium Survey 2011* (December 2011), pp. 95-97.

64 For a detailed description of the revision see United Nations Office on Drugs and Crime and Afghanistan, Ministry of Counter-Narcotics, *Afghanistan: Opium Survey 2012* (May 2013), chapter 7.3.

Fig. 36. Opium production estimates in Afghanistan before and after revision, and farm-gate prices of dry opium, 2004 to 2012



Source: United Nations Office on Drugs and Crime and Afghanistan, Ministry of Counter-Narcotics, *Afghanistan: Opium Survey 2011* (December 2011), pp. 95-97.

However, production fluctuations alone do not explain why opium prices rebounded so strongly after 2010 and remained at a high level of about $200 per kilogram, even after a relatively good harvest in 2011. Other factors, such as changes in trafficking flow, demand or law enforcement, are likely to have played a role, and need to be further investigated.

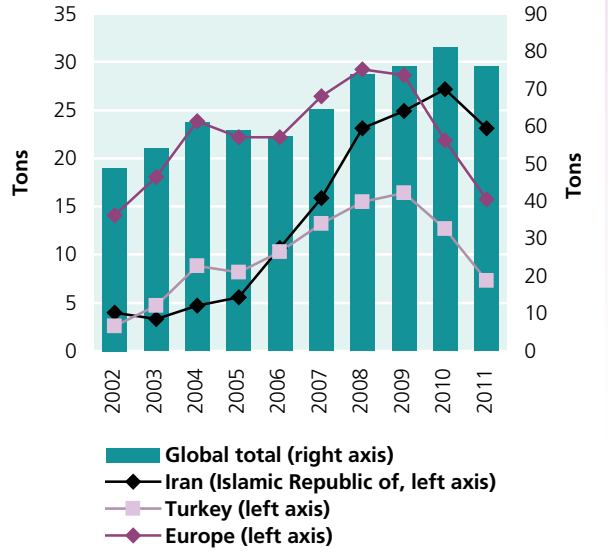
Effect of fluctuations in global opiate production on major markets

Structural changes in the European heroin market

The fluctuation in Afghan opium production affected the European market, which has seen decreased supply, owing in part to successful law enforcement activity, as well as to changes in trafficking flows. Heroin seizures have also decreased in Europe since 2009. In Western and Central Europe, greater access to treatment and alternatives to heroin, along with relatively smaller numbers of new heroin users, have contributed to a change in the structure of the European heroin market. While the decreased heroin supply also affected Eastern and South-Eastern Europe, structural changes on the demand side to the extent observed in Western and Central Europe were not reported in those subregions.

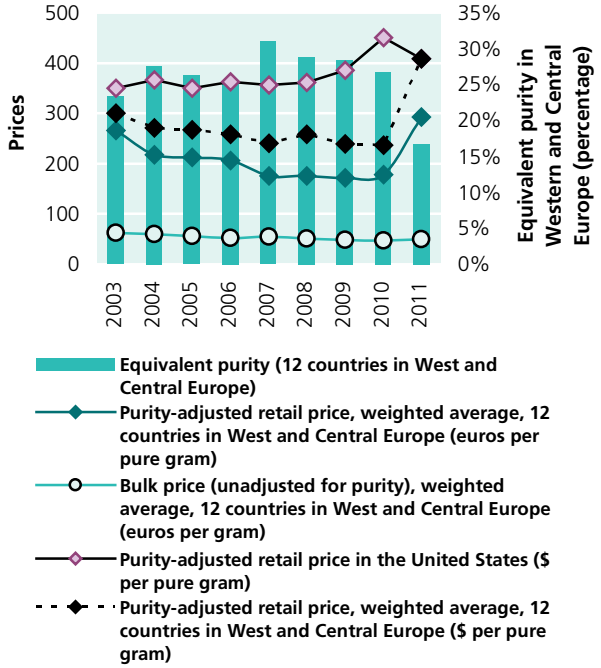
Increased law enforcement activity, as reflected in the figures for global heroin seizures, also affected the supply to Europe, where heroin seizures declined by 28 per cent in 2011 to 16 tons, only half the amount seized in 2008 (29 tons). A decline was also noticed in heroin seizures in the Islamic Republic of Iran (by 15 per cent to 23 tons) and

Fig. 37. Heroin seizures worldwide, in Europe and in selected countries, 2002-2011
(Tons)



Source: UNODC, data from annual report questionnaire and other official sources.

Fig. 38. Heroin retail prices in the United States and Western and Central Europe, 2003-2011



Source: United Nations Office on Drugs and Crime, data from the annual report questionnaire; Europol; and the United States Office of National Drug Control Policy.

Turkey (by 43 per cent to 7 tons) in 2011, two countries on the Balkan route through which Afghan opiates reach Europe.

Interestingly, heroin seizures had already started to decline in 2010 in Turkey and South-East Europe, despite the fact that they are further along the trafficking route than the Islamic Republic of Iran.

EMCDDA argues that the decline in seizures reported in Turkey and the European Union in 2010 and 2011 could be a result of changes in both trafficking flows and law enforcement activity.[65]

The assumption that changes in production levels and in law enforcement activity did indeed lead to changes in the volume of drug flow is also supported by purity figures from Western and Central European countries. In Germany, for example, a clear decline in heroin purity was seen: it was 34.1 per cent at the wholesale level in 2010, having increased steadily from 36.5 per cent in 2005 to 60.3 per cent in 2009.[66] The retail level followed a similar pattern from 2005, but reflected the decline in purity one year later, when it fell from 25 per cent in 2010 to only 11 per cent in 2011. Such drops in purity are often associated with the diminished availability of the drug in user markets: traffickers cut the drug with more adulterants or cutting agents to maintain their previous sales volumes.

Changes on the demand side have also contributed to a lesser flow of opiates towards Europe. Drug treatment and use indicators suggest that the heroin market, particularly in Western and Central Europe, is undergoing a structural change. Heroin users have a relatively high level of service contact and access to opioid substitution therapy or alternatives to heroin.[67] These alternative substances may also be obtained illicitly. In Estonia, for example, heroin users are reported to be using illicit synthetic opioids (fentanyl). Greece, Italy, Latvia, the Russian Federation, Slovakia and Switzerland all reported seizures of 1 kg or more of prescription and other opioids in 2011,[68] indicating that this phenomenon is not restricted to Western and Central Europe.

All these factors – substitution strategies, treatment and low levels of new use – represent a combination of long-term structural changes in the user population and short-term adaptive use strategies. They shed some light on how the heroin user population, particularly in Western and Central Europe, could react to supply fluctuations and a reduced flow of opiates into the region. The heroin seizures reported for 2011 in Western and Central Europe, which are at about the 2010 level, indicate that these changes and strategies, however, may not necessarily continue.

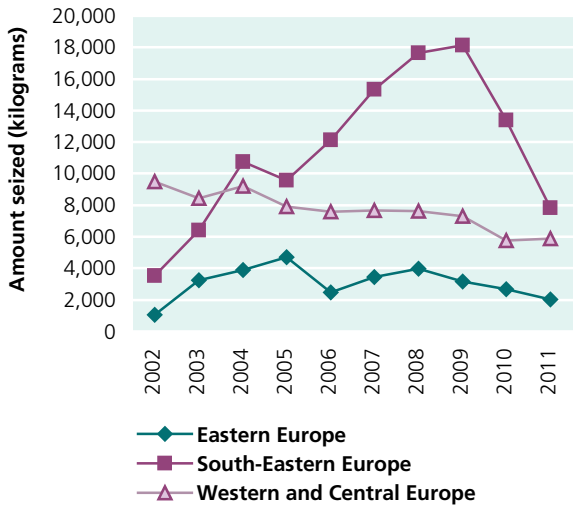
65 European Monitoring Centre for Drugs and Drug Addiction and European Police Office, *EU Drug Markets Report: A Strategic Analysis* (Luxembourg, Publications Office of the European Union, 2013), p. 30.

66 Tim Pfeiffer-Gerschel and others, *2012 National Report to the EMCDDA by the Reitox National Focal Point: Germany – New Developments, Trends and In-Depth Information on Selected Issues* (Deutsche Beobachtungsstelle für Drogen und Drogensucht, 2012), p. 190.

67 European Monitoring Centre for Drugs and Drug Addiction, *Annual Report 2012: The State of the Drugs Problem in Europe*, p. 73.

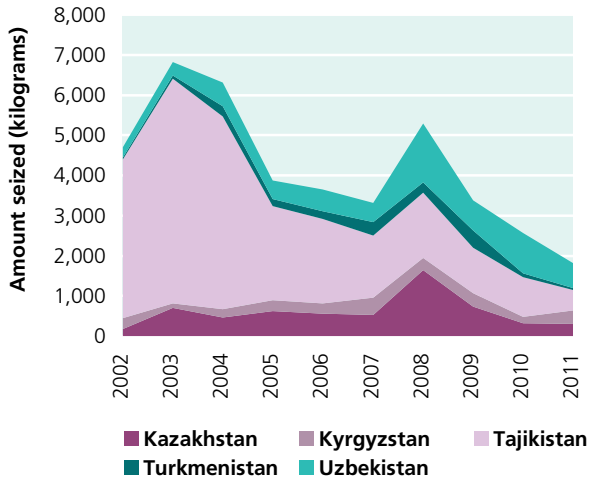
68 Annual report questionnaire replies for 2011.

Fig. 39. Heroin seizures in Europe, 2002-2011



Source: UNODC, data from annual report questionnaire and other official sources.

Fig. 40. Heroin seizures in Central Asia by country, 2002-2011



Source: UNODC, data from annual report questionnaire and other official sources.

The northern route, which is used mainly to supply the heroin market in Central Asia and the Russian Federation, reflects a different pattern. Overall, heroin seizures in Central Asia have been declining since the first decade of the twenty-first century, from an annual average of 5 tons per year during the period 2002-2006 to only 3 tons during the period 2007-2011, while demand in Central Asia and the Russian Federation is thought to be stable or increasing. The small peak in seizures in 2008 seems to reflect the high opium production in Afghanistan in that and the preceding year but did not change the overall declining trend. The link between production in Afghanistan and seizure levels in Central Asia is not evident and other factors are assumed to have played a role.

Changing patterns: increase in maritime trafficking to Africa

A strong increase in heroin seizures has been observed in Africa, especially in East Africa, since 2009. The amount of heroin seized in East, West and Central Africa remains small compared with those in other regions, but from 2009, they increased over fivefold. The vast majority of these seizures were made at sea borders or ports or on the open sea, which points to increased maritime trafficking of Afghan opiates towards Africa. Data on recent seizures made at sea borders, at ports or at sea suggest that large volumes are trafficked along this route: in a single case in April 2011, 202 kg of heroin was seized in Benin[69] as part of a controlled delivery operation conducted by the Governments of Benin and Pakistan and, in January 2012, 210 kg of heroin that had been trafficked via a maritime route was seized in the United Republic of Tanzania.[70]

69 United Nations Office on Drugs and Crime, *Paris Pact Drug Situation Report: Trafficking in Opiates Originating in Afghanistan* (March 2013).

70 Annual report questionnaire.

Data from heroin seizures reported in East Africa between 2010 and 2012 suggest that heroin is trafficked towards the sea borders and ports of Kenya and the United Republic of Tanzania. Later on, it is transported towards South Africa by road. Anecdotal information reveals that traffickers use a number of vessels to traffic opiates from ports in Iran (Islamic Republic of) and Pakistan to Africa. Dhows and, to a lesser extent, containers are used to reach East Africa, while containers are used more to reach West Africa, particularly Benin and Nigeria.

Emerging routes through the Middle East

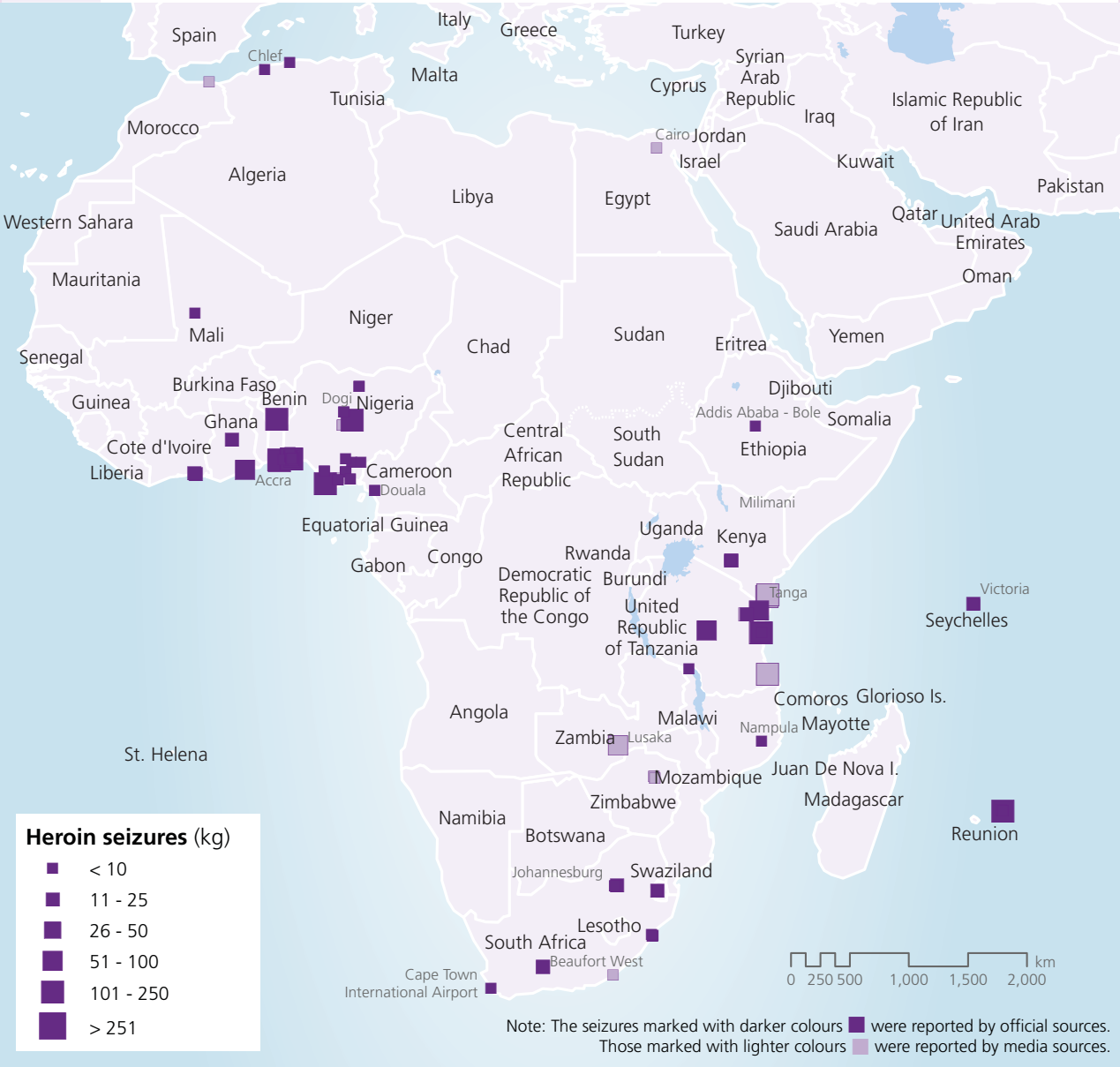
Iraq and the Middle East may be emerging as new trafficking routes: an increasing number of countries are reporting seizures of heroin sourced from Afghanistan. Whether that also indicates an increase in heroin abuse in the region remains to be seen. It is also noteworthy that between 2006 and 2011, most Pakistani traffickers arrested in Pakistan were headed for destinations in the Gulf States or in China, Malaysia and Thailand.

There are reports that strengthened law enforcement countermeasures on the border between the Islamic Republic of Iran and Turkey might have led to new trafficking routes emerging in Iraq.[71] In 2011, Turkish law enforcement authorities reported three operations linked to heroin trafficking through the north of Iraq that resulted in seizures of 550 kg of the drug.[72] Both heroin and opium are trafficked through Iraq. Canadian authorities reported seizures

71 Report of the Subcommission on Illicit Drug Traffic and Related Matters in the Near and Middle East on its forty-seventh session, held in Antalya, Turkey, from 19 to 23 November 2012 (UNODC/SUBCOM/47/5).

72 "The new patterns of drug trafficking in Turkey", presentation prepared by the Turkish Central Narcotics Division for the international conference entitled "Criminal drug organizations: situation in EU with special focus on the Balkans", Ohrid, the former Yugoslav Republic of Macedonia, October 2012.

Map 5. Locations of reported heroin seizures in Africa for the period 2010-2012



Source: UNODC data from the individual seizures database and UNODC Regional Office for Central Asia, mapping of drug seizures online.

Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations. The final boundary between the Sudan and South Sudan has not yet been determined.

of opium trafficked by air from Iraq to Canada during the period 2009-2012, including a single 10 kg shipment hidden in car parts.[73]

Many countries in the Middle East, including Saudi Arabia and the Syrian Arab Republic, have reported increases in opiate seizures to UNODC. Heroin seizures reported by the Syrian Arab Republic were, on average, over 80 kg during the period 2007 to 2011, compared with only 14 kg in the preceding five-year period; the quantity of heroin seized in Saudi Arabia has also increased since 2007, from an average of 1 kg during the period 2002-2007 to 41 kg in 2008, 56 kg in 2010 and 111 kg in 2011.[74] Lack of data makes it difficult to define whether these increases imply an increase in heroin use in the region, or whether traffickers are seeking alternative routes (notably to Europe).

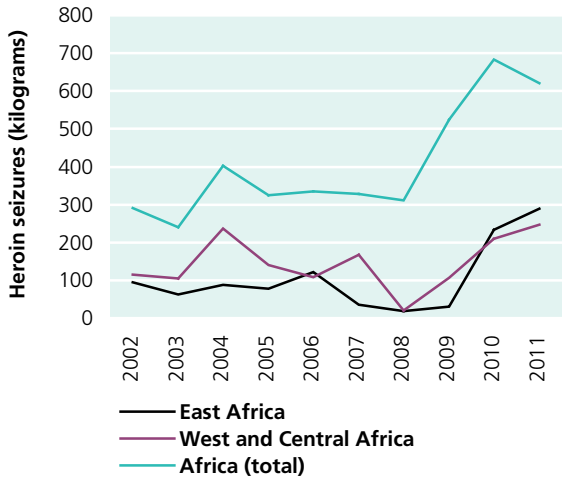
Finally, large shipments of heroin being trafficked in containers have been seized in the United Arab Emirates, which is a key node with major ports in Dubai, Khawr Fakkan and Abu Dhabi. Trade flow through harbours in the country may be exploited by drug traffickers for their illicit trade. In 2011, Dubai authorities seized 130 kg of heroin en route from Pakistan.[75]

73 Canada Border Services Agency, "CBSA finds 10 kilos of suspected opium concealed in steel gear", 24 February 2012 (www.cbsa-asfc.gc.ca/media/prosecutions-poursuites/tor/2012-02-24-eng.html).

74 UNODC annual report questionnaire.

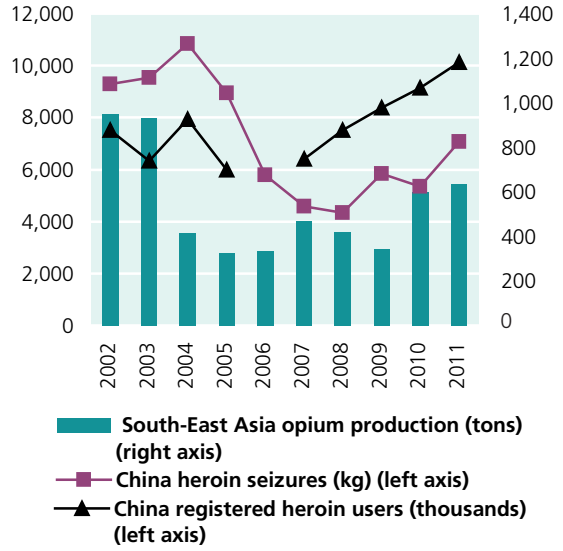
75 United Nations Office on Drugs and Crime and World Customs Organization, "UNODC-WCO Container Control Programme: year-

Fig. 41. Heroin seizures in Africa, 2002-2011



Source: UNODC, data from annual report questionnaire and other official sources and the World Customs Organization.

Fig. 42. Opium production in South-East Asia and heroin seizures and use in China, 2002-2011



Source: UNODC, data from annual report questionnaire and other official sources.

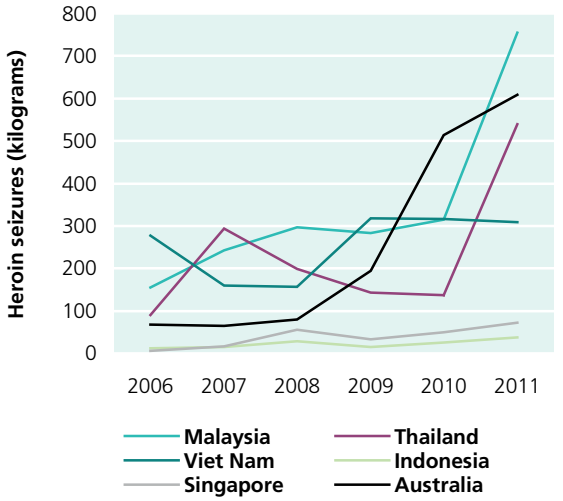
Against the trend? The heroin market in East and South-East Asia

The pattern of heroin seizures in East and South-East Asia is quite different to that in Europe. The number of registered heroin users in China is increasing and it appears that opium production in the Lao People's Democratic Republic and Myanmar is unable to meet demand. This would indicate that other sources, possibly Afghanistan, are supplying the country with opiates.

Seizure trends in China generally follow opium production trends in South-East Asia. Heroin seizures in China reached their lowest levels in 2007 and 2008, which ties in with the low levels of opium production seen in the Lao People's Democratic Republic and Myanmar during the period 2005-2006 (factoring in the one-year time lag between the production and seizure of the drug). Subsequently, heroin seizures rose again, following increases in opium production in South-East Asia. However, the number of registered heroin users was much higher than in the first half of the decade, when production levels and seizure levels in South-East Asia were much lower. This could indicate the growing importance of other source regions for the Chinese opiate market, in particular Afghanistan, which registered record harvests in some years when opium production in South-East Asia was low.

This indicates a diversification of source regions and thus trafficking routes, which include maritime and courier routes, possibly taking advantage of growing licit trade flows between China and South-West Asia.[76] China reports

Fig. 43. Heroin seizures in selected countries in South-East Asia and Oceania, 2006-2011 (Kilograms)



Source: UNODC, data from annual report questionnaire and other official sources.

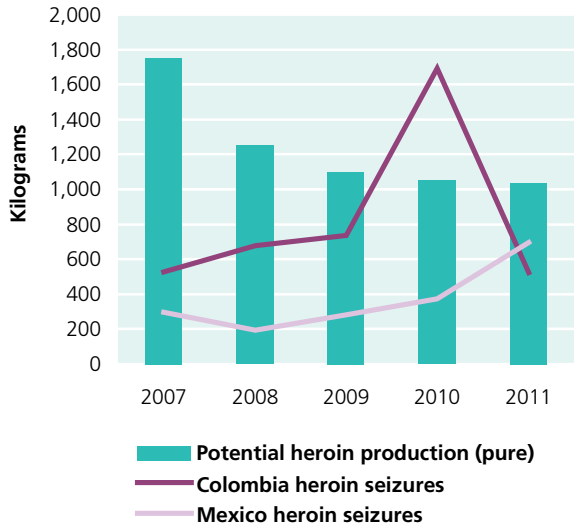
Malaysia as the second leading country, after Myanmar, from which drugs enter the country, and lists Afghanistan as the second leading source country for opiates entering the country. As the opium production areas in Myanmar border China and there is little need to resort to other trafficking routes, it is not unlikely that Afghan opiates enter China through regional hubs in Malaysia and Thailand via couriers; this is confirmed by statistics from Malaysia and Pakistan.[77]

end report 2011", p. 11 (available from www.unodc.org/documents/toc/CCP_Year_End_Report_2011.pdf).

76 For more information on this issue, see United Nations Office on Drugs and Crime, *Misuse of Licit Trade for Opiate Trafficking in Western and Central Asia: A Threat Assessment* (October 2012). More research is needed to get a better understanding of misuse of licit trade for drug trafficking in China and South-East Asia.

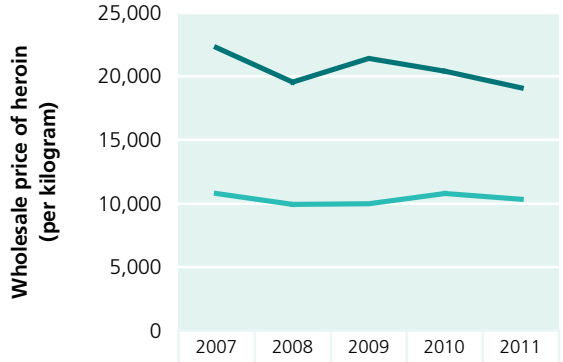
77 Annual report questionnaire replies submitted by Malaysia and Pakistan for 2011.

Fig. 44. Potential heroin production in Colombia and seizures in Colombia and Mexico, 2007-2011



Source: UNODC, data from annual report questionnaire and other official sources and Illicit Crop Monitoring Programme.

Fig. 45. Colombia, annual wholesale price of heroin, 2007 to 2011



	2007	2008	2009	2010	2011
Heroin (wholesale), Colombian pesos per kg (thousands)	22,294	19,560	21,422	20,421	19,101
Heroin (wholesale), United States dollars per kg	10,780	9,950	9,993	10,786	10,348

Source: United Nations Office on Drugs and Crime and Colombia, *Colombia: Coca Cultivation Survey 2011* (June 2012).

The rising levels of heroin seizures in several countries in South-East Asia and Oceania supports the assumption of a growing opiate flow through these regions to known consumer markets such as China and Australia. Owing to a lack of drug use statistics in many South-East Asian countries, it is difficult to assess whether and how this development affects opiate use in those countries.

Problems identifying opiate flows in the Americas

All countries in the Americas, except Canada, are supplied by heroin produced in the region. According to Government reports, the Canadian heroin market is supplied by heroin originating in Asia, mainly Afghanistan. Middle Eastern and Asian organized criminal groups both within Canada and abroad continued to be involved in the smuggling of heroin intended for Canada.[78]

The available information on heroin production in Colombia and Mexico, two important supply countries for the United States market, is inconsistent and does not fully explain the heroin supply situation in the region, given that the potential cultivation is greater in Mexico, while the United States reports Colombia as its main supplier.[79] There is insufficient information about the role played by heroin originating in Afghanistan for the United States market.

In Colombia, between 2007 and 2011, 4 tons of heroin of unknown purity was seized, while potential production amounted to 6 tons of pure heroin. In 2010, the amount of heroin (of unknown quality) seized was even larger than the amount of potential production in the country. Allowing for lower purity of the seized heroin, this would indicate a very high seizure rate, which would leave only a small amount of heroin for local consumption and export. Though, with an annual prevalence of only 0.02 per cent among those aged 15-64 years, opiates are not widely used in the country, and the number of estimated opiate users is around 6,000.

Official data show a strong decline in opium and heroin production in Colombia over the period 1998-2007 and further declines to 2011. However, heroin prices did not increase. Nominal prices for heroin at the wholesale level were lower in 2011 in both dollars and Colombian pesos, than they were five years before, suggesting that the supply of heroin did not drastically diminish.

In comparison, in Mexico, potential heroin production is estimated to be 30 times higher than in Colombia, and heroin seizures reached the Colombian level in 2011. Despite this, and while acknowledging the growing importance of Mexico as a supply country for heroin reaching its market, the United States – on the basis of information from its Heroin Signature Program – continues to consider Colombia the primary source of heroin in the country,[80] although heroin from South-West Asia continues to be available. The United States estimates poppy cultivation

78 Annual report questionnaire replies submitted by Canada for 2011.

79 Annual report questionnaire replies submitted by the United States for 2011.

80 Levamisole and tetramisole were mentioned as cutting agents used in heroin available in the United States (annual report questionnaire replies submitted by the United States for 2011). These substances are known to be used in cocaine manufacture in Colombia, where they are added to export-ready cocaine in clandestine laboratories.

in Mexico at 12,000 hectares,[81] with a correspondingly higher potential production of heroin.[82]

It is unclear how Colombia, given its much lower potential production, could supply larger amounts to the United States market than Mexico. This points to heroin production in Colombia having a greater degree of importance than that reflected in the available potential production estimates, and/or different interpretations could be drawn from the United States Heroin Signature Program, since "investigative reporting suggests that heroin producers in Mexico maybe using Colombian processing techniques".[83]

81 *International Narcotics Control Strategy Report*, vol. 1, *Drug and Chemical Control*.

82 The Government of Mexico does not validate the estimates provided by the United States of America, as they are not part of its official figures and it does not have information on the methodology used to calculate them. The Government of Mexico is in the process of implementing a monitoring system in collaboration with UNODC to estimate illicit cultivation and production.

83 National Drug Intelligence Center of the U.S. Department of Justice. *2011 National Drug Threat Assessment*, p.27.