1.2 The global heroin market

Worldwide, more than 15 million people consume illicit opiates[1] (opium, morphine and heroin). The large majority use heroin, the most lethal form. More users die each year from problems related to heroin use, and more are forced to seek treatment for addiction, than for any other illicit drug. Among illicit narcotics, opiates are also the most costly in terms of treatment, medical care and, arguably, drug-related violence. In addition, heroin is the drug most associated with injection, which brings about a host of acute and chronic health problems, including the transmission of blood-borne diseases such as HIV/AIDS and Hepatitis C. In Central Asia, Ukraine and the Russian Federation, injecting opiates is linked to nearly 60-70% of all HIV infections.[2]

Beyond its health impact, the illicit opiate industry also has a detrimental effect on stability and security in a number of places, including through the funding it provides for insurgents in production areas, particularly in Afghanistan. In 1998, the United Nations General Assembly Special Session on drugs already expressed 'deep concern about links between illicit drug production, trafficking and involvement of terrorist groups, criminals and transnational organized crime.'[3] In some regions, the nexus of illicit drugs, organized crime and instability has taken the form of growing infiltration of state institutions by drug trafficking groups.

Getting opiates from producer to consumers worldwide is a well-organized and, most importantly, profitable activity. The most lucrative of illicit opiates, heroin, presently commands an estimated annual market value of US$55 billion. When all opiates are considered, the number may reach up to US$65 billion. Traffickers, essential to the transportation of drugs from production areas to lucrative end-user markets, pocket most of the profits of this trade. A rough estimate of the number of traffickers involved in moving this illegal commodity across countries and regions would likely stand at well above 1 million people.[4]

The problem is not new and tremendous efforts have been made by governments over the past decades to stem the flow of illicit opiates. Many successes have been obtained. Most of them have been local, however, and over the long term, global illicit opiate production has increased.

The supply source for this huge underground economy is now concentrated in three areas: Afghanistan, South-East Asia (mostly Myanmar) and Latin America (Mexico and Colombia). Together, they supply nearly all the world's illicit opium and heroin, but Afghanistan stands out among this group, accounting for around 90% of global illicit opium production in recent years.

1 Opiates are a group of psychoactive substances derived from the poppy plant, which includes opium, morphine, codeine and some others. The term 'opiate' is also used for the semi-synthetic drug heroin that is produced from poppy compounds.

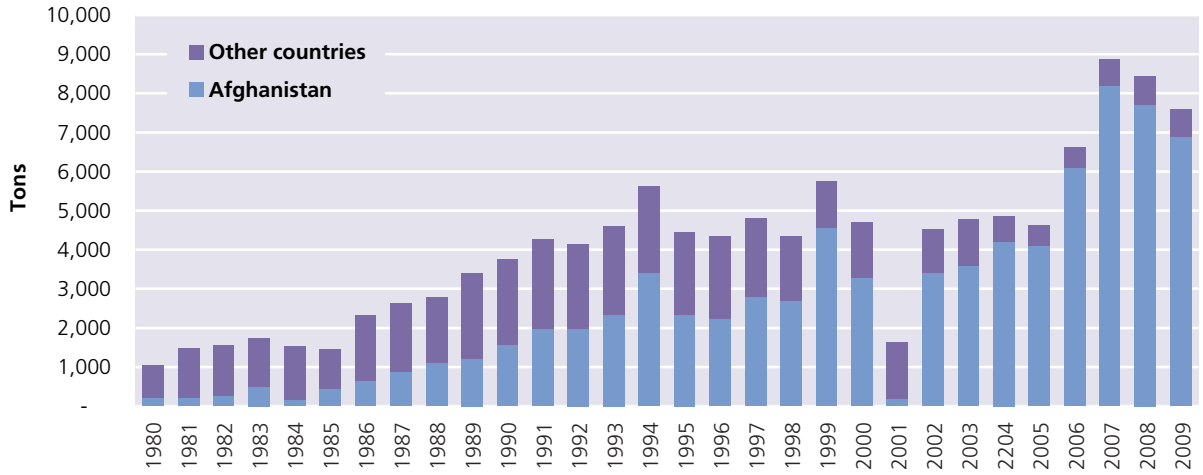
2 Mathers B., Degenhardt L., Phillips B., Wiessing L., Hickman M., Strathdee A., Wodak A., Panda S., Tyndall M., Toufik A. and Mattick R, on behalf of the Reference Group to the United Nations on HIV and Injecting Drug Use, "Global epidemiology of injecting drug use and HIV among people who inject drugs: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

3 United Nations General Assembly Special Session on the World Drug Problem (UNGASS), New York, June 8-10, 1998.

4 Based on the annual number of arrests for heroin trafficking reported and a tentative, but very high, arrest ratio of 20% (1 in 5 traffickers arrested, which is most certainly well above the real number).

Fig. 5: Global potential opium production, 1980-2009

Source: UNODC World Drug Report (figure for 2009 based on 2009 Survey results for Afghanistan and 2008 data for the rest of the world)



By itself, Afghanistan provides 85% of the estimated global heroin and morphine supply, a near monopoly.

In a 2009 Political Declaration reviewing drug control achievements over the previous decade, UN Member States recognized that 'the supply of opiates originating in Afghanistan continues to pose serious challenges to the international community.'[5] On that occasion, Member States also decided to redouble their efforts and to obtain decisive results against illicit supply and demand by 2019. Obtaining such results will require clear improvements in the efficacy of the response provided so far by the international community. A first obstacle stands in the way of designing a reinvigorated strategy. Our understanding of the transnational illicit opiate economy, as well as of its links with other socio-economic and political issues, remains fragmented and relatively superficial. Designing the international response that would solve this decades-old problem within the next 10 years thus requires a particular effort to fill knowledge gaps.

1.2.1 Dimensions of the global opiate market

Estimating demand and supply

As with any other commodity, the laws of supply and demand apply to the trade in illicit opiates. However, unlike most commodities, information on supply and demand is not always readily available due to the illicit nature of the trade. Supply and demand depend on one another in multiple ways; there is no simple link between them. For example, a significant drug supply in trafficking transit regions appears to encourage demand in places where there was previously none.

Estimates presented in this chapter draw heavily on the data reported by UNODC surveys (for example, in Central Asia, the Russian Federation and Pakistan), annual reports from governments to UNODC, referred to as the Annual Reports Questionnaire (ARQ) and UNODC estimates. The UNODC Illicit Crop Monitoring Programme, which collects data on global opium poppy cultivation, was used as the main source of production data.[6] Other indicators examined included the heroin seizure databases of the World Customs Organization (WCO) and UNODC. A trend analysis of both opiate use and seizures data for the 2000-2008 period was carried out by UNODC over the past year to identify the patterns and estimate the magnitude of opiate flows throughout the world.

One important caveat that must be borne in mind is that while the estimates presented are the best currently available, they are not always based on direct research. In the case of demand, indirect methods must sometimes be used, due to the absence - for most countries - of any robust data collection system to arrive at scientifically sound per capita consumption estimates. Only 35% of all countries and territories (76 out of 217) provided data on opiate prevalence rates in the 2008 ARQ; 141 (65%) did not provide data. Out of this total, UNODC used other available sources to calculate drug use prevalence for 55 countries (25%).

Further analysis of information gaps reveals that in 2008, UNODC received no information on opiate

5 United Nations, Commission on Narcotic Drugs (CND), Fifty-second session, Vienna, 11-20 March 2009 (UN document number E/CN.7/2009/Res. 52/2).

6 The details of this methodology can be found in UNODC's *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, pp.36-37. They can also be found in the online methodology section of the *World Drug Report*.

Table 1: Availability of data on opiate abuse prevalence, by region

Source: UNODC

	Data on prevalence of opiate abuse available (number of countries/territories)		Data on prevalence of opiate abuse not available from any source (number of countries/territories)		
Continent	Data provided through ARQ	UNODC estimation	Number of countries/territories	Share of countries/territories	Total
Africa	4	21	30	55%	55
Americas	12	13	20	44%	45
Asia	20	17	14	27%	51
Europe	38	4	5	11%	47
Oceania	2	N/A	17	89%	19
Total	**76**	**55**	**86**	**40%**	**217**

abuse prevalence from 30 countries in Africa, 20 countries in the Americas, 51 countries in Asia, 5 countries in Europe and 17 countries in Oceania (most of which are small islands).[7] Essentially, a majority of countries do not provide domestic drug abuse data in ARQs which complicates efforts to generate global and/or country-level consumption and consumer figures. Other valuable indicators such as data on opiate purity and prices are even more scarce, but this has much to do with local capacity. As a result, less is known about opiate demand than about opiate supply. All the estimations given in this chapter are therefore based on the limited data available to UNODC and may change or be updated as more data is provided by Member States.

Apart from ARQs, estimates presented in this chapter also relied on indirect methods (mostly treatment multiplier and capture-recapture methods) which usually represent the best evidence available to estimate national demand for opiates. For some countries, household survey data is also available. This tends, however, to be less reliable for the use of drugs such as heroin, which is highly stigmatized and where many users no longer live in a 'normal' household.

The global number of opiate users can be estimated at more than 15 million in the recent period. Around a quarter of them consume some 1,100 mt of opium in raw form.[8] The rest use heroin and consume approximately 340 mt of pure heroin per year.[9] In opium equivalents,[10] opiate demand could be estimated at 3,700 mt worldwide.

Demand for opium

There are an estimated 4 million opium consumers worldwide. Unlike heroin demand, which is more evenly distributed around the world, opium consumption is concentrated in Asia, where it has a long tradition of use. Over the past century, opium gradually ceded its place to heroin, but it still maintains important markets in countries like the Islamic Republic of Iran, India and Pakistan.

Afghanistan is the world's largest opium producer and exporter but it is also an important consumer. The country accounted for 7% of total world demand, or 80 mt a year, for an estimated 150,000 users in 2008 (rising to 200,000-250,000 in 2009).[11] A large volume of opium is consumed in the Islamic Republic of Iran, approximately 450 mt, according to UNODC estimates. But all of Afghanistan's neighbours report worrying levels of opium use. Excluding China, consumption in the countries bordering Afghanistan (the Islamic Republic of Iran, Pakistan, Tajikistan, Uzbekistan and Turkmenistan) is estimated at 650 mt per year; 60% of global consumption. Although small-scale cultivation occurs in these countries, such as in Pakistan and Central Asia,[12] the main supply source for the region's opium consumers is Afghanistan.

Other parts of the world are affected as well. In the Russian Federation, over 58 mt of opium are consumed annually,[13] while the Middle East absorbs some 16 mt per year. In the Americas, opium consumption is mainly reported in Mexico. The level of opium consumption (if

7 Many of these gaps are due to the lack of well-developed data collection systems in many countries.

8 Some users consume both heroin and opium, but the overlap between the two categories is difficult to quantify. For the purpose of simplicity, calculations did not take it into account.

9 Throughout this report, the term 'heroin' refers to a product with the purity of heroin produced at the main source, Afghanistan (70%).

10 Taking into account the distribution of production between Afghanistan and the rest of the world, volumes expressed in terms of opium equivalents in this chapter use a conversion factor of 7.5:1.

11 UNODC, *Afghanistan drug use survey 2005*, 2006.

12 As the UNODC *Illicit drugs trends in Central Asia* (2008) report notes "Given the 2006 regional total of 2.22 hectares of reported cultivation, this is equivalent to a potential output of 90 kg of opium, a minute fraction of the amount produced in Afghanistan."; see UNODC "Illicit drug trends in Central Asia", April 2008, p.8.

13 Of note, some of these users consume only "kompot" (a poppy straw solution that is usually injected), which is generally sourced locally.

Table 2: Estimated opium and heroin consumption, 2008

Source: UNODC

	Region/ country	Heroin users	Opium users	Heroin consumption (mt)	Opium consumption (mt)	Total opiate consumption (opium equivalent)
Major distribution destinations of Myanmar and Laos heroin production	Myanmar	66,000	67,000	1.3	7.0	20.1
	China*	2,254,000	119,000	45.0	12.0	458.2
	India	871,000	674,000	17.0	67.0	239.8
	Oceania	32,500	52,000	2.0	5.0	23.4
	Asia (except India, China, Myanmar)	852,000	1,118,500	17.0	75.0	245.0
	Sub total	**4,075,500**	**2,030,500**	**82**	**166**	**986.6**
Major distribution destionations of Afghan heroin	Afghanistan	47,000	146,000	2.0	80.0	91.8
	Pakistan	547,000	145,000	19.0	80.0	213.8
	I.R. of Iran	391,000	531,000	14.0	450.0	547.0
	Central Asia	283,000	60,000	11.0	33.0	112.2
	Russian Federation	1,490,000	166,000	70.0	58.0	548.6
	Turkey	25,000	25,000	0.8	9.0	14.4
	Europe (except Turkey and Russian Federation)	1,614,000	271,000	88.0	95.0	711.0
	Americas	1,538,000	82,000	26.0	29.0	212.0
	Middle East and South Asia (except I.R. of Iran, Pakistan and Afghanistan)	63,500	491,000	1.6	16.0	27.2
	Africa	1,240,000	172,000	25.0	60.0	235.0
	Sub total	**7,238,500**	**2,089,000**	**257**	**910**	**2,713**
	Total	**11,314,000**	**4,119,500**	**340**	**1,075**	**3,700**

* The reported number refers to the annual number of users as estimated by F. Lu, N. Wang, X. Sun, et al in "Estimating the number of people at risk for and living with HIV in China in 2005: methods and results", *Sexually Transmitted Infections*, June 2006, Vol. 82 Suppl 3, pp. iii 87-91. The number of annual users differs from the official number of opiates users registered which in 2009 was 900,000.

any) in other Latin American countries remains unknown due a dearth of data for nearly half of all Latin American countries.

India has traditionally been an important consumer of opium.[14] Based on the ARQs provided by the Government, current opium consumption in India is estimated at some 65-70 mt per year. The Government reports also show that foreign-sourced opium has neither been seized nor reported as trafficked into India. Consequently, such a consumption level (6% of the estimated global total) would require the illicit cultivation of some 1,500 - 2,000 hectares of opium poppy on Indian territory. Diversion from licit cultivation could also be a source of supply, but Indian authorities now consider this possibility less likely given the limited size of licit cultivation (6,000 ha in 2009) and the strict controls in place. Opium is also consumed in neighbouring countries, such as Bangladesh and Nepal. But there also, Afghanistan (or Myanmar) does not appear to be the source. Government reports and recent field research have confirmed the existence of (limited) illicit opium poppy cultivation in Nepal, as well as in the border areas of Bangladesh and India,[15] which could be the source for consumption in these countries. Until now, it was generally assumed that these markets were captured by Myanmar and Afghan suppliers, but the possibility of an emerging regional source of supply cannot be discounted and needs to be studied further.

The main African country to have reported opium

14 UNODC, *A century of international drug control*, 2008, p.15.

15 UNODC mission report to South Asia, information provided by Bangladesh, Nepalese and Indian counter-narcotics officials, March 2009.

Fig. 6: Estimated global opium consumption in 2008

Source: UNODC

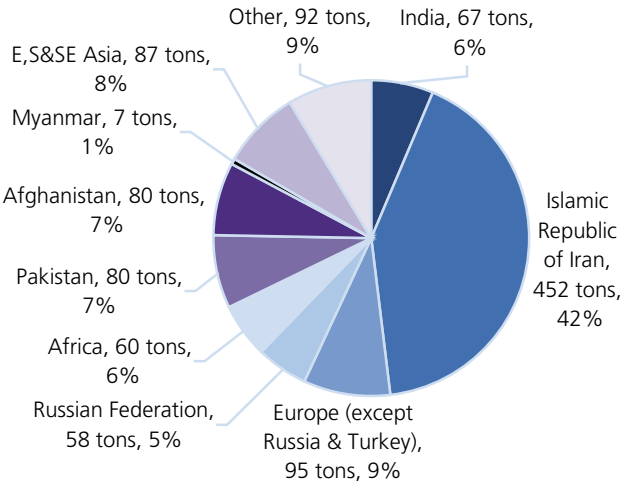
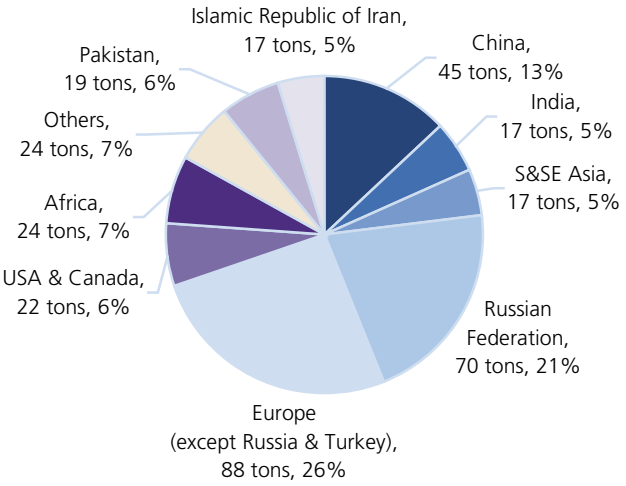


Fig. 7: Global heroin consumption (340 mt), 2008

Source: UNODC



consumption is Egypt. As in India, there are no reports or data to indicate that the opium consumed in Egypt (estimated at 60 mt)[16] is trafficked from another country. This may suggest the existence of illicit cultivation of some 1,000 ha of opium poppy in Egypt. Raw opium may also be consumed in other African countries, but until comprehensive drug use surveys are conducted or other data is made available to UNODC, much uncertainty will remain in this area.

Although it reportedly consumed an extraordinary 26,690 mt of opium a century ago,[17] consumption in China now appears to be limited to some 12 mt annually.[18] The opium consumed in South–East and East Asia originates mainly in Myanmar and to a much lesser extent in the Lao People's Democratic Republic. There may be some local production in other East and South-East Asian countries, since the amount of opium seized there (0.3 mt in 2008) is not proportional, compared with other regions, to the estimated level of consumption (75 mt). Moreover, there is little evidence of opium trafficking from Myanmar or the Lao People's Democratic Republic to these countries.

Demand for heroin

Heroin is a more potent and addictive derivative of opium. It may be smoked or injected. In recent years, it is estimated that some 340 mt of the substance have been consumed worldwide each year.

Two markets, Europe[19] and the Russian Federation, currently account for nearly half of global heroin consumption. With 70 mt of heroin consumed per year, the Russian Federation is estimated to be the country with the highest national level of consumption. The combined level of heroin consumption in European countries is estimated at around 85-90 mt.[20] Within Europe, four countries dominate, namely the United Kingdom (some 19 mt), Italy (about 18 mt), France (an estimated 10 mt) and Germany (approximately 7 mt). Afghan opium is now the only known source of heroin consumed in Europe and the Russian Federation.

In 2008, available data suggest that around 20 mt of heroin were consumed in the United States of America, 1.3 mt in Canada and 5 mt in Latin America. According to US Government reports, the majority of the heroin consumed in the country comes from Latin America and Mexico. The rest is trafficked from Afghanistan via Europe and Africa. Opium production in Mexico was reported to have sharply increased that year (by 120%), amounting to 325 mt of raw opium, from which 30-40 mt of heroin could potentially be produced.

In contrast to its high opium consumption levels and despite its proximity to the world's largest heroin producer, official reports indicate that heroin consumption is relatively low in the Islamic Republic of Iran (14 mt for an estimated 391,000 users). Afghanistan's other neighbour, Pakistan, has approximately 500,000 heroin users, estimated to have consumed around 19 mt of heroin in 2008. At the source, in Afghanistan, domestic consumption is estimated at around 2 mt per year (2008)

16 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009.

17 UNODC, *A century of international drug control*, 2008, p.91.

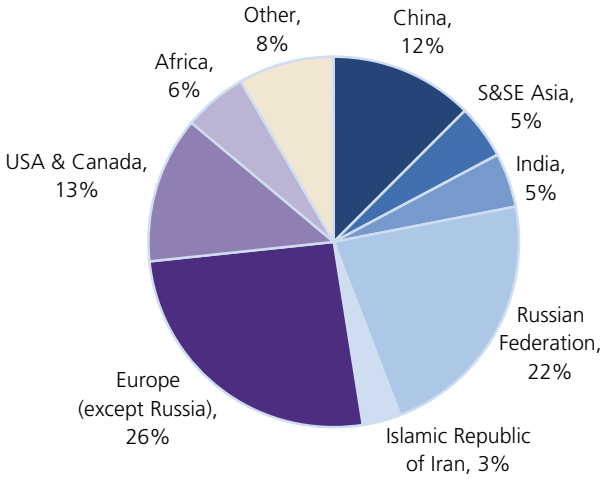
18 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, p.27.

19 For the purpose of analysis in this chapter, "Europe" excludes Turkey and the Russian Federation.

20 Ibid.

Fig. 8: Global heroin/opium market distribution (US$ 65 billion) in 2008

Source: UNODC



among 50,000 users (this increased to 100,000-135,000 in 2009.

At an estimated 17 mt in 2008, India has the highest level of heroin consumption in South Asia. The estimated amount of heroin consumed in neighbouring Bangladesh was also considerable, amounting to 4 mt in the same year. In Nepal, heroin consumption appears to have increased in recent years and is currently estimated at around 800 kg. As already noted, there appears to be a certain level of heroin production – and illicit opium poppy cultivation- in India. According to official reports from the Governments of Nepal and Bangladesh, almost all the heroin consumed in those countries originates in India.

China's 2.2 million heroin users, the largest population in absolute terms, were estimated to consume some 45 mt of heroin in 2008. Most of the supply for China is sourced in Myanmar, although Afghan heroin appears to be gaining market shares. In other South-East and East Asian countries, heroin consumption was estimated at around 18 mt. The main sources of the heroin consumed in this region are Myanmar and the Lao People's Democratic Republic, followed by processed Afghan opium. In Australia and New Zealand, the annual heroin consumption was estimated at 1.8 mt, sourced from both Afghanistan and Myanmar.

Nearly all of Africa's opiate users are reportedly consuming heroin.[21] Although estimates for that region are not very reliable, approximately 25 mt of heroin would be needed to supply Africa's addict population,[22] tentatively estimated at 1.2 million individuals. Most of this market appears to be supplied by Afghan heroin trafficked via Pakistan, India and a number of countries along the Arabian peninsula.

Value of the trade

At retail level, the total value of the heroin market is substantial at an estimated US$55 billion. The size of the annual opium market is a more 'modest' US$7-10 billion. Consequently, the combined total opiates (heroin/opium) market could be worth up to US$65 billion per year. This amount is higher than the GDPs of many countries. In economic terms, nearly half of the overall opiate market value is accounted for by Europe (some US$20 billion) and the Russian Federation (US$13 billion). Other lucrative markets include China (US$9 billion) and the United States and Canada (US$8 billion). Most profits are generated downstream, leaving Afghan producers with only a fraction of the profits. The farm-gate value to the farmer for cultivation and immediate sale of opium was estimated at US$0.4 billion in 2009. When adjusted to include the profits derived from trafficking of opium and the conversion of opium to morphine and/or heroin, the value to the Afghan opium economy was estimated at US$2.4 billion (2009) or only about 3.5% of the total value of the opiate industry.

Global volume and distribution

To estimate the quantity of opiates required to supply world illicit demand, one must add reported seizures to estimated levels of consumption. Some 646 mt of opium and 91 mt of heroin/morphine were seized in 2008. Around 5,000 mt of opiates (heroin, morphine and opium combined and expressed in opium equivalents) would have needed to enter the market to satisfy global demand in 2008.

For heroin only, world consumption (some 340 mt in 2008) combined with reported seizures (91 mt in 2008), would indicate an annual flow of about 430 mt of heroin into the global market.

The distribution of opium production

Production in Afghanistan increased from around 200 mt in 1980 to 3,300 mt in 2000, reaching a peak of 8,200 mt in 2007, before dropping slightly to 7,700 mt in 2008 and again to 6,900 in 2009. Expressed as a proportion of the global illicit opium production, Afghanistan's share rose from around 20% in 1980 to 70% in 2000, and to more than 90% since 2006. This is directly related to decreased output in the 'Golden Triangle', encompassing Thailand, the Lao People's Democratic Republic and Myanmar, the world's leading opium producer in the 1970s and 1980s. Between 2003 and 2008, opium production in Myanmar fell by 59%, from 810 to 410 mt. Production in the neighbouring Lao People's

21 UNODC, *2006 World Drug Report*, p. 74.

22 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium,* 2009, p. 13.

Table 3: Opiate (opium, heroin and morphine) seizures, 2008

Source: UNODC

		Heroin and morphine (mt)	Heroin and morphine in opium equivalent (mt)	Opium (mt)	Total opium equivalents (mt)
Major distribution routes of Myanmar and Laos heroin production	Myanmar	0.3	3.0	3.9	7
	Prov. of China	4.3	43.0	1.4	44
	India	1.1	11.0	2.0	13
	Oceania	0.1	0.8	0.0	1
	Asia (except India, China, Myanmar)	1.0	10.0	0.3	10
	Sub total (rounded)	**7**	**68**	**8**	**76**
Major distribution routes of Afghan heroin	Afghanistan	3.3	23.1	43.0	66
	Pakistan	9.2	64.4	27.0	91
	I. R. of Iran	32.0	224.0	561.0	785
	Central Asia	5.3	37.1	4.8	42
	Russian Federation	3.4	23.8	0.4	24
	Turkey	15.5	108.5	0.5	109
	Europe (except Turkey and Russian Federation)	10.4	72.8	0.3	73
	Americas	3.6	25.2	0.8	26
	Middle East and South Asia (except I. R. of Iran, Pakistan and Afghanistan)	0.8	5.6	0.1	6
	Africa	0.3	2.2	0.1	2
	Sub total (rounded)	**84**	**587**	**638**	**1,225**
	World total (rounded)	**91**	**655**	**646**	**1,301**

Democratic Republic also declined dramatically, from more than 120 mt in the 1990s to around 10 mt in recent years. Thailand's production is negligible; it has not reported any significant cultivation since 2003.

Although Afghanistan's potential opium production decreased by 10% from 2008 to 2009, it is still well above the average annual production recorded during the 1990-2006 period. Data do not show a corresponding increase in world demand and UNODC has not registered any unusual price declines or dramatic increases in the purity of the heroin seized worldwide. On that basis, and taking into account uncertainties as regards the exact level of world demand, a potential over-production of some 12,000 mt during that period presents a supply-demand riddle that deserves attention.

Turning to the Americas, the average amount of opium estimated to be produced in Latin America and Mexico was around 130 mt per year until 2006. In 2008, a reported 120% increase in opium production in Mexico made it the third biggest opium producing country after Myanmar with 325 mt potentially produced in 2008.

Fig. 9: Global opium production, 1990-2009

Source: UNODC

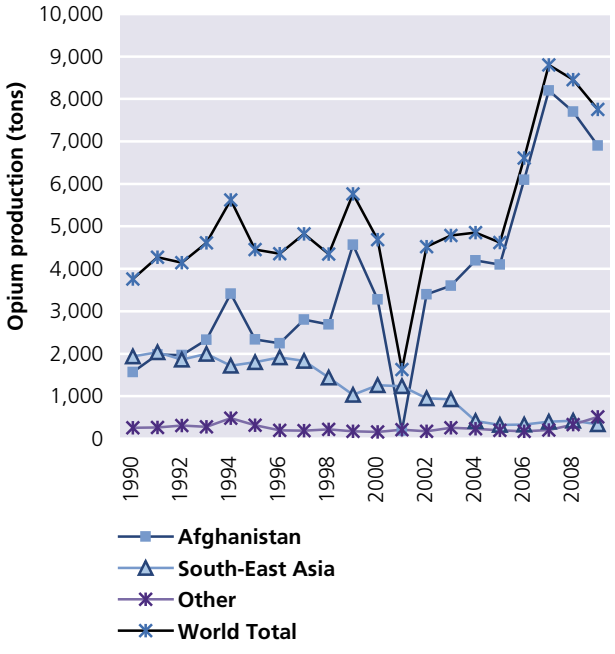
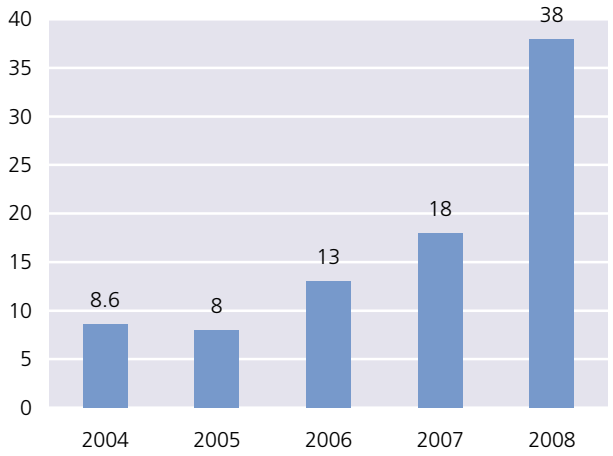


Fig. 10: Potential pure heroin production in Mexico, in metric tons, 2004-08

Source: National Drug Intelligence Center, *National Drug Threat Assessment 2010*



Some data also suggest that limited illicit cultivation takes place in other countries, such as Egypt and India. At the time of writing, no information was available on the quantities cultivated and produced, which, in the case of Egypt, may be negligible. Algeria reports the eradication of approximately 80,000 opium poppy plants every year, but this production appears to be limited to supplying the local market.[23] Finally, there is illicit cultivation in some CIS countries. Ukraine, the Republic of Moldova and the Russian Federation for example seem to be self-supplied for their own local market of poppy straw derivative solution (Kompot).

The distribution of heroin production

In 2008, approximately 2,700 mt of Afghanistan's opium were refined into an estimated 380 mt of heroin to supply the global market. Placing a distant second is Myanmar and the Lao People's Democratic Republic production which yielded some 40 mt of heroin in 2008; all processed in Myanmar. The remainder, some 30-40 mt in 2008, is shared among mostly Latin American countries (including Colombia and Mexico). Processing Mexico's opium output alone would potentially yield some 38 mt of pure heroin in 2008. Lastly, lower levels of heroin production continue to exist in places like India.

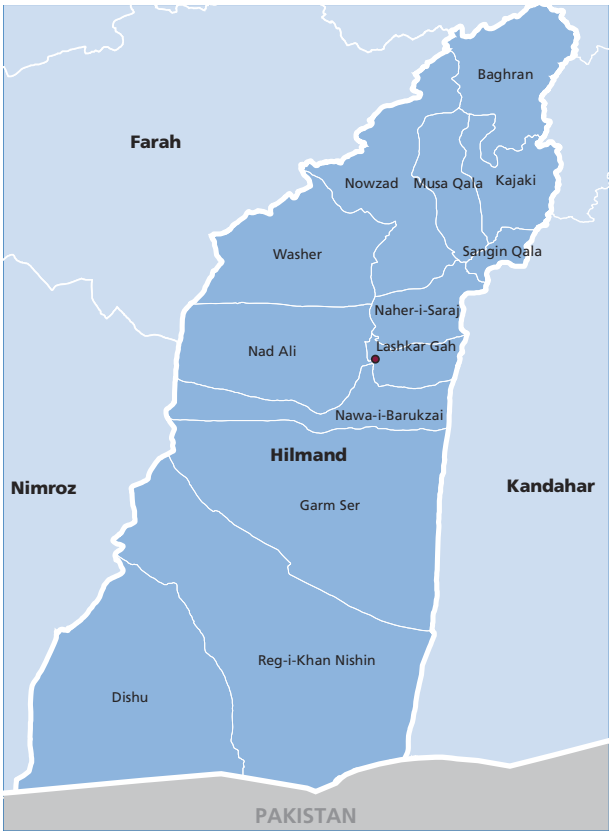
Through a relatively simple chemical process, opium is used as the raw material for the extraction of morphine base, an intermediary product. A crucial precursor chemical, acetic anhydride, is then used to convert morphine base into heroin.[24] In terms of quantities, each kg

23 INCB, *Report of the International Narcotics Control Board for 2009*, February 2010.

24 Other chemicals are required but most of these are anyway not restricted under international conventions.

Map 1: Hilmand province

Source: UNODC



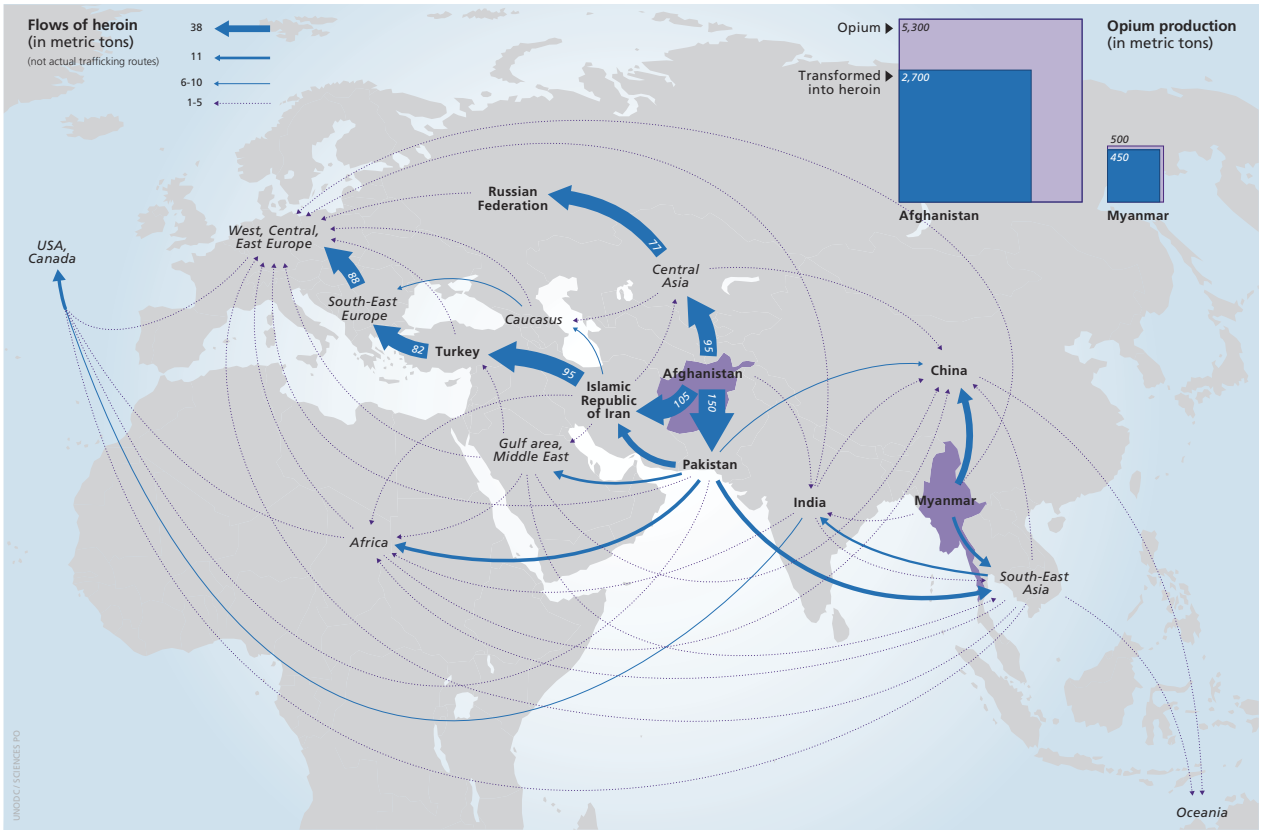
of Afghan heroin requires approximately 7 kg of Afghan opium to produce. Afghan opium generally has a higher morphine content than the opium produced in Myanmar which requires approximately 10 kg of opium for each kg of heroin processed. Laboratories refining Afghan opium therefore face somewhat lower processing costs in the initial phases of heroin production.

Acetic anhydride costs approximately US$1-2 per litre in licit trade but (illicit) prices in Afghanistan have shot up over the past decade from US$24 to US$350 per litre, either due to more effective interdiction or increased demand. Since acetic anhydride is not produced in Afghanistan, it must be diverted from licit trade and smuggled into the country. In order to produce the required volumes of heroin (380 mt), as much as 1,000 tons of acetic anhydride needed to be smuggled into Afghanistan (or other countries where processing potentially takes place) in 2008. The interdiction of 14,233 litres in Afghanistan in 2008, while an increase over 2007, remains marginal at a ratio of approximately 1%.

Generally speaking, there is a geographical overlap between regions of opium production and heroin processing (Afghanistan, Myanmar). It is established that there is a considerable number of heroin laboratories in Afghanistan. This is evidenced by reports from the Afghan authorities on the destruction of 69 facilities in

Map 2: Global heroin flows of Asian origins

Source: UNODC



2008[25] (against 57 in 2007) while UNODC surveyors identified 97 laboratories that same year. By way of comparison, Myanmar authorities dismantled 24 heroin laboratories over the 2006-2008 period.[26]

In Afghanistan, processing (and cultivation) are concentrated in the southern provinces, such as Hilmand, Kandahar and Nimroz, where the insurgency and lack of government control provide the ideal cover. Notably, Kandahar's Spin Boldak district was the location of the largest acetic anhydride seizure in 2008, with 7,500 litres (enough for over 3.5 mt of heroin) confiscated in a single incident. But Hilmand province is at the core of the global trade in Afghan opiates. As well as its vast production of opium, it is also the location of large, fixed heroin processing facilities. In 2008, Hilmand province alone accounted for almost 50% of Afghanistan's opium seizures.[27] Of the known district locations, Dishu in the south and Nad Ali in the centre saw the greatest seizure volumes. The latter district is a major opium poppy cultivation area on the Hilmand river, while Dishu is a processing district and a hub for trafficking into Pakistan. However, all of the laboratories dismantled in Hilmand in 2008 were in central and northern districts. Well-known opiate bazaars in places such as Lashkar Gah, Baramcha and Girishk continue to operate, although they were the scene of several seizures in 2008.

At the same time, there is also the possibility that not all Afghan opium is processed into heroin in Afghanistan. If this is the case, Afghanistan needs to export opium (and/or morphine) for this purpose, which, in the case of opium, increases the chance of detection. There are no reports, however, of Afghan opium being trafficked to the Americas, Africa, South Asia (except Pakistan) and South-East Asia. Only a trivial amount is thought to be shipped to Gulf countries and is limited to local consumption. Between 2000 and 2008, seizure data provided to UNODC indicated negligible opium and morphine seizures in European countries (including Turkey). There were, however, sizeable opium seizures reported by countries north of Afghanistan. In 2008, approximately 4.5 mt of opium were seized in Central Asian countries but the regional market (34 mt) likely absorbed most of the flow. Moreover, there is a general absence of morphine seizures in this region.

25 UNODC Afghanistan country office, *Analysis of Opiate and Precursor Seizures in Afghanistan in 2008*, 2009, p.13; see UNODC *2009 World Drug Report*, p.37.

26 UNODC, *Patterns and Trends of Amphetamine-Type Stimulants and Other Drugs in East and South-East Asia (and neighbouring regions)*, November 2009, pp 86-91.

27 UNODC Afghanistan country office, *Analysis of Opiate and Precursor Seizures in Afghanistan in 2008*, 2009, p.13; see UNODC *2009 World Drug Report*, p.37.

The highest volumes of morphine and opium seizures were reported by Pakistan and the Islamic Republic of Iran, Afghanistan's immediate neighbours. In 2008, Pakistan (7.3 mt) and the Islamic Republic of Iran (9 mt) seized a combined 16.3 mt of morphine, a staggering 95% of global morphine seizures. In contrast, Afghanistan only seized 479 kg that same year. Most Iranian and Pakistani morphine seizures occurred close to the Afghan border, perhaps suggesting that if large-scale processing is taking place outside Afghanistan, it is staying close to the source. Both Pakistan (27 mt) and the Islamic Republic of Iran (573 mt) effected more than 90% of global opium seizures, but demand for the substance is high in both countries while that of morphine is negligible. Referring to these numbers, the *2008 World Drug Report* concluded that such high morphine and opium seizures indicated that 'important amounts of heroin might be produced outside Afghanistan, as morphine does not have a large user base.' This possibility needs to be further researched.

Distribution of trafficking flows

As mentioned earlier, there is no strict division between regions of supply and demand. The same caution is warranted in examining 'transit' regions, which very often are also regions of consumption and possibly add to supply. The following estimate of global opiate flows uses a methodology combining both supply-side and demand-side analyses from production, consumption and seizure data.[28]

At first sight, there are distinct patterns of distribution, as production in Latin America and Myanmar is mostly dedicated to the US and Chinese markets, respectively. Altogether, these two regions constitute around 15% of total heroin flows in the world. Afghanistan accounts for an estimated 85% of global heroin and morphine exports, often overlapping with both Latin America and Myanmar, including in the case of the United States and Chinese markets, respectively.

From Afghanistan

Of the estimated 380 mt of heroin produced in Afghanistan, approximately 5 mt stay in the country for local consumption or is seized by local law enforcement.[29] The remaining 375 mt are exported to the world via routes flowing into and through the neighbouring countries of Pakistan (150 mt), the Islamic Republic of Iran (105 mt) and the Central Asian countries of Tajikistan, Uzbekistan and Turkmenistan (95 mt) towards their final destinations in Europe, the Russian Federation and Asia.[30]

About a third of the heroin produced in Afghanistan travels to Europe (110 mt) while a quarter goes north to Central Asia and the Russian Federation. Afghan heroin is also increasingly meeting a rapidly growing share of Asian, mainly Chinese, demand. Approximately 15-20 mt are estimated to be trafficked to China while another 35 mt are trafficked to other South and South-East Asian countries. [31] Perhaps 35 mt are shipped to Africa, while the remainder supplies markets in other parts of Asia, North America and Oceania.

In addition to heroin, Afghanistan also exports some 1,000 mt of opium annually to its immediate neighbours (the Islamic Republic of Iran, Pakistan and Central Asia) and further to a global market of some 4 million opium consumers - most of which are in Asia.[32] With the exception of South and Central America, Afghan opiates are now trafficked and sold in virtually every corner of the globe.

From Myanmar

More than three quarters of Myanmar's production (some 40 mt of heroin) supplies the local and regional markets, primarily Chinese. The remainder goes to other South-East Asian countries and Oceania.

From Latin America (Colombia and Mexico)

In 2008, it is estimated that some 30-40 mt of heroin were potentially produced in Latin America (mainly Mexico and Colombia). Producers in Colombia and Mexico supply all of the Americas, although the majority goes to the north.

Flow interception (seizures)

Interception rates vary widely between regions; however, estimated global interception rates are approximately 20% of the total heroin flow worldwide in 2008. The Islamic Republic of Iran leads all countries with 23% of all heroin interceptions. Turkey comes next with 16%, followed by the United States and China, which come in third and fourth with 9 and 8% respectively. Heroin seizures decreased sharply in Pakistan compared to the average level observed between 2000 and 2006 (26 mt).

28 Available demand data was the key variable used to estimate the size of the heroin/opium flows. Total heroin consumption was estimated for each country, then combined with official seizure data and balanced against total production.

29 The country seized less than three mt of heroin in 2008, a seizure rate of less than 1%.

30 The destination of the remaining 20 mt is unknown. It might be sourced from Afghanistan via Pakistan and/or other routes and/or be produced in India (diverted from the licit to the illicit market). In order to clarify this, an in-depth heroin consumption and trafficking study should be carried out in India.

31 There are approximately 20 mt of heroin unaccounted for which can potentially be trafficked to India (see UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009) but this remains a hypothesis until further evidence is produced.

32 See UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, p. 11.

Table 4: Heroin flow and interdiction, 2008

Source: UNODC

Country/region	Estimated amount of heroin + morphine flow (mt)	Average heroin + morphine seizures (mt)	Percent of estimated flow intercepted
Afghanistan	380	3.30	1%
Pakistan	150	9.20	6%
I. R. of Iran	140	32.00	23%
Turkey	95	15.50	16%
South-East Europe (Bulgaria, Greece, Albania, Romania, Serbia, FYR Macedonia, Bosnia, Croatia, Montenegro)	90	2.8	3%
Rest of Europe (except Russian Federation)	105	7.60	7%
Midde East& Gulf countries (except I. R. of Iran)	14	0.80	6%
Central Asia	95	5.30	6%
Russian Federatioin	77	3.40	4%
Africa	35	0.31	1%
Myanmar	60	0.30	1%
India	37	1.10	3%
China	55	4.30	8%
Rest of S, E & SE Asia	30	1.00	3%
Oceania	2	0.08	4%
USA and Canada	24	2.1	9%

Interdiction rates continued to remain very low in the main production centres of Afghanistan (1%) and Myanmar (1%), in African countries (1%), the Balkans (3%) and India (3%). In 2008, there were also substantial decreases in heroin seizure volumes in Western and Central Europe (7.6 mt), compared to the level observed between 2000 and 2006 (9 mt).

Global impact

The opium economy is deeply entrenched and its reach extends far beyond the borders of the few source countries. Whether one looks at the damages to the health of communities, the rise in criminal activity, the loss of economic productivity, the impact on global security or the more insidious corruption of government institutions, it is fair to say that illicit opiates leave very few nations untouched.

The cost of opiate use to individual users and to society as a whole is high. Studies indicate that more users die each year from problems related to heroin use and more are forced to seek treatment for addiction than for any other illicit drug. Users develop both tolerance and physical dependence, which means that their bodies adjust to the presence of heroin over time, requiring more to produce the same effect and inducing severe withdrawal symptoms if the drug is not taken in sufficient quantities. The difference between a recreational dose and a fatal one is small, and variations in street drug purity result in many overdoses. The mortality rate for dependent heroin users is between 6 and 20 times that expected for those in the general population of the same age and gender.[33] In addition, heroin is the drug most associated with injection, which brings about a host of acute and chronic heath problems including the transmission of blood-borne diseases such as HIV/AIDS and hepatitis C.

The largest national market for Afghan heroin is the Russian Federation; a market which has rapidly expanded since the dissolution of the Soviet Union. It is there that heroin is currently doing some of its worst damage, including through the spread of HIV. In neighbouring Central Asia, the past 10 years have witnessed both the highest increase in prevalence of drug abuse worldwide and similarly alarming levels of HIV/AIDS. Both these regions are good examples of the speed and extent of the

33 WHO/UNODC/UNAIDS position paper: "Substitution maintenance therapy in the management of opioid dependence and HIV/AIDS prevention".

damage a sudden increase in heroin transit can do. On the Balkan route, the ravages of opiate consumption in the Islamic Republic of Iran have been well documented, that country having one of the largest opium user populations in the world. In Africa, an emerging destination for Afghan heroin, a rise in injecting drug use[34] could worsen an already severe HIV/AIDS epidemic.[35] In Afghanistan itself, while most of the lethal crop is exported, enough is left behind to create addiction. In 2005, UNODC estimated the entire opiate-using population to be 200,000. Since then, recurring anecdotal information appears to indicate increased addiction rates, sometimes affecting and debilitating entire villages.

In 2008, 285,000-360,000 opiate users were found in Afghanistan. In addition to creating health problems, the opiate trade has implications for global security. Previous UNODC research highlighted the role of drugs (including opiates) as precursors or perpetuators of instability worldwide.[36] One early example was the Soviet invasion in 1979, which triggered the mass production of opiates in Afghanistan. Global drug production is increasingly being concentrated in a few unstable areas and conflict zones. In the case of opiates, insurgent groups operating in various theatres are thought to partially fund their operations from the taxing of production and trafficking. In Afghanistan, a conservative estimate placed the figure at US$125 million/year in profits for Taliban insurgents. Across the border, in Pakistan's tribal areas, Taliban allies such as al-Qaida and other like-minded groups (for example, the Islamic Movement of Turkestan and the Tehrik-e-Taliban Pakistan) have bases along the main heroin/opium trafficking routes and are ideally located to benefit from trafficking. In other parts of the world, militant groups such as the Kurdistan Workers' Party (PKK) or rebels in India's north-east may also be benefiting from the illicit opiate trade. Illicit opiates thus potentially feed a chain of insecurity stretching across Asia and Europe.

Transnational crime generates money and power. This power is not sufficient to threaten the stability of developed states, but in Afghanistan, and some vulnerable countries on the Balkan and Northern routes, money generated from opiates compares well with GDPs. The amount of money that the trade brings to bear on these countries' political systems and societies poses a threat to their development and some nations may be at risk of 'drug dependence'. Countries like Afghanistan (48% of GDP in 2007, 33% in 2008 and 26% in 2009), are in a sense dependent on the illicit opiates industry. In the case of Tajikistan, the industry may amount to as much as 30% of the recorded GDP.[37] This situation is exploited by powerful criminal organizations, which have in some cases infiltrated the highest levels of government. These groups, which generate vast profits through drug trafficking and other illicit activities, are able to corrupt governmental officials, reduce the effectiveness of law enforcement and derail the march towards instituting the rule of law in newly-formed states in the Balkans, transition states in Central Asia and vulnerable states in Africa. Of course, corruption can emerge at any part of the chain, which means that corruption is not limited to transit (or source) countries.

1.2.2 Northern route

Unlike other major routes out of Afghanistan which have existed for decades, the Northern route through Central Asia and into the Russian Federation is a relatively recent phenomenon, only taking shape in the mid-1990s. In this region, both the nature and extent of drug trafficking have been strongly shaped by the dissolution of the USSR, whereby newly-formed states had to suddenly police borders previously administered centrally. These new borders remained virtually open until new national customs services were created in 1993–1994.[38]

Routes and volumes

UNODC estimates that 25% of all Afghan heroin -or 95 mt- are trafficked each year from Afghanistan into the Central Asian Republics (CARs) towards the Russian Federation.[39] This total includes heroin that is consumed en route or at destination, seized by law enforcement or to a limited extent, trafficked onward to Europe. The Russian market is estimated to consume approximately 70 mt of heroin annually while Central Asian demand stands at 11 mt; the rest is either seized or continues onwards.

In addition to heroin, some 120-130 mt of opium are smuggled into the region each year, mostly for consumption in the CARs and the Russian Federation. There is no evidence of morphine being shipped in large quantities through this route. Transformed into opium equivalents, approximately 780-800 mt of opiates are trafficked annually along this route.

34 One of the indicators of that trend is the rise in the number of heroin users, which appears to have increased by 54% between 2004 and 2008 in Africa.

35 Sub-Saharan Africa, is home to two-thirds (67%) of people living with HIV/AIDS or 22 million people; see UNAIDS, *Report on the Global AIDS epidemic 2008*, August 2008.

36 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009; see also UNODC, *Crime and instability: case studies of transnational threats*, February 2010.

37 Letizia Paoli et al., "Tajikistan: the rise of a narco-state", *The Journal of Drug Issues*, 2007, p.951.

38 Martha Brill Olcott et al.; "Drug trafficking on the great Silk road: the security environment in Central Asia", Carnegie Endowment working papers, 2000.

39 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009.

From Afghanistan to the north, traffickers are offered a choice of three countries: Tajikistan, Uzbekistan and Turkmenistan. These northern borders span a length of some 2,600 km. The Uzbek and Tajik borders are marked by the Amu Darya River, while the Turkmen border is mostly desert. Although there is no shortage of possibilities for clandestine crossings, it appears that most of the trafficking occurs along established trade and transit routes. There are nine official crossings between Afghanistan and Central Asia, including two river ports, one on the Uzbek border and one on the Tajik border. These river ports are the primary conduit for legitimate trade, and also, it appears, for trafficking. They are:

- Hayraton (Afghanistan's Balkh province - Sukhandaraya province of Uzbekistan);
- Ninji Pianj (Afghanistan's Kunduz province - Khatlon Province, Tajikistan).

Uzbekistan's border with Afghanistan is short (137 km) and well-policed. While armed attempts at night crossings still occur, traffickers generally prefer to avoid this border in favour of easier alternatives such as the Tajik border. It appears instead that most opiates that do enter Uzbekistan first transit Tajikistan and to a lesser extent Kyrgyzstan. What cannot be excluded, however, is that larger, long-distance shipments by well-protected networks may find it convenient to use the better-developed infrastructure of Hayraton when aiming for the Russian market, or even to import precursor chemicals, as evidenced by a 2008 seizure of 1.5 mt of acetic acid.[40]

Afghanistan's border with Turkmenistan is lengthy (744 km) and mostly desert. There is some lab activity in the border areas of adjoining Afghan provinces (such as Badghis), which is of concern since traffickers generally export opiates over the closest border. The Turkmen route is facilitated by the presence of approximately 1 million ethnic Turkmens in Hirat, Badghis and Faryab provinces. Turkmenistan also shares a 992 km border with the Islamic Republic of Iran where an equal number of Turkmens reside, mainly in the Mazanderan and Khorassan provinces, close to the border. Turkmenistan borders the Caspian Sea for a length of 1,768 km and its coastal port of Turkmenbashi was long viewed as an important heroin route across the Caspian to Azerbaijan and further to Europe. Although the Caspian is undoubtedly used for opiate trafficking, recent UNODC field research suggests that trafficking through this particular seaport may have fallen into disuse. Seizure data also appears to indicate limited direct trafficking from Afghanistan into Turkmenistan. Other routes may however be used. Recent data from the Central Asia Regional Information and Coordination Centre (CARICC) indicates the emergence of a new route through Turkmenistan: From Afghanistan to the Islamic Republic of Iran-Turkmenistan-Kazakhstan-Russian Federation/CIS countries-Europe.[41] Not enough information is available on this route to estimate its importance, however. Turkmenistan was a leading country in precursor chemical seizures in the late 1990s,[42] but no movements have been detected in the past decade.

From a law enforcement perspective, control of the Tajik-Afghan border (1,387 km) is becoming more and more elusive. Outside fixed border points, traffickers continue to swim, wade or cross the Amu Darya river by boat, with the majority reportedly crossing undetected. Once in Tajikistan, the loads are then broken down into smaller quantities to be shipped across the border by land, rail and air. The larger portion of opiates travels north through Kyrgyzstan toward Kazakhstan. In Kyrgyzstan, the southern city of Osh has consistently been identified as a regional hub of trafficking activity. As noted, a smaller flow veers east into Uzbekistan and further to Kazakhstan.

The building of new bridges across the Amu Darya river, while crucial for the development of regional trade, is misused by traffickers. According to law enforcement sources, opiate traffickers, in collusion with corrupt officials, reportedly use the cover provided by legitimate cross-border commerce to traffic growing quantities of heroin into Tajikistan.[43] These developing corridors can also be potentially misused for precursor conveyance destined for laboratories in north-eastern Afghanistan.[44] In 2007, a seizure of 10 mt of acetic anhydride in the Russian Federation was to be shipped by truck to Afghanistan, by way of Tajikistan.[45]

In all, 95 mt of heroin are estimated to be trafficked across these three borders. Estimates suggest that the largest proportion of the Central Asian flow runs through Tajikistan. Once in Central Asia, traffickers have access to a number of transportation options, including a well-developed road and rail network. Based on seizure figures, most trafficking appears to be conducted in private and commercial vehicles, often in relatively small amounts. Of 45 heroin seizures above 500 grams (a commercial quantity) made in Tajikistan between 2005

40 Acetic acid is not a controlled substance but as been cited as a possible alternative to acetic anhydride in processing.

41 UNODC Regional office for Central Asia, "Compendium 2010".

42 In 1997-1998, 78% of heroin seized in Central Asia was apprehended in Turkmenistan while in 1995-2000, more than 198 mt of precursor chemicals were seized in the country, mostly acetic anhydride; see UNODC ROCA, "The Drug and Crime Situation in Central Asia: Compendium", 2003.

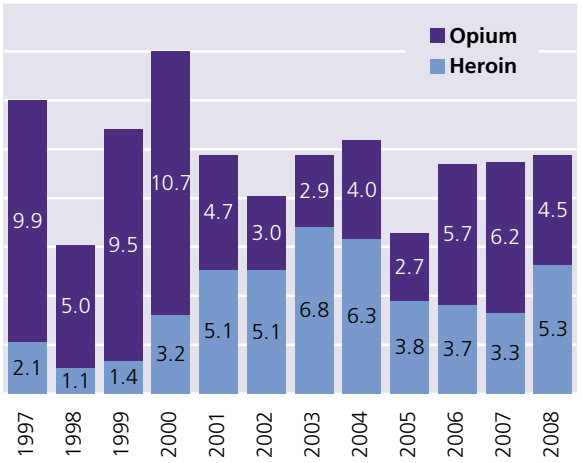
43 Interview, Tajikistan, November 2009.

44 UNODC surveyors identified 24 laboratories (13 morphine, 11 heroin) in north-eastern Afghanistan, see UNODC Afghanistan country office, *Analysis of Opiate and Precursor Seizures in Afghanistan in 2008,* p 13.

45 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, p.73.

Fig. 11: Opiate seizures in Central Asia, 1997-2008 (mt)

Source: UNODC Regional Office for Central Asia



and 2007, 80% amounted to 10 kg or less, and of these, the average size was 2.6 kg. The largest seizure, made in 2005, was 119 kg. This is a large seizure, but it would take hundreds of similar shipments to accommodate the 95 mt estimated to be trafficked through the region.[46]

There appears to be a recent trend toward larger seizures, however, suggesting increasingly well-resourced organizations. While it was rare to find a seizure of over 100 kg of heroin in Central Asia (or the Russian Federation) prior to 2008, at least 14 such seizures have been made since that time, including in Kazakhstan (537 kg), Tajikistan (100 kg twice), Uzbekistan (133 kg and 568 kg) and the Russian Federation (330 kg). A similar trend was observed with opium, where larger than usual consignments were seized in Tajikistan (400 kg), Turkmenistan (200 kg) and Uzbekistan (155 kg and 190 kg) in 2008. Of course, it remains unclear whether these trends reflect changes in the nature of the trafficking or in the nature of enforcement.

Reversing a previous downward trend that started in 2005, heroin seizures sharply increased in 2008 and made up the largest proportion of opiates seized in Central Asia. In all, 5.3 mt of heroin (60% more than in 2007) and 4.5 mt of opium (28% less than in 2007) were seized in Central Asia in 2008. Tajikistan has traditionally led Central Asia in heroin seizures, and on a per capita basis, probably leads the world in opiate seizures.[47] Turkmenistan's seizures are dominated by opium while other Central Asia countries appear more balanced. In 2008, Uzbekistan's heroin seizures (1,472 kg) more than tripled compared to 2007 (480 kg).

Although most opiates are reported trafficked by road, traffickers can also move their product by air, including via direct routes into the Russian Federation. A common method involves internal body carry or 'swallowers'; most start their journey in Tajikistan. Air routes from Central Asia carry smaller shipments of opiates than land routes, but on aggregate, they likely amount to significant quantities with higher profit margins. According to official reports from the Russian Federation, more than 20% of seized heroin enters the Russian Federation through commercial airliner.[48] A smaller proportion, approximately 12%, is reportedly trafficked northward by passenger train. Here again, internal body carry appears to be a common method. UNODC estimates that approximately 25 mt of heroin are trafficked by air/rail, while the bulk, some 50-55 mt, is trafficked using the regional road network, mainly via Kazakhstan.[49]

Although Kazakhstan is the inescapable heroin gateway to the Russian Federation if travelling by land, it seized only about 3% of the heroin flow estimated to cross its territory in 2008, despite a three-fold increase in heroin seizures over previous years. Kazakhstan is also last in regional opium seizures despite an annual consumption estimated at 18 mt. This anomaly is difficult to explain. It is true that due to their length, Kazakhstan's borders are the most challenging of all the CARs. A country roughly the size of Western Europe, Kazakhstan must police some 12,000 km of land borders (including the 7,000 km border with the Russian Federation) and 1,900 km of Caspian Sea coastline. Conversely, Kazakhstan is probably the best equipped Central Asian state to handle the drug threat as it has the largest financial resources. A 2008 report from the Central Asian Regional Information and Coordination Centre (CARICC) starkly concluded: "If drugs reach the territory of Kazakhstan then the probability of safe shipping to the Russian Federation can be around 95%." Once the heroin reaches Kazakhstan, most passes through the north-western borders into the populated areas of south-western Russia and western Siberia.

In addition to losses en route such as seizures and local consumption, not all heroin is destined for the Russian Federation. One small stream (approximately 1 mt) veers east towards China's Xinjiang province to supply the Chinese market. Based on anecdotal reports, this route may have grown in significance although it is unclear if one or all of Central Asia's borders with China

46 In contrast, large cocaine seizures are typically multiple mt, and the wholesale value of these drugs is about the same in their primary destination markets.

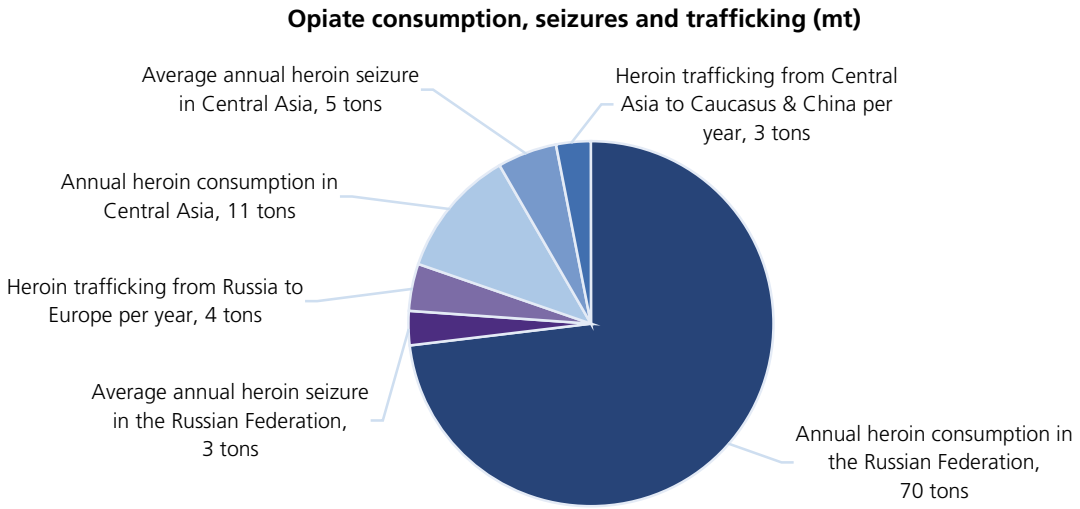
47 According to UNODC data, three of the Central Asian countries were listed among the top 25 opium seizing countries in 2007. In terms of global heroin seizures, Tajikistan ranked 7th; Kazakhstan – 19th; and Uzbekistan – 21st.

48 ARQ, Russian Federation 2008.

49 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, p.50.

Fig. 12: Distribution of the heroin market on the Northern route, 2000-2008

Source: UNODC



are used for trafficking.[50] Another two mt are estimated to be shipped from Central Asia to the Caucasus region every year. The remainder, approximately 75-80 mt of heroin, enters the Russian Federation. Some 70 mt is annually consumed by heroin users in the Russian Federation and an average of 3 mt of heroin is seized annually. This leaves an estimated 4 mt of heroin to exit into Ukraine, Belarus, the Baltic countries and the Nordic countries.

How does the market operate?

The dissolution of the USSR influenced the dynamics and structures of organized crime in the region. Firstly, it permitted the re-activation of dormant cross-border trade, ethnic and family ties with Afghanistan. Second, the Central Asian states inherited a well-established air and road communication system that links them to the Russian Federation and Europe, a boon for opiate traffickers seeking new markets and alternate routes to Europe. Third, these new states are mostly poor and some have had problems with political insurgencies. Under-resourced and struggling to find their feet, addressing heroin trans-shipment was not an early priority. During the early transition years, Afghan groups quickly expanded their operations into Central Asia. The civil war in Tajikistan (1992-1997) was a facilitator, creating a lawless climate and further impoverishing the least developed of all post-Soviet states. In the post-war period, some warlords and criminal elements were left to consolidate their position. Over time, Tajik and other Central Asian groups would traffic increasingly large loads into a rapidly expanding Russian market. Networks became entrenched and relationships were cemented with both Russian organized crime and Afghan suppliers.

On the Afghan side of the border, trafficking to Central Asia appears to be dominated by reportedly five major Afghan narcotics networks, comprised of officials, organized crime groups and warlords with sprinkled elements from former Mujahedin factions such as *Hizb-i-Islami*. These (sometimes overlapping) networks are often engaged in legitimate businesses and work alongside much smaller, often family-based, groups. Ethnic Tajiks living on both sides of the Tajik-Afghan border and their common language are important in this respect. Although there are some laboratories active in the adjacent north-eastern Afghan provinces (Takhar, Kunduz and Badakhshan)[51] bordering Tajikistan, most Central Asian heroin is processed in and trafficked from southern Afghanistan. Pashtun networks based in the south ship narcotics across the country to Uzbek and Tajik groups for further shipment. Although groups are generally organized along ethnic lines in Central Asia, mixed ethnic membership is also found in some regions. This is most obvious in Tajikistan where some networks are composed of nationals from Afghanistan and Tajikistan. This facilitates trafficking operations and ensures smooth lines of supply.

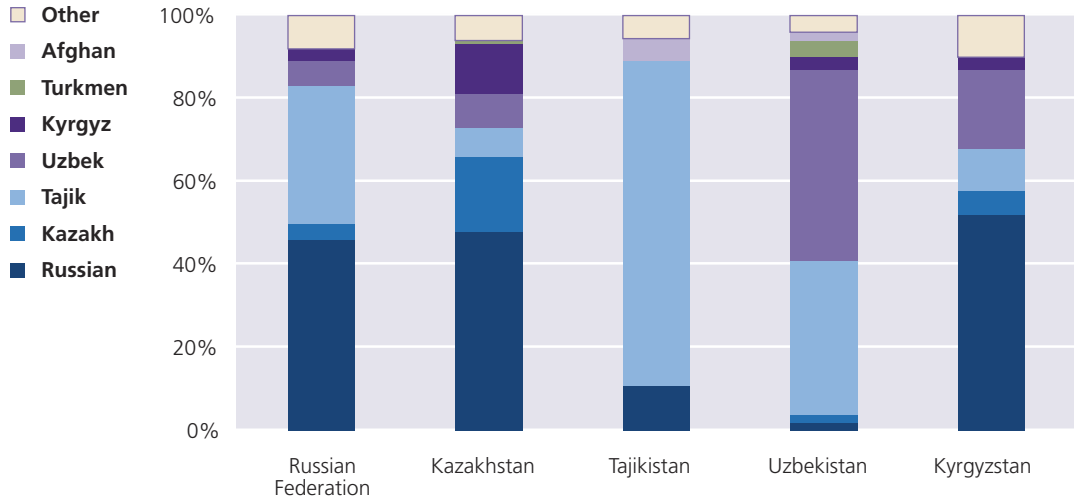
Based on customs seizures, there is plenty of evidence of transnational activity, but no national groups appear to dominate regional trafficking. Russian nationals comprise a large share of arrestees in Kazakhstan and Kyr-

50 According to some reports, the level of heroin trafficking from Central Asia (especially from Tajikistan) to China may be higher than currently estimated. Given the paucity of information, it is currently difficult to estimate the importance and extent of this relatively new phenomenon.

51 There are also laboratories active in Nangarhar (eastern Afghanistan) and a portion of their production reportedly moves north.

Fig. 13: Distribution of nationalities of arrested heroin traffickers at customs, 2000-2008

Source: World Customs Organization



gyzstan, but a much smaller share among countries that span the Afghan border. Conversely, a small number of Afghans are arrested in Tajikistan, but usually not further afield. Tajiks appear to be major players in a number of countries, including the Russian Federation, but are detected in much smaller numbers in Kazakhstan. According to Western law enforcement sources in the region, Russian-based organized crime groups generally place orders with Tajik-based groups who arrange for trans-shipment of the drugs from Afghanistan through Tajikistan. The drugs are then moved through the region and into the Russian Federation. It is possible that the Tajik groups who source the drugs then pass the consignments on to Russian groups in Kazakhstan but it seems more likely that the drugs change hands several times before reaching the consumer.

Outside these 'regional' nationalities, West Africans, especially Nigerians, have also been reported, particularly in Tajikistan. In some instances, they may act as simple couriers, as demonstrated with the 2006 attempt by a Nigerian group to have one of their own cross the Kazakh-Chinese border with heroin. There is a distinct possibility that firmer ties across borders will occur between Central Asian groups and networks that originate outside the region. Increased cross-border commercial ties and a re-establishment of ethno-cultural linkages with the western Chinese province of Xinjiang could facilitate supply to a growing heroin market in that part of China.

Heroin trafficking in some Central Asian countries also appears increasingly complex and professional. Large seizures in recent years may indicate an organized trafficking business, while arrest statistics seem to suggest a trend towards regionalization. Although they are still numerically important, individual entrepreneurs and smaller groups united by family ties or kinship may have become fewer in number. There is also evidence that traffickers are increasingly resorting to violence in order to protect shipments. Armed clashes used to occur mostly on the Tajik-Afghan border, but Uzbek and Turkmen border guards are reporting incidents as well.[52]

Heroin increases in value as it distances itself from the source. The estimated value of opiates (at the borders) trafficked through the Afghanistan/Central Asia border area is US$350-400 million[53] annually. The portion that eventually reaches the Russian Federation will be worth 30 times this amount. In the Russian Federation, retail distribution of heroin and other drugs is carried out by a variety of criminal groups typically organized along ethnic lines with Central Asian, Caucasian, Russian/Slavic and Roma groups all active in drug trafficking.[54]

Impact of this flow

In terms of absolute numbers, the Russian Federation is particularly affected with its 1.5 million addict population. The hugely damaging threat of HIV/AIDS is directly related to heroin injection. To date, there are over a quarter of a million registered HIV cases (although the number of unregistered cases is estimated to be much higher than this) in the Russian Federation. Of these, over 80% are intravenous drug users. In the CARs, nearly 15 years of continuous heroin transit has created

52 Interview Uzbek Chief of Border Guards, Tashkent, Uzbekistan, November 2009; Interview Deputy Chief Turkmen border guards, Ashghabat, Turkmenistan, November 2009.

53 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009.

54 International Narcotics Control Strategy Report - 2007.

Table 5: Heroin users and consumption in the Russian Federation and Central Asia

Source: UNODC

Country	Number of estimated heroin users	Estimated level of heroin consumption (mt)	Number of estimated raw opium users	Estimated level of opium consumption (mt)
Tajikistan	20,300	1	4,700	3
Turkmenistan	31,200	1	1,400	1
Uzbekistan	118,600	5	13,800	8
Kyrgyzstan	25,900	1	9,600	5
Kazakhstan	86,000	3	33,000	18
Total (rounded)	**282,000**	**11**	**62,500**	**34**
Russian Federation	**1,500,000**	**70**	**160,000**	**58**

a local market of 282,000 heroin users, consuming approximately 11 mt of heroin annually. Local opium consumption is estimated at approximately 34 mt (although demand in Turkmenistan may be underestimated). This puts some Central Asian states on par with countries with the highest global opiate abuse prevalence.[55] As in the Russian Federation, heroin use in Central Asia has led to a jump in HIV cases, spreading predominantly among male injecting drug users of the most productive age (20 to 49 years).[56] Another statistic completes this grim picture: the total number of officially registered HIV cases in Central Asia has increased 19-fold in the last decade: from 1,641 cases in 2000 to 30,993 cases[57] in late 2008.[58]

The total value of the opiate market is estimated to be around US$13-15 billion per year in both Central Asia and the Russian Federation.[59] By virtue of this financial weight alone, organized crime in the region contributes substantially to problems of corruption and undermines governance. Drug traffickers are able to offer substantial bribes to poorly paid local police, border guards and customs to turn a blind eye to suspicious shipments. In Central Asia, both Tajikistan and Kyrgyzstan are particularly vulnerable, and both have very high levels of corruption.

55 Current annual prevalence of opiate abuse is estimated to be around 1% of the adult population (between 15 – 64 years) in the region.

56 UNODC Regional Office for Central Asia, *Compendium of Drug Related Statistics. 1997-2009, 2009*, p.7.

57 In 2008, 6,664 officially registered persons with HIV/AIDS were identified in Central Asia.

58 UNODC Regional Office for Central Asia, *Compendium of Drug Related Statistics. 1997-2009, 2009*, p.7.

59 These figures are necessarily imprecise, particularly due to the lack of data on heroin purity levels in Central Asia and lack of certainty regarding the size of the Russian heroin using population.

1.2.3 Balkan route

The Balkan route to West and Central Europe runs from Afghanistan via the Islamic Republic of Iran, Turkey and south-east European countries. This route and its various branches form the artery that carries high purity Afghan heroin into every important market in Europe. UNODC estimates that 37% of all Afghan heroin or 140 mt is annually trafficked into the Islamic Republic of Iran, from Afghanistan *and* Pakistan, towards the European market.

Routes and volumes

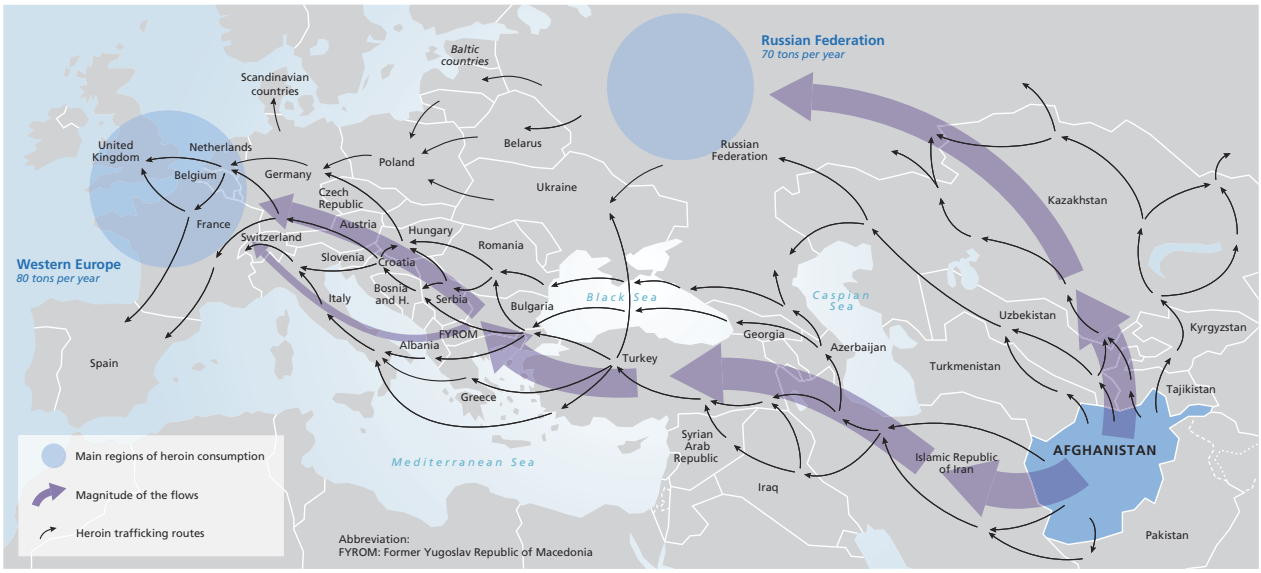
The Islamic Republic of Iran's eastern border with Afghanistan and Pakistan is 1,845 km long and consists of mainly mountainous or harsh desert terrain. There are obvious challenges to achieving even partial control over this area, although 12,000 anti-narcotics police and border guards are reportedly deployed at these long borders.[60] The Balkan route begins in Afghanistan's southern and western provinces, with shipments destined for both the Afghan-Iran border and the Afghan-Pakistan border.

Most of the heroin flow moves through the Iran-Afghan border. Every year, approximately 105 mt of heroin are smuggled from the Afghan provinces of Nimroz, Hirat and Farah into eastern Islamic Republic of Iran. Possibly due to increased law enforcement efforts at that border, Afghan traffickers are thought to increasingly rely on the Afghanistan-Pakistan-Iran route, estimated to handle an additional 35 mt of heroin. To do this, they must first cross into the Pakistani province of Balochistan and veer

60 UNODC project document, "Integrated Border Control in the I.R. of Iran (IRNI50).

Map 3: The Northern and Balkan routes

Source: UNODC



east into the Islamic Republic of Iran. Once in the Islamic Republic of Iran, only two borders separate Afghan opiates from mainland Europe.

In all, approximately 1,000 mt of opium and 140 mt of heroin flow into the Islamic Republic of Iran via these borders. Most of the heroin, around 30% (105-110 mt) of Afghanistan's total production, continues to move west/south-west into the Islamic Republic of Iran towards Turkey and further to Europe. This total includes heroin that is consumed within Europe, seized by law enforcement or trafficked onward to destinations like the United States. The bulk of the supply (at least 80%, or 85 mt) travels the traditional overland Balkan route. An additional 10 mt reach Europe by air or sea from various points of departure.

The so-called 'northern Balkan route' is a relatively recent variant on the Balkan route which transits the Caucasus rather than Turkey. Every year, approximately 9 mt of heroin are estimated to be trafficked from the Islamic Republic of Iran along this route. Joining this flow is a smaller volume of about 2 mt from Central Asia (not shown on map). In all, 11 mt of heroin are estimated to enter the Caucasus. Some 4 mt are either consumed or seized. The remainder, around 7 mt,[61] is thought to be trafficked to Europe. Through one branch of this route, an estimated 6 mt are shipped from Georgia and then to Europe (Bulgaria) via the Black Sea.[62] A smaller flow of 1 ton also travels through Georgia, but moves northward across the Black Sea to the Ukraine.[63]

61 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium,* 2009, p.49.

62 Ibid., p.39.

63 Ibid., p.39.

Some of the identified routes running through the Caucasus are:

1. Islamic Republic of Iran – Azerbaijan – Georgia – Black Sea – Ukraine and/or Bulgaria;
2. Islamic Republic of Iran – Caspian Sea – Russian Federation/Caucasus – Black Sea – Ukraine and/or Bulgaria;
3. Afghanistan – Central Asia – Caspian Sea – Azerbaijan/Caucasus.

Other, smaller routes include trafficking from the Islamic Republic of Iran into Azerbaijan and onward to Dagestan in the Russian Federation, and a small heroin flow originally shipped to the Ukraine via the Caucasus region for transport to Romania and beyond to West Europe. An extension of the Northern route, perhaps 4 mt per annum (4%), is also reported to reach Europe via the Russian Federation.

Heroin crosses from the Azarbaycan-e-Khavari province of the Islamic Republic of Iran into Turkey and traverses Turkey's Hakkari and/or Van districts. An estimated 95 mt of heroin are shipped across Turkey's borders every year along the following routes:

- Hakkari/Van – south-eastern cities – central Anatolian cities – Istanbul – Edirne to Bulgaria/Greece.
- Hakkari/Van – south-eastern cities – southern/western Anatolian cities and onward to Greece/Cyprus by sea.
- Hakkari/Van – south-eastern cities – central Anatolian cities – northern Anatolian cities – Ukraine.

From Turkey, around 80-85 mt of heroin flow towards West Europe (particularly Germany, the Netherlands Italy and the UK) along several routes:

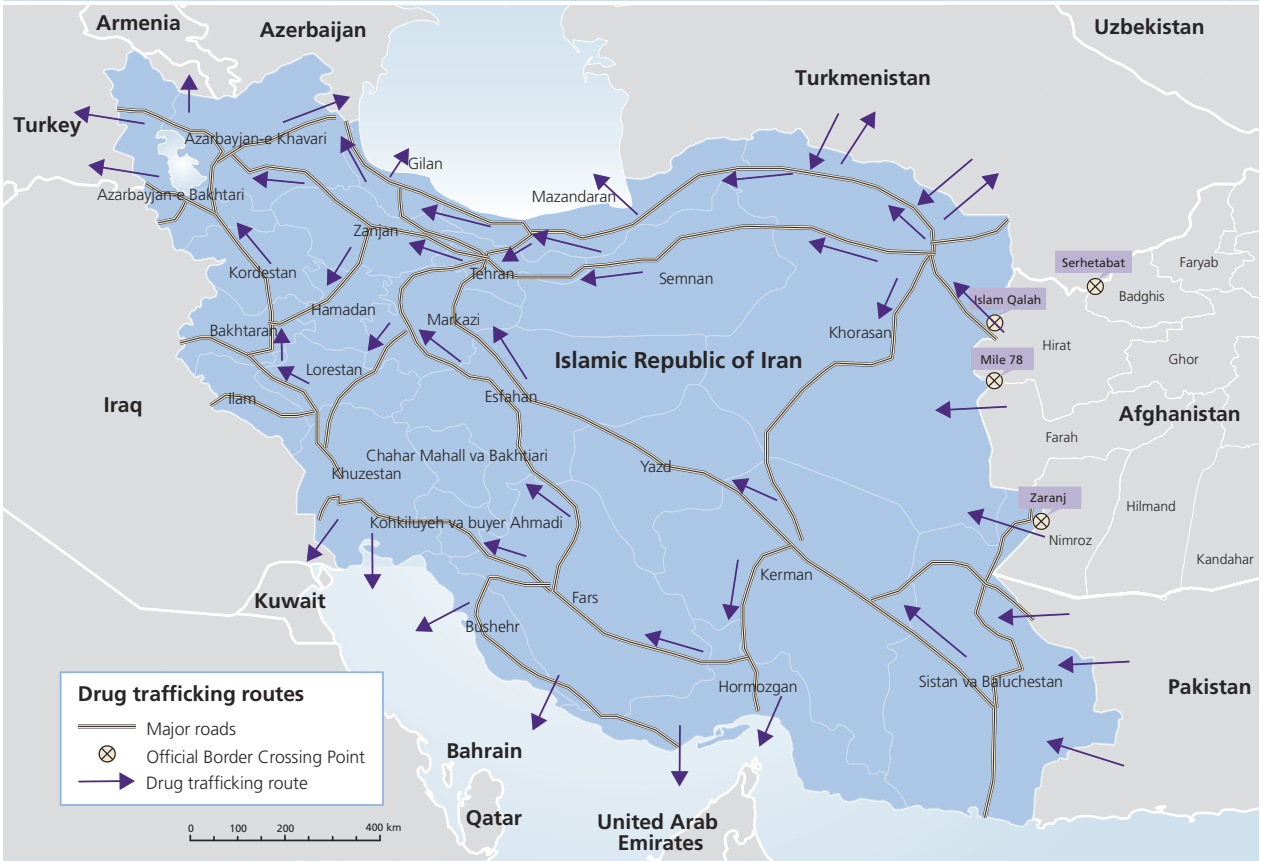
Table 6: Breakdown of heroin flows to Europe

Source: UNODC

Route	Size of flows (mt)	Percentage (rounded)
Balkan route (Afghanistan-I. R. of Iran-Turkey-Southern Europe-Rest of Europe)	85	80%
Northern route (Afghanistan-Central Asia-Russian Federation-East Europe)	4	4%
Northern Balkan route (Afghanistan-I. R. of Iran-Caucasus-Southern Europe)	7	7%
Directly from Pakistan to West and Central Europe	5	5%
Through Africa to Western and Central Europe	2	2%
Directly from South and South-East Asia (except India) to West and Central Europe	1	1%
Through the Middle East and the Gulf area to West and Central Europe	1	1%
Directly from India to West and Central Europe	1	1%
Total	**106**	**100%**

Map 4: Major drug trafficking routes in the Islamic Republic of Iran

Source: UNODC



- **To Italy**: Approximately 20-25 mt[64] of heroin are trafficked towards Italy (mostly by sea) and Switzerland. Most of that amount is thought to be trafficked via Bulgaria, Greece, the former Yugoslav Republic of Macedonia and Albania for onward transportation to Italy. A smaller route proceeds directly from Greece by sea towards Italy. Some heroin also flows via the former Yugoslav Republic of Macedonia to Serbia, Bosnia and Herzegovina, Croatia and Slovenia and further north. In addition, an undetermined amount of heroin is trafficked via sea and air from Turkey to Italy.

64 This amount is equivalent to the estimated quantity of heroin consumed in Italy and Switzerland.

- **To the Netherlands and Germany**: The bulk of the heroin trafficked along this route (approximately 55 to 60 mt) travels to Germany and the Netherlands through Bulgaria, Serbia, Hungary and Austria, or through Bulgaria, Romania, Hungary, Slovakia and Austria. From Germany and the Netherlands, heroin shipments are trafficked onwards to larger markets in France, the United Kingdom and Spain.

Because of its central position along the Balkan route, Austria plays an important transit role for much Germany-bound heroin. Heroin flows to Austria through its borders with Slovenia and Hungary. However, some heroin destined for the German market is trafficked through Bulgaria, Romania, Hungary, Slovakia and the Czech Republic, thereby bypassing Austria. Controls at Schengen borders are limited or non-existent.

Other routes include:

- To East Europe: A limited amount of heroin is trafficked directly from Turkey to Ukraine by sea.
- Direct shipments to West and Central Europe: An undetermined amount of heroin is trafficked directly from Turkey to Western and Central European countries such as Germany, the Netherlands, Belgium, France and the United Kingdom by sea and air.

How does the market operate?

Considerable quantities of heroin are trafficked to Europe by sea and air, but the Balkan route resembles the Northern route in that the bulk of the flow proceeds by land. Most of the heroin headed for West European markets leaves Afghanistan into the Islamic Republic of Iran, Pakistan and Turkey, which collectively seize most of the heroin interdicted in the world (40% of the estimated flow intercepted in 2008). Despite these remarkable enforcement efforts, traffickers nevertheless succeed in getting sufficient volumes through, so that most of the heroin consumed in Europe in recent decades has passed through these countries.

Drug smuggling along the Balkan route is systematic and seems to involve groups with ample resources and consignments much larger than those found on the Northern route (in Central Asia). On the Balkan route, the average amount of heroin seized is approximately 10 kg, which is twice the average amount seized on the Northern route. Consignments very rarely travel the whole way from Afghanistan to Europe in a single unbroken journey. Normally, they will be bought and sold by different groups along the route, the mode of transport will change, and loads will be split and merged as they are moved westward. Seizures are especially large up to Turkey, at which point consignments appear to be broken down into smaller quantities.

The logistics of the trade summarized above necessitates the involvement of well-organized trafficking groups with international connections. For such profit-driven organizations, the lure of Afghan opiates is obvious given the huge mark-ups that arise with distance from the source. One kg of heroin is worth around US$2,000-2,500 in Afghanistan, but rises to US$3,000 on the Afghanistan-Pakistan border and to US$5,000 on the Iran-Afghanistan border. It increases yet again by around 60%, to approximately US$8,000, at the Iran-Turkey border. Based on the estimated flows via this route, Iranian crime groups organizing heroin trafficking from the Afghanistan-Iran border to the Turkey-Iran border stand to pocket some US$450-600 million per year. In addition to heroin, raw opium (some 1,000 mt in 2008) also flows from Afghanistan to the Islamic Republic of Iran via the above-mentioned routes to feed an established Iranian market. An estimated total of 450 mt[65] of opium is consumed each year in the Islamic Republic of Iran. The annual street value of opium consumed in that country is around US$900,000.

Given the huge sums involved and the serious penalties if caught,[66] traffickers along the Iran-Afghanistan borders are generally well-organized and well-armed. Deadly clashes between Iranian troops and traffickers are commonplace, as demonstrated by the thousands of casualties sustained by the Iranian border guards in the past three decades. Depending on the border region, smugglers may be Baluchi tribesmen or Kuchi nomads. If opiates are trafficked through Balochistan - via the largely uncontrolled borders of the Nimroz, Hilmand and Kandahar provinces of Afghanistan - Taliban insurgents are known to provide security to drug convoys up to the border. Balochistan-based organized crime groups then transport the heroin to the Iran-Pakistan border. Once the heroin enters the Islamic Republic of Iran, drug trafficking groups based in that country facilitate onward trafficking to the Turkish border. This is supported by the official statistics of the Islamic Republic of Iran which show that most traffickers are Iranian nationals, with few Pakistanis arrested in the Islamic Republic of Iran (similar proportions are observed for Iranian arrestees in Pakistan). These numbers and other reports suggest that the involvement of Pakistani organized crime groups may not extend far inside the borders of the Islamic Republic of Iran.

Once Iranian criminal groups receive the shipments, the majority is forwarded westward towards Turkey. As previously noted, a portion of the flow veers north and transits the Caucasus towards Europe. The presence of 12 to 20 million ethnic Azeris in northern Islamic Republic of Iran can facilitate direct traffic into Azerbaijan. Also hindering drug law enforcement over Azerba-

65 UNODC, *Addiction, crime and insurgency*, 2009, UNODC.

66 *Drug control in 2009*, Annual Report, Islamic Republic of Iran.

ijan's 132 km long border with the Islamic Republic of Iran is the existence of uncontrolled territories due to an unresolved conflict. In fact, the entire Caucasus region hosts several breakaway republics and disputed zones, over which no recognized national authority has control. The recent conflict in Georgia, for example, has reportedly led to an increase in the volume of heroin trafficking from that country to Europe via the Black Sea.

On the main route to Turkey, ethnic Kurdish groups, with large border populations in the Islamic Republic of Iran, Iraq and Turkey, may be responsible for border crossings. These groups may resell these drugs in Turkey or traffic them to Europe through their own networks. The United Kingdom's Serious Organised Crime Agency argues that in 2009, 138 Turkish networks continued to control the heroin supply to Europe.[67] According to WCO seizure statistics between 2000 and 2008, the majority of drug traffickers arrested in Turkey were Turkish nationals. This might suggest that Turkish groups are organizing the heroin trafficking all through Turkey up to the borders with Bulgaria and Greece where Balkan-based groups take over.

Once heroin leaves Turkish territory, interception efficiency drops significantly. In the Balkans, relatively little heroin is seized, suggesting that the route is exceedingly well organized and lubricated with corruption.[68] In 2008, the countries and territories that comprise South-East Europe (a total of 11 countries, including Greece and Cyprus) seized 2.8 mt of heroin in 2008. This is in sharp contrast to what is seized upstream in Turkey (15.5 mt in 2008) and the Islamic Republic of Iran (32 mt in 2008) every year. In other words, for every kg seized in the South East Europe, nearly 6 are seized in Turkey and 11 in the Islamic Republic of Iran. Given that approximately 85-90 mt travel through this region, this suggests inadequate controls and poor cooperation in a region where high levels of unemployment and low salaries also create incentives for corruption.

The total quantity of heroin seized in West and Central Europe, as reported by some 45 countries, was around 7.6 mt in 2008, which again is only a fifth of the total amount seized in Turkey and the Islamic Republic of Iran in 2008. In all, three countries - the United Kingdom (18%), Italy (14%) and Bulgaria (13%) – accounted for almost half of the total amount seized in the EU and EFTA countries in 2008. Across Europe, many countries directly straddling the main heroin trafficking routes report rather low levels of heroin seizures, such as Montenegro (18 kg in 2008), Bosnia and Herzegovina (24 kg), the former Yugoslav Republic of Macedonia (26 kg), Hungary (28 kg), Albania (75 kg), Austria (104 kg), Slovenia (136 kg), Croatia (153 kg) and Serbia (207 kg).

Organized crime in the Balkans involves a large variety of criminal activities and as such, heroin is but one, albeit among the most lucrative, commodities illicitly trafficked through this region. The profits accrued as the opiates move downstream are substantial. Organized crime groups managing heroin trafficking between the Islamic Republic of Iran and Turkey and on to the Balkans are estimated to earn around US$8,000 per kg of heroin or a total of US$600-700 million per year. The routes through this region also operate in the reverse direction with cocaine, precursor chemicals and amphetamine-type stimulants (ATS) moving eastward into Turkey and beyond. Organized crime groups controlling these corridors thus have comparatively better access to more numerous and diversified crime markets than their Northern route counterparts. Thus, many tend to be poly-drug (heroin, cannabis et cetera) and poly-crime (trafficking in human beings, weapons and stolen vehicles, to name but a few).

Another notable feature of the Balkan route is that some important networks have clan-based and hierarchically organized structures. Albanian groups in particular have such structures, making them particularly hard to infiltrate. This partially explains their continued involvement in several European heroin markets. Albanian networks continue to be particularly visible in Greece, Italy and Switzerland. Italy is one of the most important heroin markets in Europe, and frequently identified as a base of operation for Balkan groups who exploit the local diaspora. According to WCO seizure statistics, Albanians made up the single largest group (32%) of all arrestees for heroin trafficking in Italy between 2000 and 2008. The next identified group was Turks followed by Italians and citizens of Balkan countries (Bulgaria, Kosovo/Serbia, the former Yugoslav Republic of Macedonia and to some extent Greece). A number of Pakistani and Nigerian traffickers were arrested in Italy as well.

Most of the Balkan heroin first passes through Bulgaria, a country which has reported some fairly large heroin seizures in the past, but where figures have been erratic, despite little evidence of fluctuation in the flows. In 2008 for example, Turkey seized some 15 mt of heroin while Bulgaria, despite being the recipient of most of the Balkan route flow, seized 1.1 mt. In Bulgaria, most of the arrested heroin traffickers are nationals of that country. However, the proportion of Turkish nationals also stands out. The other main nationalities are citizens of the Balkans such as Serbs and Macedonians. Notably, Albanians are near-absent.

The Netherlands is a hub for heroin trafficking to France, the United Kingdom, Belgium, as well as Germany. In the Netherlands, the total number of arrests made by customs authorities is limited. Dutch, Nigerian

67 Serious Organised Crime Agency, *The United Kingdom Threat Assessment of Organized Crime*, October 2009, p.26.

68 Interception rates in the Balkan region are very low (3%), especially when compared with Turkey (16%) and the Islamic Republic of Iran (23%).

Fig. 14: Nationality of heroin traffickers arrested in Italy, 2000-2008

Source: World Customs Organization

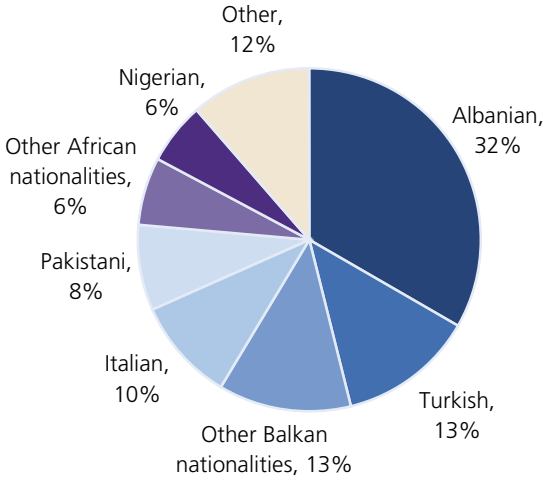
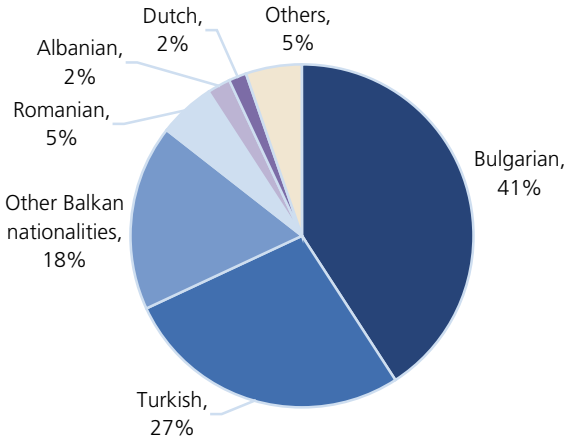


Fig. 15: Nationality of heroin traffickers arrested in Bulgaria, 2000-2008

Source: World Customs Organization



and Turkish nationals are nearly equally represented, while Balkan nationals are conspicuously absent.

In Germany, the number of Turks arrested for heroin trafficking outnumbers all other nationalities except Germans. Dutch citizens represent 5% of all heroin trafficking arrests and generally enter the trafficking chain only after the heroin has arrived in Germany or in trafficking the heroin from the Netherlands back into Germany. Balkan nationalities make up a minority of arrestees in Germany, followed by Nigerian nationals.

In the United Kingdom, British citizens predominate, but a considerable number of Dutch citizens also show up in arrest statistics. The proportion of arrested Turkish, German, Pakistani and Belgian nationals was considerably smaller than Dutch or British nationals between 2000 and 2008. Here too Balkan nationalities comprised a negligible percentage of all heroin trafficking arrests.

Heroin trafficking from the Turkey-Bulgaria and Turkey-Greece borders to the main heroin markets in the United Kingdom, France, Germany and the Netherlands is organized by multi-ethnic groups. Locally-based organized crime groups generally traffic heroin within the destination (main consumer) countries. In Germany and the United Kingdom, for example, German and British groups, respectively, operate heroin distribution networks. In transit countries, south-east European and Turkish organized crime groups cooperate. The involvement of local groups in transit countries varies from country to country. In Austria, for example, the number of Austrians arrested for heroin trafficking between 2000 and 2008 was negligible, with most arrestees holding Turkish, Hungarian, Nigerian or Iranian citizenship. In

Fig. 16: Nationality of heroin traffickers arrested in the Netherlands, 2000-2008

Source: World Customs Organization

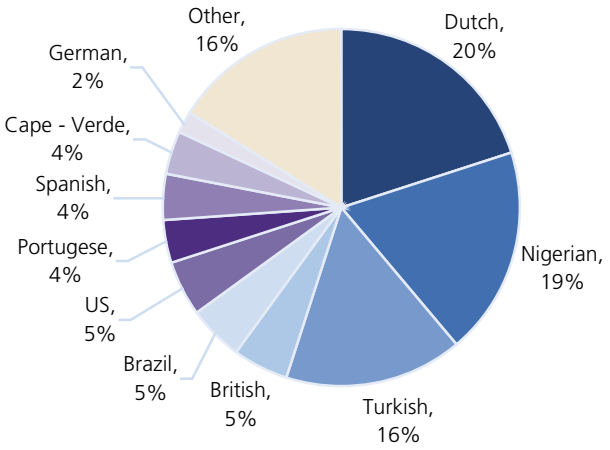


Fig. 17: Nationality of heroin traffickers arrested in Germany, 2000-2008

Source: World Customs Organization

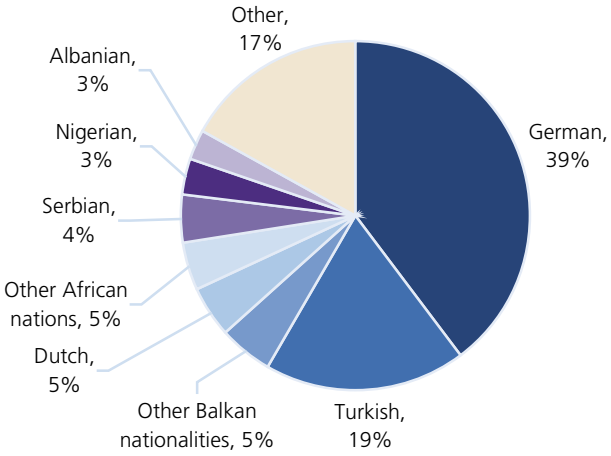
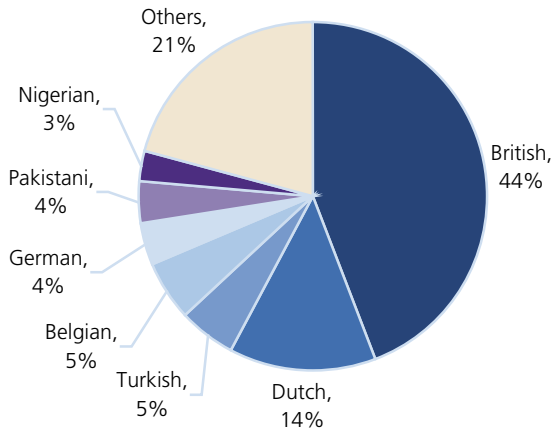


Fig. 18: Nationality of heroin traffickers arrested in the United Kingdom, 2000-2008

Source: World Customs Organization



neighbouring Hungary, by contrast, the number of Hungarian nationals arrested for heroin trafficking during the same period was comparable to that of other nationalities.

Shared ethnicity and language undoubtedly helps smugglers to facilitate opiate trafficking from the source, through the Iran-Pakistan and Afghanistan-Pakistan borders all the way to the Turkish border and beyond. At the same time, different ethnic groups cooperate seamlessly. This includes Kurdish and Turkish groups as well as Bosnian, Serb, Albanian and Croat groups further downstream. The 2010 US International Narcotics Control Strategy Report argues, regarding trafficking in the Balkans, that 'elements from each ethnic group and all major crime "families" are involved in the narcotics trade, often collaborating across ethnic lines.'

Impact of this flow

The first and most direct impact of opiates is on health, including heroin-related deaths. Opiates (including synthetics) account for 35% to almost 100% of all drug-related deaths in the 22 European countries that have provided data, and over 85% in 11 of those countries.[69] In addition, heroin abuse by injection contributes to high rates of serious diseases such as hepatitis B, hepatitis C and HIV.[70] The HIV epidemic among injecting drug users continues to develop at varying rates across Europe. In the countries of the European Union, the rates of reported newly diagnosed cases of HIV infection

69 European Monitoring Center for Drugs and Drug Addiction (EMCDDA), *Drug situation in Europe: Drug-related infectious diseases and drug-related deaths*, November 2009.

70 Hepatitis C (HCV) is more prevalent than HIV among injecting drug users across Europe. HCV antibody levels among national samples of injecting drug users in 2006 and 2007 vary from 18% to 95%, with half of European countries reporting levels in excess of 40%.

Table 7: Subregional distribution of heroin consumption in Europe

Source: UNODC

Region	Heroin consumption (mt)
East Europe	4.4
Southern Europe	2.4
West and Central Europe	80
Total	**87**

among injecting drug users are mostly at stable and low levels, or in decline. However, in post-soviet European countries such as Ukraine, Belarus and the Republic of Moldova, those rates increased in 2007.[71] Finally, the term 'transit country' may not adequately apply to the Islamic Republic of Iran, given the ravages of opiates in the country. There are around 1 million opiate users in the Islamic Republic of Iran and approximately 14 mt of heroin and 450 mt of opium are consumed in-country.[72] The Islamic Republic of Iran appears to have one of the highest rates of heroin addiction per capita in the world: 20% of Iranians aged 15 to 60 are involved in illicit drug use, and 9% - 16% inject drugs.[73] But the lethality of heroin is even more direct on the Islamic Republic of Iran's borders where 3,500 casualties among the border guards are a reminder of the risks taken by law enforcement officials to stem this deadly flow.

Europe is the most important market in terms of volume and turnover for Afghan heroin, with around 250 kg of heroin (of 70% purity) consumed on a daily basis. Annually this represents some 85-90 mt of heroin and a value of some US$20 billion. Most of it, approximately 80 mt, is thought to be consumed in Western and Central European countries. The European market is far from homogenous as four main national markets, the United Kingdom (21%), Italy (20%), France (11%) and Germany (8%) together account for about 60% of consumption in Europe.

Opiate trafficking also fuels corruption and all countries on the Balkan route are affected. The combined GDP of Kosovo/Serbia, the former Yugoslav Republic of Macedonia and Albania at US$20 billion is equivalent to the value of West-Europe's heroin market. The opiate trade is a serious threat to the Balkans; particularly vulnerable

71 European Monitoring Center for Drugs and Drug Addiction (EMCDDA), *Drug situation in Europe: Drug-related infectious diseases and drug-related deaths*, November 2009.

72 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, p.25.

73 Razzaghi E, Movaghar A, Green TC, Khoshnood K. 2006. "Profiles of risk: a qualitative study of injecting drug users in Tehran, Iran." *Harm Reduct J,* Vol. 3, No. 12, doi:10.1186/1477-7517-3-12 in "Mapping and Situation Assessment of High-Risk Key Populations in Three Cities of Afghanistan", World Bank, September 2007, p.4.

are Kosovo/Serbia, Bosnia, the former Yugoslav Republic of Macedonia and Albania. A number of unresolved conflicts and/or remaining inter-ethnic tensions along sections of this route continue to prevent the emergence of effective regional counterdrug cooperation and to facilitate trafficking.

1.2.4 The Southern route

Unlike the Northern or Balkan routes, which are mostly dedicated to single destination markets, the southern route serves a number of diverse destinations, primarily Europe, Africa and Asia, and even a limited quantity going to the United States and Canada. In truth, the only opiate destination market seemingly *not* targeted through this route is the Russian Federation. It therefore seems more accurate to talk about a vast network of routes rather than one general flow direction.

Routes and volumes

Pakistan is geographically vulnerable to opiate trafficking; UNODC estimates that approximately 40% of Afghanistan's heroin/morphine (150 mt) transits or is consumed in Pakistan. More Afghan opiates pass through Pakistan than any other country bordering Afghanistan. Controlling this border is a major challenge; the long, thinly guarded boundary (2,500 km) follows a chain of mountains with long sections reaching altitudes of more than 4,000 metres gradually ceding to open plains and dunes in Balochistan province facing southern Afghanistan. The most important points for all trade, both licit and illicit, on the Pakistan-Afghanistan border are the Torkham crossing in the Federally Administered Tribal Areas (FATA) and the Chaman checkpoint in Balochistan province. In addition to these, there are hundreds of natural passes and desert roads coursing across the entire border, most of which are unmanned and unsupervised.

In recent years, a cross-border insurgency has precluded effective law enforcement work in much of the FATA and in parts of Balochistan province. The biggest vulnerability, however, is Pakistan's immediate proximity to heroin processing zones in Afghanistan, notably the adjoining provinces of Hilmand, Nimroz and Kandahar. Every day, finished heroin is smuggled into Pakistan using multiple methods of transportation, including the wide usage of camels and pack animals. Not only heroin but unrefined opium and semi-refined morphine are shipped across these borders, as seizure data demonstrates. In 2006, Pakistan seized approximately 32,658 mt of morphine or 72% of global seizures. This is a huge 18-fold increase over seizures in 2001, which totaled 1,825 kg.[74] Since then, morphine seizures have dropped by two thirds in 2007 (10,989) and again by a third in 2008 (7,324).[75] Seizures of opium nearly doubled from 2007 (15,369) to 2008 (27,242) and Pakistani users consume approximately 80 mt of opium annually, most of it sourced in Afghanistan. A portion of heroin never leaves Pakistan, either due to absorption into the domestic market (estimated to consume approximately 20 mt of heroin annually)[76] or seizures (9.2 mt of heroin in 2008).

The remaining opiates (mostly heroin) flow out of Pakistan in multiple directions, starting with the major consumption markets next door in China, India and the Islamic Republic of Iran. The following are the major routes identified:

- From eastern Afghanistan into the FATA, opiates are trafficked in three main directions: 1) towards China via Gilgit (northern areas) by road; 2) towards India through the NWFP-Chakwai/Rawalpindi-Sailkot-Wagha route; 3) towards Karachi via the North Western Frontier Province (NWFP)-Rawalpindi-Chawai-Faisabad-Mutan-Sukkur route.
- From Balochistan (mostly the cities of Dalbandin and Quetta) towards eastern Islamic Republic of Iran by road and rail for onward movement towards Turkey and Western Europe. Towards Gwadar port or the smaller fishing ports and open areas of the Makran coast or the main ports of Karachi and Port Qasim and further to international destinations via air or sea, mostly using cargo containers.

Although significant quantities are shipped from Eastern Afghanistan into FATA, the Pakistani province of Balochistan is the primary transit area, both for shipments that exit via the Pakistani coast and those which travel through Pakistan to the Islamic Republic of Iran. This is a significant flow in itself with almost a quarter of the heroin flow (or 35 mt) veering west towards the Iranian border and blending into the Balkan flow destined for Europe.

Europe, an especially lucrative market, is also targeted by Pakistani traffickers who operate numerous air (and sea) trafficking routes from Pakistan to Europe (mostly the United Kingdom and the Netherlands), shipping an estimated 5 mt annually via these direct connections.[77]

Approximately 2 mt of heroin are shipped to the United States and Canada annually, through various routes, including directly in cargo planes.[78]

Over the past decade, China appears to have received an increasing amount of Afghan opiates, approximately 7 mt (out of an estimated total 55 mt of heroin trafficked

74 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, UNODC, p.34.

75 ARQ, Pakistan, 2008.

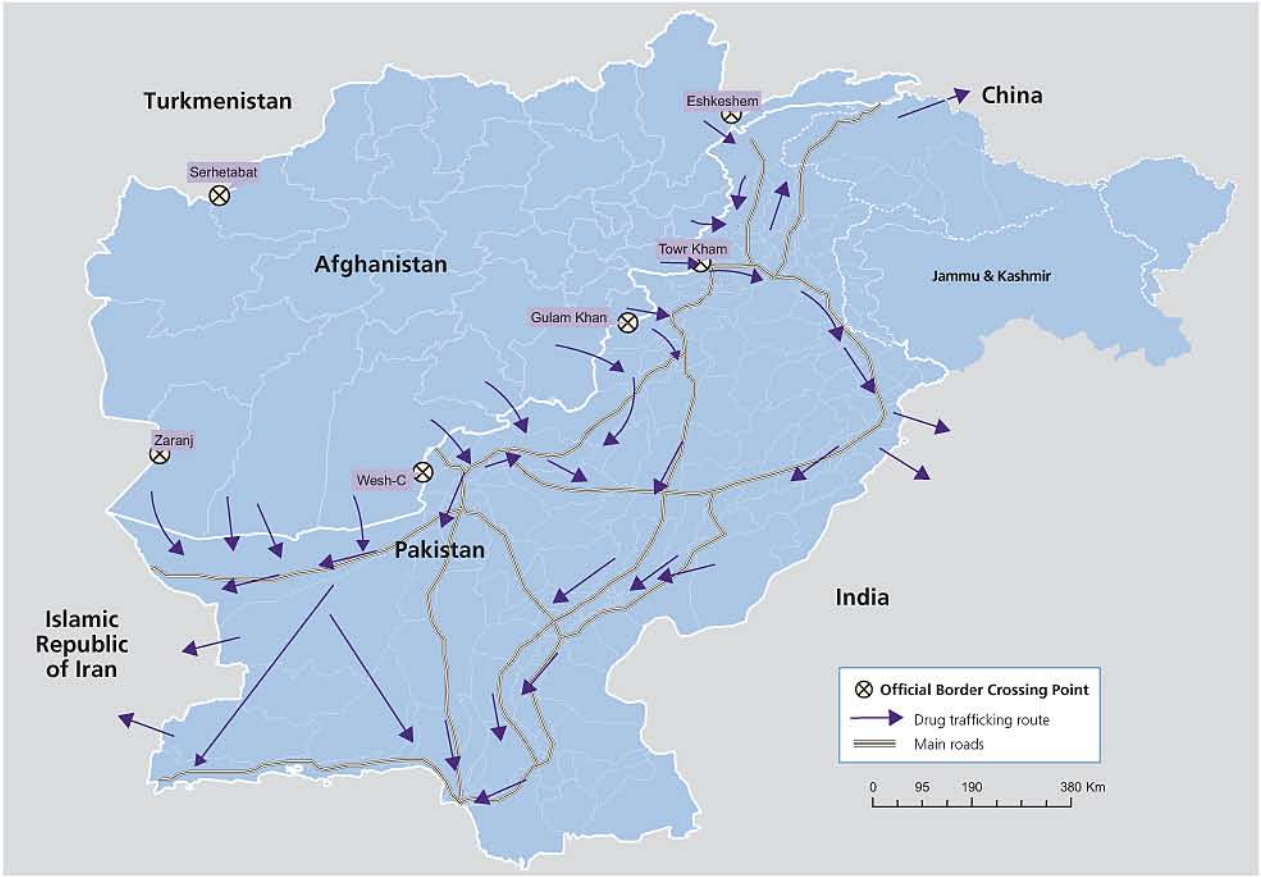
76 UNODC, *Addiction, crime and insurgency*, p.25.

77 Ibid., p.34.

78 In July 2009, the Royal Canadian Mounted Police seized over 120 kg of heroin that had been shipped from Pakistan.

Map 5: Drug trafficking routes in Pakistan

Source UNODC



to China annually) of which were sourced from Pakistan in 2008.[79] A proportion of this amount is thought to traverse Pakistan's northern areas towards China's Xinjiang province.

UNODC now tentatively estimates that Pakistan is Africa's main supplier of heroin at approximately 20 mt a year. In addition to the aforementioned direct routes into the United Kingdom/the Netherlands, Pakistani traffickers - in collusion with African crime groups - ship perhaps an additional 2-3 mt into Europe using Africa as a trans-shipment point.[80]

Karachi is a major sea conduit for shipments to Gulf countries and further to East and Southern Africa and various destinations in China. Approximately 11 mt are estimated to be trafficked into the United Arab Emirates (mostly Dubai) for onward shipping to these two destinations.[81]

Pakistani traffickers also operate routes through Lahore and other northern cities into India (mainly by road). There are a large number of other air/road and sea routes servicing numerous other Asian countries for a total flow of approximately 25 mt.[82] Additionally, some routes proceed in seemingly counter-intuitive directions. As an example, in June 2007, Kyrgyz authorities arrested a Nigerian who had organized trafficking from Pakistan to Tajikistan and onward to CIS countries, Europe and Australia. Another route reported by Central Asian authorities involved multiple couriers starting in Pakistan and onward to the Islamic Republic of Iran-Azerbaijan-Turkey towards a final destination city in China.[83]

79 UNODC, *Addiction, crime and insurgency*, p. 48.

80 In Africa, Nigeria, South Africa and Ghana are the main African States sourcing to Europe; see UNODC *Addiction, crime and insurgency : the transnational threat of Afghan opium*, p.38.

81 Individual seizure data provided by the UAE indicates that at least 50% of the heroin seized in the UAE was headed to Africa, and the rest to China; see UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, p.48.

82 UNODC, *Addiction, crime and insurgency: the transnational threat of Afghan opium*, 2009, p. 59.

83 CARICC Information Bulletin N.48.

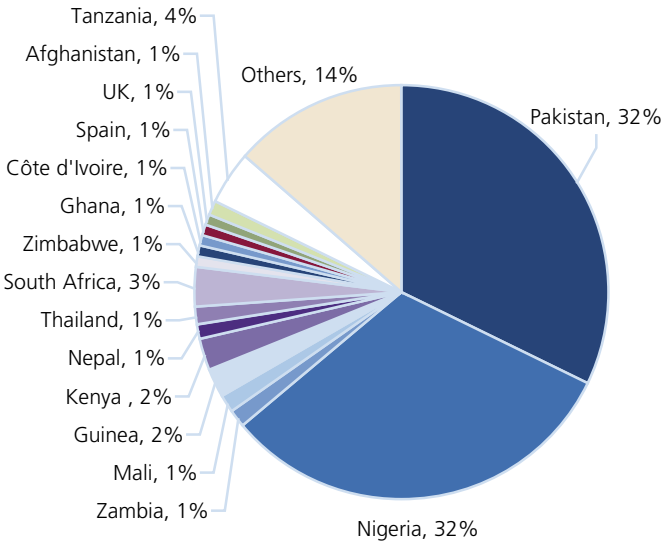
How does the market operate?

The first stage of the route offers relatively few challenges to experienced traffickers, many of whom belong to ethnic groups that live on both sides of the border. In Balochistan, drug trafficking convoys consist mostly of Baloch traffickers receiving from Pashtuns in Afghanistan and delivering to the Islamic Republic of Iran, Karachi, or launches from the Balochistan coast (Gwadar and Pasni ports). These convoys are heavily militarized and intimidation/violence occurs all around their business, including in areas of Balochistan that suffer from having very low penetration of government security forces. Many important traffickers are based in Quetta (Balochistan) and some are Afghans who have relocated there following law enforcement operations in southern Afghanistan.

Trafficking from eastern Afghanistan into the FATA generally involves the use of mountain trails and pack animals. Violence is rarely reported during crossings (which often occur at night). The cross-border trade is under the control of several prominent cross-border Pashtun tribes, notably the Afridi and Shinwari, but also others such as members of the Mohmand and Waziri sub-tribes. To offload further in Pakistan, whether in Karachi or on the Makran coast, traffickers rely on high-level political protection and connections between Afghans and powerful people in Sindh and Punjab provinces.

Fig. 19: Breakdown by nationality of arrested heroin traffickers in Pakistan, 2008

Source: World Customs Organization



With the possible exception of Iran-bound opiates, African traffickers – the majority West Africans - are pivotal to the international trafficking of heroin. Groups often have a large and varied pool of couriers to employ. These may be Filipinos, Indonesians, Pakistanis and Chinese nationals but also West Africans. Among West African groups, Nigerians are especially active as attested in arrest figures. These groups tend to be organized along tribal/ethnic lines with loose network structures.[84]

West African groups traffic to multiple destinations, including China, India and Africa. This type of trafficking usually involves the use of air routes (from the airports of Peshawar, Islamabad, Lahore, Karachi and Quetta) to transit points like Dubai and onward to Nigeria and other West African countries.[85] The use of post parcels is also widely reported.

Africa is both a market and a staging point for other destinations. According to ANF reports, African traffickers "have created two networks: a supply network from Pakistan to Africa and a redistribution network from Africa to Europe and North America and elsewhere."[86] In destination markets like Europe, West African networks rely on their respective diaspora as a base for their activity (importation and retail distribution of heroin). Recruiting European nationals as couriers to bring heroin by air to Europe has also been reported.

The use of air routes is significant; over 37% of Pakistan's total heroin seizures in 2006 took place at airports.[87] Couriers typically attempt to either conceal opiates in luggage or body carry them out of Pakistan.

The extent to which African groups collaborate with Pakistani groups in smuggling ventures remains unclear. According to the US State Department INCSR 2010, drug trafficking organizations in Pakistan are still fragmented and decentralized but there is a trend towards specialization. Clearly, the market is not closed to outsiders, as Nigerians alone account for fully 32% of drug trafficking arrests in 2008. Rather it appears that Nigerians (and other African groups) overlap in some cases with Pakistani groups, both in Pakistan and in some destination markets (Africa and China)

Annually, UNODC estimates that the revenue generated by Afghan opiate trafficking to and through Pakistan exceeds US$1 billion, while emphasizing that this excludes the revenue from illicit trading in associated precursor chemicals. In the past few years, most large (multi-ton) seizures have occurred at the port of Karachi but chemicals may also be trafficked to Pakistan in small lots from China and/or India, two major producers. It is notable that Pakistan's acetic anhydride seizures surpassed Afghanistan's in 2008.[88] There is an increasing

84 Joergen Carling, *Migration, Human Smuggling and Trafficking from Nigeria to Europe*, International Peace Research Institute, Oslo (PRIO), 2006.

85 Anti Narcotic Force Pakistan, *Analysis of domestic seizures 2006.*

86 Ibid., p.14.

87 UNODC Pakistan country office, *Illicit drug trends in Pakistan*, April 2008, p.23.

88 According to information provided by the UNODC Pakistan country office, in 2008, Pakistan reportedly seized over 15,000 litres of acetic anhydride in three separate seizures.

information flow on precursor trafficking through Pakistan and this is directly related to the country's openness to observation and international cooperation. There remain, however, serious information gaps on precursor procurement networks and the illicit precursor trade in general.

Impact of this flow

As with the Islamic Republic of Iran, Pakistan's high levels of opium and heroin use are fuelled by the easily available supply. The latest assessment of drug use in Pakistan took place in 2006 and estimates the number of chronic opiate users at 628,000, of which around 500,000 are heroin users.[89] To put these numbers in perspective, this is twice the numbers found in Central Asia[90] and ten times the numbers found in Afghanistan.

A 100% increase in injecting drug use was estimated between 2000 and 2006. There is currently a concentrated, but localized, HIV epidemic among injecting drug users (IDUs) in Pakistan. Coupled with widespread risk behaviour, this could lead to an HIV epidemic among the wider population. Surveys in several cities of Pakistan have confirmed substantial epidemics of HIV among IDUs.[91] One study in Karachi revealed an increase in HIV prevalence among IDUs from 1% in 2004 to 26% in March 2005,[92] while a more recent study found that HIV prevalence among IDUs has reached 24% in Quetta (along the border with Afghanistan).[93] The increase in the number of IDUs has complicated drug treatment and requires trained service providers.

As in neighbouring Afghanistan, drugs in Pakistan are inseparably entangled with corruption and insecurity. Currently, Pakistan's efforts against the trafficking of Afghan opiates (and the cultivation of opium poppy) are constrained by a major cross-border insurgency and the threat of violent extremism, which has monopolized the attention of law enforcement agencies. One example is the restive Federally Administered Tribal Areas (FATA) which was opium poppy-free for several years until 2003/2004, but where there has been a re-expansion of cultivation.[94]

89 According to the 2008 UNODC survey *Illicit drug trends in Parkistan* there are 482,000 heroin users in Pakistan.

90 Prevalence was revised downwards to 0.7% of the adult population. However, this assessment was not methodologically sound and it is suspected that opiate use in Pakistan is much higher than the numbers it returned.

91 National AIDS Control Programme of Pakistan, *HIV Second Generation Surveillance in Pakistan: National Report – Round 1*, 2005.

92 Emmanuel F, Archibald C, Altaf A; "What Drives the HIV Epidemic among Injecting Drug Users in Pakistan: A Risk Factor Analysis", XVI International AIDS Conference, 13-18 August 2006, Toronto, Canada.

93 Achakzai M, Kassi M, Kasi PM, "Seroprevalences and Co-infections of HIV, Hepatitis C Virus and Hepatitis B Virus in Injecting Drug Users in Quetta, Pakistan", 2007, *Tropical Doctor*, 37(1):43-5.

94 According to the US Government, Pakistan cultivated 1,779 ha in 2009 with a potential opium production of approximately 44 mt. The majority of this cultivation occurs in the Federally Administered Tribal Areas (Khyber, Bajaur, and Mohmand); see Bureau of International Narcotics and Law Enforcement Affairs, *2010 International Narcotics Control Strategy Report (INCSR)*, March 2010.

1.2.5 Implications for response

Drug control in the era of globalization faces a number of challenges, from a cultural shift in consuming societies - which sees some forms of drug use as increasingly acceptable - to the dismantling of barriers to global trade. The latter poses acute challenges to border controls, which still require substantial strengthening, particularly in the Balkans, Central Asia, South Asia and along the Pakistan-Afghanistan border. The level of global sea, air and land transportation will continue to increase. As an example, according to the International Association of Ports and Harbours container traffic is expected to double by the year 2012, compared with 1999 figures. At present, more than 220 million sea containers move around the globe per year with approximately 90% of the world's cargo shipped via container. Scanning or searching every single container, load and vehicle is practically impossible. Traffickers are well aware of these limitations and frequently target the busiest ports of entry. International information exchange and cooperation should therefore be the pillar of any global counter-narcotics strategy. Practically speaking, this should include increased support for regional information collection and coordination bodies such as the Joint Planning Unit (JPU) in the Islamic Republic of Iran, the Southeast European Cooperative Initiative (SECI) centre in the Balkans and the Central Asian Regional Information and Coordination Centre (CARICC) in Central Asia, which would enhance capacities for expanded cooperation in the future.

Like any other industry, the opiate market follows the laws of demand and supply, and also react to economic stimulus and pressures. The geographic concentration of opiate production in Afghanistan is unique. It is tempting to think that if control could be maintained over a few provinces in one of the poorest countries on earth, one of the world's most intractable drug problems could be solved overnight. Experience has shown, however, that markets quickly adjust, and that production soon re-emerges to meet an established demand. This perspective may also have led to a disproportionate focus on production in Afghanistan, at the cost of efforts in other parts of the market chain. It is thus imperative that the market be tackled as a whole, including both supply and demand. The international community needs to strengthen the link between supply and demand reduction measures and to better integrate national efforts in the framework of an international strategy on the scale of the market. To do both, getting a better understanding of the transnational heroin economy is a matter of urgency.