Opium cultivation is reaching historic levels; prevalence of use remains stable

According to the limited information available, at 0.7 per cent and 0.4 per cent of the population aged 15-64 respectively, the global prevalence of use of opioids and opiates has remained stable, representing 32.4 and 16.5 million users. Due to a 7 per cent increase, from 209,000 ha in 2013 to 224,000 ha in 2014, opium cultivation in Afghanistan is now at its highest level since estimates became available, although the increase was actually greater from 2012 to 2013 (36 per cent) (see figure 39). The 63 per cent reduction in poppy eradication in Afghanistan, from 7,348 ha in 2013 to 2,692 ha in 2014, may be a contributing factor.

Following a consistent downward trend between 2000 and 2006, opium poppy cultivation in both the Lao People’s Democratic Republic and Myanmar increased steadily to reach roughly 64,000 ha in 2014, of which an estimated 57,600 ha were cultivated in Myanmar and 6,200 ha in the Lao People’s Democratic Republic.

Only partial information about the extent of opium poppy cultivation and heroin production in the Americas is available, but Mexico eradicated 14,662 ha of opium poppy in 2013 (7 per cent less than in 2012) and Colombia estimated the area under opium poppy cultivation in 2013 to be 298 ha. Colombia also reported the eradication of 514 ha of opium poppy in 2013 and the dismantling of one heroin laboratory per year over the 2011-2013 period.

Global potential opium production also continued to increase in 2014, reaching 7,554 tons, its second-highest level since the late 1930s (see figure 40). Opium production in Afghanistan accounted for an estimated 85 per cent of that total (6,400 tons) and, at 410 tons of heroin of export purity, 77 per cent of global heroin production (estimated at 526 tons).\textsuperscript{232} The remaining 116 tons (heroin of unknown purity) were produced in the rest of the world, but because the conversion ratios were updated in 2014, potential heroin production in 2014 is not comparable with production in previous years.

The majority of the opium and illicit morphine seized in 2013 was concentrated around poppy cultivation areas in Afghanistan and its neighbouring countries, while heroin seizures covered a wider area (see figure 41). Since 2002, Afghanistan, Iran (Islamic Republic of) and Pakistan have consistently accounted for more than 90 per cent of the global quantity of opium seized each year and this pattern continued in 2013 when, with a 13 per cent increase from the previous year, the Islamic Republic of Iran remained the country with the largest quantity of opium seized (436 tons).

Globally, heroin seizures increased by 8 per cent from 2012 to 2013, whereas illicit morphine seizures decreased by 26 per cent (see figure 42). The largest drop in illicit morphine seizures was observed in Afghanistan, where they fell from 44 tons seized in 2012 to 24 tons in 2013. Since 2005, Afghanistan, Iran (Islamic Republic of) and Pakistan have accounted for more than 90 per cent of global morphine seizures each year, but in 2013 the quantity increased in the Islamic Republic of Iran (to 10.4 tons from 7 tons in 2012)\textsuperscript{233} and in Pakistan (to 3.8 tons from 1.4 tons in 2012).

Up-to-date information on the use of opiates was available in only a few countries and points to stable global demand for heroin, whereas the non-medical use of prescription

\textsuperscript{232} UNODC updated the conversion ratio from opium to heroin in 2014 and estimated export quality heroin to have a purity of 52 per cent. The updated conversion ratio is 9.6 kg of opium for the production of 1 kg of export quality heroin (52 per cent purity). For details, see Afghanistan Opium Survey 2014: Cultivation and Production, p. 35.

\textsuperscript{233} Islamic Republic of Iran, Drug Control Headquarters, Drug Control in 2013 (March 2014).
opioids has continued to increase in many regions. The markets for opiates in Africa, South-West Asia, parts of East Asia, the Middle East, Europe and Oceania are mainly supplied by South-West Asia (Afghanistan), while some markets in South-East Asia and Oceania are also supplied by South-East Asia (the Lao People’s Democratic Republic and Myanmar). The Americas are mainly supplied by Latin America (Colombia and Mexico), with the exception of Canada, which to a significant extent is supplied by Afghan heroin.

Shifts in opiate trafficking routes

Despite the increase in opium and illicit morphine seizures in the countries neighbouring Afghanistan, the stability of global seizures of heroin from 2008 to 2013 and of overall demand for heroin imply that the increase in estimated global opium and heroin production has not yet been reflected in a significant increase in heroin supply in most regions. There are signs, however, of increases in some heroin-related indicators (such as mortality and health emergencies) in the United States and the United Kingdom, where there are also indications of increased purity and lower prices. Moreover, in South and South-East Asia and West and East Africa, there are indications of increasing trafficking, but the paucity of data makes it difficult to determine whether these subregions are expanding markets for heroin.

The so-called “Balkan route” (through Iran (Islamic Republic of) and Turkey overland via South-Eastern Europe to Western and Central Europe), the so-called “northern route” (through Central Asia to the Russian Federation) and the so-called “southern route” (southwards through Iran (Islamic Republic of) or Pakistan) are the established global trafficking routes of Afghan opiates. These routes are marked, however, by constant changes; for example, two major heroin seizures in Armenia (917 kg) and Georgia (588 kg) reported in 2014 were in stark contrast to the very low levels of seizures made in those countries over the past 15 years. This suggests that drug trafficking networks may be experimenting with new

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trajectories, although significant seizures continue to be made elsewhere on the Balkan route.

There is no evidence of a decline in the demand for heroin in the Russian Federation, yet heroin seizures along the northern route have actually decreased. Despite a temporary reduction from 2011 to 2013, the fact that heroin seizures in Afghanistan itself have increased in the past decade may show that an increasing amount of opiates are being intercepted before reaching markets outside Afghanistan. On the other hand, several countries reported increasing seizures of heroin trafficked via the southern route (on which heroin is trafficked to Asia and Europe often via African countries) as well as maritime routes, which is consistent with reports of an expansion of trafficking along the southern route. In Pakistan, opium seizures increased for the third consecutive year to reach 34 tons in 2013. The strengthening of controls between Afghanistan and Iran (Islamic Republic of) and between Iran (Islamic Republic of) and Turkey may have forced traffickers to move southwards towards the coasts of Iran (Islamic Republic of) and Pakistan.

The increasing importance of Africa as a transit region for Afghan heroin bound for Europe and other regions has been reflected in increasing seizures of heroin being reported in recent years by some African countries, particularly in East Africa, and in seizures in Europe of African provenance. Since 2010, heroin seizures associated with the southern route have been reported in a number of European countries, including Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, the Netherlands, Portugal, Serbia, Spain, Sweden, Switzerland, Ukraine and the United Kingdom (see table 6 and figure 43). It is not clear whether this is a long-term shift away from the Balkan route or simply a response to opportunities

Table 6. Large seizures of heroin in Belgium and the Netherlands linked to the southern route in 2013 and 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>Method</th>
<th>Route</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>863 kg</td>
<td>Container</td>
<td>Mozambique – Belgium – the Netherlands</td>
<td>Seized at Antwerp seaport</td>
</tr>
<tr>
<td>2013</td>
<td>230 kg</td>
<td>Container</td>
<td>Pakistan – Belgium – the Netherlands</td>
<td>Seized at Antwerp seaport</td>
</tr>
<tr>
<td>2014</td>
<td>764 kg</td>
<td>Container</td>
<td>Iran (Islamic Republic of) – United Arab Emirates – the Netherlands</td>
<td>Seized at Rotterdam seaport</td>
</tr>
</tbody>
</table>

Sources: UNODC, The Illicit Drug Trade through South-Eastern Europe (March 2014) and the Netherlands, Public Prosecution Service.
presented by perceived lower levels of law enforcement along the southern route.\textsuperscript{238}

Although suspected for decades,\textsuperscript{239} recent seizure data suggest that movements of large shipments of heroin from Afghanistan across the Indian Ocean to East and Southern Africa may have become more common. Dhows (traditional sailing vessels used in the Red Sea and the Indian Ocean) are known to move opiates from Afghanistan to Kenya and the United Republic of Tanzania.\textsuperscript{240} In 2014, more than 2,200 kg of heroin were seized on the Indian Ocean by the Combined Maritime Forces,\textsuperscript{241} which is more than the total reported heroin seizures for the whole of Africa between 2011 and 2013. In Kenya, 377 kg of heroin and 33,200 litres of liquid heroin were seized in 2014 from a single ship transiting via the Islamic Republic of Iran that was destined for Mombasa, Kenya; in the United Republic of Tanzania, a single record seizure of 1,032 kg of heroin transiting via Pakistan and smuggled to the country by dhow was reported;\textsuperscript{242} while in West Africa, Nigeria reported the seizure of 25 kg of heroin bound for North America and Western and Central Europe in 2013. Thus, there are increasing signs of parallels with the phenomenon in the 2000s, when Africa began to play a strategic role in the trafficking of cocaine.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{fig43}
\caption{Departure areas of heroin seized in Italy, 2011-2013}
\end{figure}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{fig44}
\caption{Quantities of heroin seized in Africa, 2003-2013}
\end{figure}

\textsuperscript{238} UNODC, Afghan Opiate Trafficking through the Southern Route, 2015 (Vienna, 2015).
\textsuperscript{239} United States, Drug Enforcement Administration (DEA), Drug Trafficking from Southwest Asia: Drug Intelligence Report (August 1994).
\textsuperscript{241} Combined Maritime Forces is a multinational naval partnership that operates in international waters, encompassing some of the world’s most important shipping lanes in the Indian Ocean and adjoining bodies of water.
\textsuperscript{242} UNODC, Afghan Opiate Trafficking through the Southern Route, 2015 (Vienna, 2015).
\textsuperscript{243} UNODC, World Drug Report 2014.

\section*{Canada and the United States: different sources of supply in heroin trafficking}

Compared with global average prevalence, opioid use remains high in North America (3.8 per cent). In the United States, there are indications of a partial shift in the opioid market towards use of heroin driven, in part, by changes in the formulation of OxyContin — one of the major prescription opioids that is misused — to a controlled-release formulation that cannot be snorted or injected,\textsuperscript{243} as well as by an increase in the availability of...
heroin and a decrease in its price in some parts of the country. A recent household survey in the United States indicated that there was a significant decline in the misuse of prescription opioids from 2012 to 2013.\textsuperscript{244}

The number of drug-related deaths continues to rise in the United States, with heroin-related cases increasing considerably (from 5,925 deaths in 2012 to 8,257 in 2013) to reach their highest levels in the past decade.\textsuperscript{245} Prescription painkiller overdoses also continue to rise, particularly among women. Over the period 2004-2011, emergency room cases related to heroin and other opioid use rose by 183 per cent (see figure 45).\textsuperscript{246}

SeIZURES OF Heroin in the United States have increased since 2008 (to 6.2 tons in 2013). Authorities have reported increased trafficking of both Mexican- and South American-produced heroin\textsuperscript{247} and, in 2014, Mexico reported being a transit country for heroin produced in Colombia and destined for the United States.\textsuperscript{248} Indeed, the majority of heroin in the United States is estimated to be supplied by Latin American production.\textsuperscript{249} In 2011 and 2012, however, authorities suggested that the availability of Afghan heroin was increasing in the United States,\textsuperscript{250} although current estimates of its share of consumer markets have not been made available to UNODC (past estimates pointed to a market share of around 4 per cent).\textsuperscript{251} Seizures of Afghan opiates made on the southern route in Africa destined for the United States seem to confirm that organized criminal groups may be trafficking heroin to supply the growing market in the United States.\textsuperscript{252}

Unlike all the other countries in the Americas, Canada is not supplied to a large extent by Latin American heroin. According to the Royal Canadian Mounted Police National Intelligence Coordination Center, between 2009 and 2012 at least 90 per cent of the heroin seized in Canada originated in Afghanistan.\textsuperscript{253} The southern route was reportedly the major conduit for those shipments, with nearly 50 per cent having transited through India, Iran (Islamic Republic of) and Pakistan.\textsuperscript{254,255}

**Australia: a mixed market with constant changes in supply source**

Levels of opioid use in Australia and New Zealand remain high (2.9 per cent), mainly because of high levels of misuse of prescription opioids. According to a recent survey in Australia, there has been an increase in the misuse of prescription opioids (from 3.0 per cent in 2010 to 3.3 per cent in 2013), while the prevalence of heroin use has declined from 0.2 to 0.1 per cent.\textsuperscript{256}

There are also signs of changes in the heroin market in Oceania. The number of heroin seizures made at the Australian border increased in 2013 from the previous year, with 429 kg being intercepted, confirming the increasing trend since 2004. Most of the heroin seized in Australia in 2013 originated in South-East Asia, while in previous

\textsuperscript{244} United States, SAMHSA, Center for Behavioral Health Statistics and Quality, Results from the 2013 National Survey on Drug Use and Health: Detailed Tables, NSDUH Series H-46, HHS Publication No. SMA 13-4759 (Rockville, Maryland, 2014), tables 7.20B and 7.30B.


\textsuperscript{247} United States, DEA, *National Drug Threat Assessment Summary* (November 2013).

\textsuperscript{248} Country report submitted by Mexico to the Twenty-fourth Meeting of Heads of National Drug Law Enforcement Agencies, Latin America and the Caribbean (October 2014).

\textsuperscript{249} In 2012, heroin from South America accounted for 51 per cent (by weight) of the heroin analysed through the DEA Heroin Signature Program, while heroin from Mexico accounted for 45 per cent and heroin from South-West Asia accounted for 4 per cent; see United States, DEA, *National Drug Threat Assessment Summary, 2014* (November 2014), p. 9.

\textsuperscript{250} UNODC, responses to the annual report questionnaire submitted by the United States for 2011 and 2012.


\textsuperscript{252} UNODC, *Afghan Opiate Trafficking through the Southern Route, 2013* (Vienna, 2015).

\textsuperscript{253} UNODC Vienna southern route study conference: view from Canada, presentation by the Royal Canadian Mounted Police, UNODC regional workshop on Afghan opiate trafficking on the southern route (Vienna, March 2014).


years the supply fluctuated between heroin originating in South-East Asia and South-West Asia (see figure 47). In 2013, by number of seizures, the Netherlands, Viet Nam and Thailand (in descending order) were the primary embarkation points of heroin reaching Australia, while Thailand, Viet Nam, Taiwan Province of China and Malaysia (also in descending order) were the principal last departure points in terms of quantities seized.257

Europe: a diverging heroin market with emerging supply routes

The heroin market in Europe is marked by variations across subregions. In Western and Central Europe, there are indications of a stable or downward trend in the use of heroin, but in Eastern and South-Eastern Europe, the prevalence of use of heroin remains high.

Quantities of heroin seized in Europe accounted for almost 30 per cent of all heroin seized globally in 2013. Heroin seizures in South-Eastern Europe increased slightly in 2013 from the previous year, with Turkey seizing 13.5 tons, slightly more than the 13.3 tons reported in 2012. A recent government report in Turkey258 highlighted several new developments, including an increase in heroin arriving in Turkey from Iraq rather than exclusively from the Islamic Republic of Iran, the increasing use of sea containers in heroin trafficking and the diversification of the activities of organized criminal groups, which are trafficking not only heroin but also cannabis resin and methamphetamine.

The quantities of heroin seized in Eastern Europe increased slightly in 2013, but remained stable from a long-term perspective. Opioid use in Eastern Europe, in particular in the Russian Federation and Ukraine, remains high, with an estimated 2.37 million (2.29 per cent prevalence), including 291,500 opiate users (0.9 per cent prevalence). Opioid use in the other countries in the subregion remains lower than the global average, although experts in Belarus perceive an increase in opioid use, particularly of acetylated opium and pharmaceutical opioids. Also, in the Russian Federation the replacement of heroin with cheaper alternatives such as acetylated opium and desomorphine continues to be reported.259 A major health consequence of people injecting opioids in Eastern Europe is the high prevalence of HIV, which is estimated to be 24.6 per cent in the Russian Federation and 19.7 per cent in Ukraine, and accounts for a third of the global estimated number of PWID living with HIV in the region. In the Russian Federation, drug-related deaths due mainly to opioid overdose are also reported to be high, at 80 deaths per million of the population.

In Western and Central Europe, seizures of heroin in most countries either remained stable or continued to decline gradually, except in Belgium, where seizures of heroin increased dramatically, from 112 kg in 2012 to 1.2 tons in 2013, as a result of two large seizures. It is important to mention that some large maritime seizures were made in Western and Central Europe, which suggests that significant heroin shipments were not detected at points of departure and transit, whether in South-West Asia, the

258 Turkish National Police, Department of Anti-Smuggling and Organized Crime, Turkish Drug Report 2013 (Ankara, 2014).
259 UNODC, responses to annual report questionnaire by Russian Federation 2012-2013.
Middle East or Gulf countries. This also suggests that the ports of Belgium and the Netherlands may play a key role as entry points to Europe for heroin imported from Afghanistan via the southern route.260

Other opioids, such as buprenorphine, fentanyl and methadone, are available in illicit markets in Western and Central Europe. For example, fentanyl and buprenorphine are the main opioids used in Estonia and Finland, respectively. In some instances, these substances account for a significant proportion of overdose deaths, as in the case of fentanyl in Estonia. On the other hand, injecting heroin has been declining in Western and Central Europe,261 as has the number of heroin users entering treatment for the first time, resulting in an ageing cohort of heroin users currently in treatment.

In the United Kingdom, following a decrease in 2011, there was an increase in heroin-related deaths in 2013. This increase may be partially explained by an increase in heroin purity which, having been low in 2011 and 2012, rose to almost its 2010 level in 2013. The average wholesale price of heroin in the United Kingdom decreased slightly from £30,000 per kilogram in 2012 to £28,000 in 2013,262 which may indicate an increase in the heroin supply and may also be related to the increase in production in Afghanistan.

Heroin is trafficked to Europe via the Balkan route and the northern route, but heroin shipments from Iran (Islamic Republic of) and Pakistan are also entering Europe by air or sea, either directly or transiting through countries in East and West Africa. The quantity of heroin seized in Europe over the past decade has varied greatly and, since 2010, supplies of heroin to the United Kingdom from Afghanistan via the Balkan route have decreased. Belgium and the Netherlands remain important transit points for heroin trafficking to the United Kingdom via heavy goods vehicles and ferries.263

### Increase in heroin seizures in East and South-East Asia

In the absence of any recent reliable data on the extent of the use of opioids in most parts of Asia it is difficult to determine a trend, although, based on expert perceptions, it is considered to be generally stable. Expert perceptions of trends in drug use indicate that opioid (including heroin) use is perceived to be decreasing in China, where, although the total number of registered heroin users increased by 6 per cent in 2013, to 1.32 million heroin users, the proportion of heroin users among all registered drug users decreased. This was because of an increase in the proportion of users of synthetic opioids, which may also include opiate polydrug users (see figure 50).

Historically, the southern route has been a marginal conduit for Afghan opiates trafficked to East and South-East Asia, as opiates produced in Myanmar tend to feed that market. There have been various reports, however, that Myanmar may be unable to meet regional demand, and

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260 UNODC, Afghan Opiate Trafficking through the Southern Route, 2015 (Vienna, 2015).
263 UNODC, responses to annual report questionnaire by the United Kingdom.
that heroin is trafficked to East and South-East Asia from Afghanistan.\textsuperscript{264} It is quite likely that a portion also travels north from Afghanistan overland via Central Asia to China,\textsuperscript{265} the primary consumer in the Asia region.\textsuperscript{266} 

Amounting to 11.8 tons in 2013, seizures of heroin in East and South-East Asia increased for the third consecutive year. China continued to account for the majority of heroin seizures in the region, with annual seizures of 8.5 tons, up from 7.3 tons in 2012. The authorities in China reported that northern Myanmar remained the main source of heroin in the Chinese market, but also noted some cases of seizures of opiates originating in Afghanistan.\textsuperscript{267} 

**Africa: possible increase in heroin use**

Although information on the extent of drug use in Africa is limited, according to UNODC the prevalence of use of opiates is estimated at 0.3 per cent of the population aged 15-64 (an estimated 1.88 million users). Moreover, the increasing importance of Africa as a transit area for Afghan heroin bound for markets in other regions may have led to an increase in heroin use locally.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig01.png}
\caption{Trends in registered drug users and the proportion of registered drug users, by drug type in China, 2002-2013}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig02.png}
\caption{Number and weight of annual Afghan heroin seizures in China, 2009-2013}
\end{figure}

Source: UNODC, responses to annual report questionnaire and other official sources.


\begin{itemize}
\item \textsuperscript{264} UNODC, *Afghan Opiate Trafficking through the Southern Route*, 2015 (Vienna 2015).
\item \textsuperscript{266} Even more confusingly, at times traffickers seem to use western China as a transit zone between Pakistan and Central Asia (based on seizure data reported by the World Customs Organization).
\item \textsuperscript{267} Country report submitted by China to the Thirty-eighth Meeting of Heads of National Drug Law Enforcement Agencies, Asia and the Pacific.
\end{itemize}