UNITED NATIONS
Office on Drugs and Crime

THE OPIUM ECONOMY IN AFGHANISTAN

An International Problem

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PREFACE

For more than two millennia, Afghanistan has been at the crossroads of civilizations and a major contributor to world culture. In the past quarter century, the country has also found itself at the crossroads of international terrorist violence and became a major contributor to world narcotics production.

As a consequence, Afghanistan now faces a historic challenge. Although counter-terrorism is the key battleground, the enemy has to be confronted on other fronts as well, first and foremost in the struggle against illicit drugs. This challenge can be faced: Thailand, Pakistan and Turkey (on the opium front), Bolivia and Peru (on the cocaine front) have shown that legal and commercially viable crops can replace illicit cultivation.

The establishment of democracy in Afghanistan and the Government's measures against cultivation, trade and abuse of opium have been crucial steps towards solving the drug problem. Yet, other news has not been good. For example, last year's opium poppy harvest was among the highest in the country's history.

Not surprisingly, public opinion, both in Afghanistan and abroad, is perplexed. Nagging questions are raised. Why is the international presence in Afghanistan not able to bring under control a phenomenon connected to international terrorism and organized crime? Why is the central Government in Kabul not able to enforce the ban on opium cultivation as effectively as the Taliban regime did in 2000-01?

There are no simple answers to these questions. The opium economy of Afghanistan is an intensely complex phenomenon. In the past, it reached deeply into the political structure, civil society and economy of the country. Spawned after decades of civil and military strife, it has chained a poor rural population – farmers, landless labour, small traders, women and children - to the mercy of domestic warlords and international crime syndicates that continue to dominate several areas in the south, north and east of the country. Dismantling the opium economy will be a long and complex process. It cannot simply be done by military or authoritarian means. That has been tried in the past, and was unsustainable. It must be done with the instruments of democracy, the rule of law, and development.

Does Afghanistan face an insoluble problem? No, if we all play our parts in the solution.

Afghanistan's drug economy can be dismantled if the Government, with the assistance of the international community, addresses the roots of the matter and not only its symptoms. This report exposes such roots, as a contribution to the common effort against illicit drugs. *First,* the report de-constructs the opium economy of Afghanistan into its main components: cultivation, production, finance, trade and consumption. *Secondly,* the report re-constructs the country's development processes piece by piece, showing that it is essential: (i) to help poor farmers decide in favour of licit crops; (ii) to replace narco-usury with micro-lending; (iii) to provide jobs to women and to itinerant workers; (iv) to provide education to children, particularly girls; (v) to turn bazaars into modern commodity markets; and (vi) to neutralize warlords' efforts to keep the evil trade alive.

National efforts will not be enough. The problem is international. Afghanistan's cultivation, trafficking and drug abuse have ramifications that reach deeply into the region's post-colonial history, and widely into the contemporary geo-politics of terrorism and violence. Hence convergent efforts are needed by countries through which Afghan opiates are trafficked, and where heroin abuse nourishes the opium economy. In other words, all countries that are part of the Afghan drug problem should be part of its solution.

The United Nations *Office on Drugs and Crime*, which is the foremost setting for multilateral policy against drugs, and a major provider of technical assistance on counter-narcotic affairs, hopes that this informal report will raise public awareness about an issue that deserves world attention.

Antonio Maria Costa
Executive Director
United Nations *Office on Drugs and Crime*

January 2003

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EXECUTIVE SUMMARY

Background

The United Nations *Office on Drugs and Crime* has conducted annual opium poppy surveys in Afghanistan since 1994. The most recent one was issued in October 2002. The surveys collect information on the location and extent of opium cultivation, production and prices. Since Afghanistan was the world's largest source of illicit opium in 2002, the surveys are crucial in defining a problem which is manifestly global and international in dimension.

The present study goes beyond reporting on a single year's production and value. It examines Afghanistan's opium economy in order to understand its dynamics, the reasons for its success, its beneficiaries and victims, and the problems it has caused domestically and abroad. The purpose of the study is to assist the country and the international community in fulfilling the objectives of the United Nations General Assembly Special Session on Drugs (1998), to eliminate illicit drugs.

This report is not about Afghanistan's dependence on illegal drug activity. On the contrary, it shows that the opium economy is limited to a few provinces that have defied the opium ban issued by President Karzai on 17 January 2002. The decree asserted that the opium problem was a matter of national security, and called for international support to solve it. The findings of this report render that call imperative.

PART 1: DIMENSIONS

Chapter 1. Afghanistan's illicit opium economy: size and shape

Production and Trafficking

- *Afghanistan's opium production (3400 tons in 2002) increased more than 15-fold since 1979;*
- *From 1996 to 1999, under the Taliban, production doubled and peaked at over 4600 tons;*
- *In 2000 the Taliban banned opium cultivation, but not trade;*
- *In 2002 opium was cultivated by several ethnic groups in the south (Helmand), east (Nangarhar) and north (Badakshan);*
- *Cross-border ethnic and tribal links facilitate trafficking by several ethnic groups;*
- *Over three-quarters of the heroin sold in Europe, and virtually all of it in Russia, originates in Afghanistan.*

Afghanistan's opium production increased more than 15-fold since 1979, the year of the Soviet intervention in Afghanistan. By 2000 the country was the source of 70% of all the illicit opium produced in the world. Following a decline in 2001, production resumed at high levels in 2002, again making Afghanistan the world's largest producer (followed by Myanmar and Laos), accounting for almost three-quarters of global opium production.

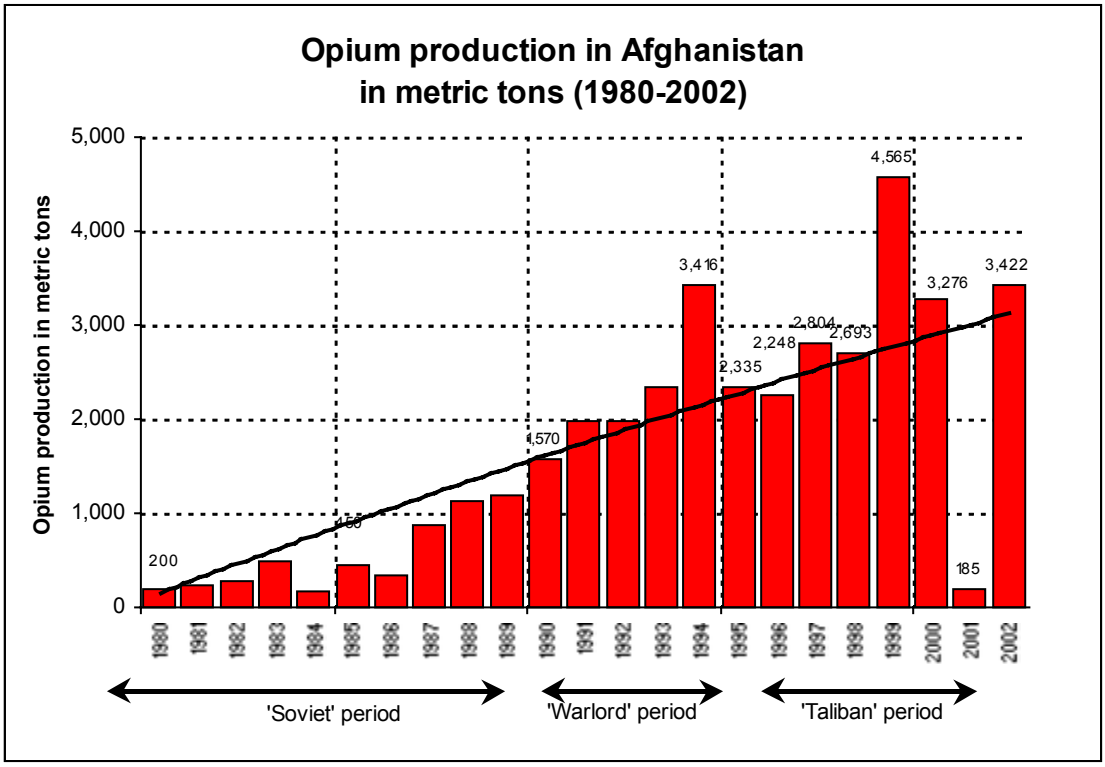


Figure 1
Source: UNDCP, *Global Illicit Drug Trends 2001* and *2002* and *Afghanistan Opium Survey 2002*.

Traditionally the bulk of opium poppy cultivation was in the south (Helmand province, 52% of total cultivation in 2000) and the east (Nangarhar, 24%). In 2001, the Taliban ban pushed the output to the north (Badakshan, 83%, though of a far lower total). In 2002 the largest areas under cultivation were again Helmand (40%), Nangarhar (27%) and Badakshan (11%), followed by Uruzgan (7%), Kandahar (5%), and Ghor (3%). Thus 93% of the area under poppy cultivation is restricted to six provinces that have not yet complied with the ban issued by the Government in January 2002.

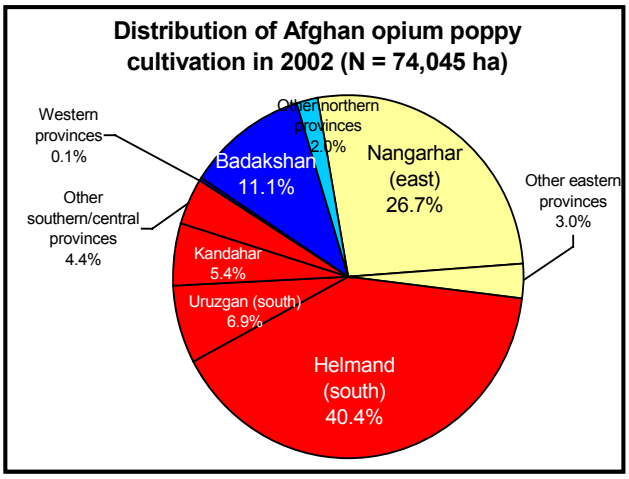


Figure 2
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2002*.

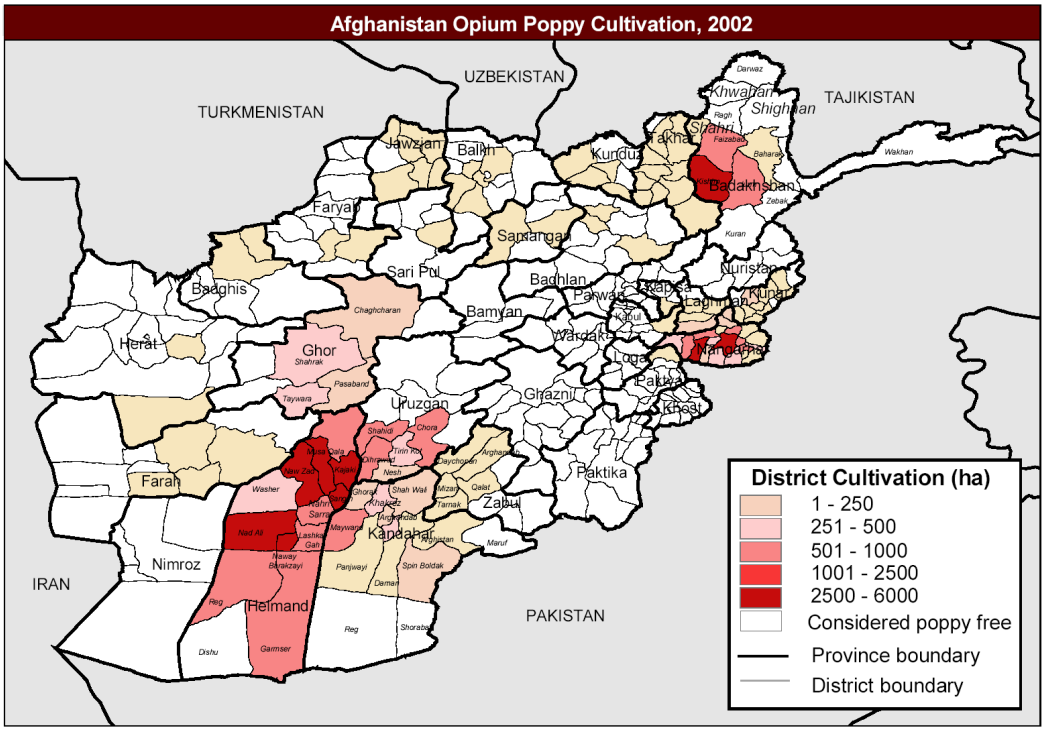


Figure 3
Source: UNODC, *Afghanistan Opium Survey 2002.*

The area under poppy cultivation is a tiny fraction of the arable land in Afghanistan (0.9% in 2002). Even in the poppy growing villages, only 8% of the arable land was used for opium cultivation in 2000, though in Helmand and Nangarhar the rates were significantly higher (about one-third of arable land). Today the bulk of poppy cultivation again takes place on irrigated land in the south, where productivity can be 3-4 times higher than in the rain-fed provinces of the north.

Most ethnic groups are involved in opium production though there seems to be a concentration among Pashtun and Tajik villages located in the main opium producing regions of southern, eastern and northern Afghanistan. Opium cultivation spread throughout the country in the 1990s, following the ethnic distribution of itinerant workers who disseminated the know-how for opium production. Trafficking then spread to neighbouring countries, facilitated by ethnic links across borders: Pashtuns in Pakistan; Baluchis in Pakistan and Iran; Tajiks in Tajikistan; Uzbeks in Uzbekistan; and Turkmens in Turkmenistan.

Trade and Incomes

- *The opium trade was* de-facto *legal in Afghanistan before and throughout the Taliban period;*
- *In January 2002, the Karzai Administration banned it;*
- *Opium markets in southern Afghanistan were fragmented and competitive, while in the east and north they were oligopolistic. Price levels and structures varied accordingly, but they are now coverging;*
- *Opium farmgate prices increased almost 10-fold ($300 per kg) at harvest time in 2001 compared to a year earlier as a consequence of the Taliban opium ban, and some 20-fold ($700 kg) prior to September 11. Despite a good harvest in 2002 – opium prices still amounted to around $350 at harvest time in 2002, and were about $540 at the end of the year;*
- *Over the 1994-2000 period, gross income from opium was about $150 million/year ($750/family). In 2001 following the Taliban ban, prices increased 10-fold. In 2002 gross income rose to $1.2 billion ($6,500/family). Part of the income is shared with traders and/or taxed by warlords;*
- *Income from opium and heroin trafficking into neighbouring countries amounted to at least $720 million in 2000. It may have doubled in 2002;*
- *These are extraordinary revenues in a country where the average wage does not exceed $2 per day.*

Given their quasi-legal status until the beginning of 2002, opium markets in Afghanistan operated like any other commodity market. Farmers sold opium directly on local bazaars or to local traders and shopkeepers who, in turn, provided credit to them.

Over the last twenty years (1980-2000) Afghanistan's opium markets were somewhat fragmented. The weakness of the central administration, the country's segmentation into clans and tribes, and the poor transport infrastructure splintered the trade. Domestic markets were also affected by cross-border trafficking: conditions in neighbouring countries (prices, routes and risks) shaped Afghanistan's own terms of trade and trading structures.

In eastern markets (Nangarhar province), prices tended to be higher than in the south due to an oligopolistic market structure. Southern markets were decentralized, atomistic and highly competitive, with lower prices. In the north, opium prices were typically high because of better quality and strongly rising demand in Central Asia and Russia. In recent years (2000-2002) price differentials have, however, declined: Afghanistan's fragmented opium trade, now increasingly influenced by international syndicates and criminal groups, may be on the way to becoming a single integrated market.

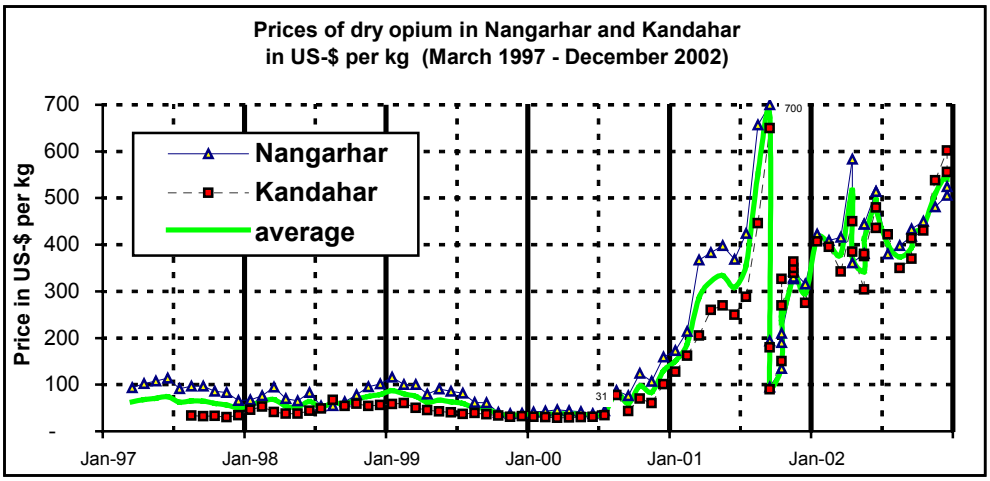


Figure 4
Sources: UNODC/ICMP, Field Office

Gross income from opium production, derived from farm-gate prices at harvest time, amounted to an annual average of $95 million over the 1994-2000 period. However, not all farmers sold their opium at harvest time, when prices were low. Taking the average annual opium prices as reported at the main opium bazaars over the same period, annual income could have been twice as high, almost $180 million. This figure includes, however, profits made by local traders. If this is excluded, gross opium income of farmers was estimated at about $150 million/year between 1994 and 2000. Following the Taliban ban in summer 2000, which reduced the 2001 harvest to one tenth of earlier levels, prices increased 10-fold to $350-400/kg. Farmers' income levels were, therefore, significantly higher in 2002. Taking into account the large output in that year (3400 tons), the gross opium revenue of farmers may have reached $1.2 billion. It may have been even higher since prices continued rising till the end of 2002. The long-term sustainability of these prices, however, is an open question.

Gross income from opium, morphine and heroin trafficking to neighbouring countries has been substantial and increasing. A conservative estimate placed it at $720 million in 2000. Less conservative assumptions would bring the figure closer to $1 billion, equivalent to 15% of Afghanistan's GDP or seven times the country's 1990-99 average annual exports ($136 million/year). In 2002 the income derived from trafficking was significantly more (about $1.3 billion), due to higher prices in neighbouring countries.

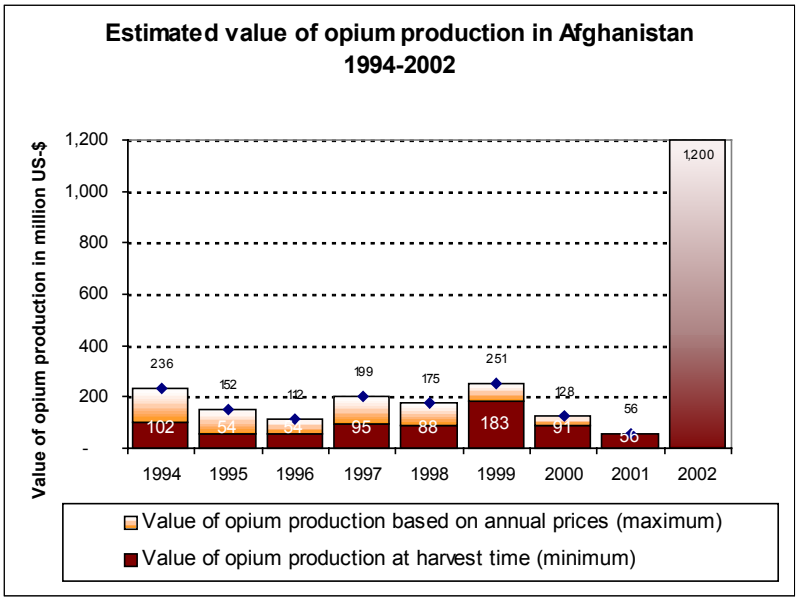


Figure 5
Sources: UNDCP/ICMP, *Afghanistan Opium Survey 2002* and previous years, and UNODC Field Office.

Drug Abuse

- *Drug abuse in Afghanistan has increased strongly in the last few years, due to prolonged human deprivation and suffering, the breakdown of traditional social controls, the return of refugees who developed a drug problem in refugee camps, and the almost unlimited availability of opiates within Afghanistan;*
- *The war wounded also became addicted as consequence of primitive first aid and large-scale use of opium, morphine, and heroin as painkillers;*
- *Drug abuse in Afghanistan is still low compared to neighbouring countries (Iran, Pakistan, and Central Asia).*

Before the Soviet occupation there was not much of a drug culture in Afghanistan and abuse was very limited. In the 1990s, drug abuse emerged as a problem in both urban and rural areas. It was caused by prolonged human deprivation and suffering of the population, the break-down of social and cultural values, the vulnerability of people in refugee camps, and the virtually unlimited availability of inexpensive narcotics. The medical use of opiates as analgesics and sedatives in the treatment of wounded combatants and other war victims also contributed to rising levels of addiction.

No national survey of drug abuse has been conducted in Afghanistan. On the basis of surveys in some districts of eastern Afghanistan, it can be estimated that opium is abused by 0.5%, and heroin by 0.1% of the adult population. These levels exceed opiate abuse levels in western Europe (0.3%), though they are lower than in Pakistan (0.9%), Central Asia (0.9%) or Iran (1.7% to 2.8%). The abuse of hashish (9.1%) and of psychotropic substances (1.8%) is also widespread.

PART 2: ORIGINS

Chapter II. Historical roots of the opium economy

- *The opium economy developed in Afghanistan because of:*
  - *lack of effective government administration until the recent past;*
  - *degradation of agriculture and most economic infrastructure due to twenty years of war;*
  - *a war economy and related black marketeering.*
- *Through the 1980s and 1990s several competing factions financed their war efforts with opium revenue. Since most of the opium producing provinces came under Taliban control after 1996, the Taliban reaped the largest gains from the opium economy.*
- *The Taliban cultivation ban increased prices in 2001 and revalued stocks by a factor of 10; more liquidity in the hands of traders thus created further incentives for the opium economy.*

Several factors played a role in the development of Afghanistan's opium economy. The most important one was weak government control over the country in the 1980s and the 1990s. As elsewhere in the world the lack, or collapse, of a central administration gave drug traffickers, criminal syndicates and terrorist groups the opportunity to develop an illegal economy for drugs, arms, contraband, and the provision of acolyte financing for further criminal activity.

The economic system collapsed. After more than 20 years of war and conflict the degradation of agricultural and other economic infrastructure was total. Irrigation channels, cultivation terraces, roads and warehousing, were all destroyed. Agricultural production of legitimate crops cannot be sustained without some basic storage, marketing and transportation facilities. Opium does not face these limitations. It is durable, easy to store and carry to the market. Opium markets, in any case, operated like spot and futures markets, with traders providing credit for future production, buying the opium in local bazaars or even at the farmgate, and traffickers taking over the marketing. As poppy cultivation became a lucrative agricultural activity, it is no surprise that it took over the best available land. The amount of land available for food production declined and the country's food deficit became acute.

Much criminal and black market activity was pushed out of Afghanistan's neighbouring countries (Iran, Pakistan and Central Asia) by strong enforcement actions in the 1980s and 1990s. Within Afghanistan, conditions of war and anarchy provided fertile ground for these criminal networks to establish themselves. There is anecdotal evidence of Taliban involvement in, and encouragement of, the opium trade as a way to expand their exchequer at a time when the regime was hurting because of growing isolation and funding difficulties.

A nexus was consequently established between war, crime and opium cultivation. For almost a quarter of a century, weak central government and civil war have, in fact, been two sides of the same coin. The civil war created a lawless climate in which an opium economy flourished. Opium production and trade increasingly fuelled the civil war, weakened the Kabul government even more, thus perpetuating a vicious circle. Later in the cycle, international terrorism added an even more pernicious dimension.

Chapter III. Poverty, devastation and farmers' motivations

- *Afghan farmers grew opium poppy because:*
- *the opium trade was* de-facto *legal until President Karzai's ban in January 2002;*
- *opium poppy is a profitable crop, produced with cheap labor (women, children and refugees);*
- *inputs for opium poppy are abundant, including suitable land, water and know-how from itinerant labor;*
- *opium became a form of saving, a source of liquidity and a collateral for credit;*
- *opium is an insurance against poverty and hunger: farmers sell future crops to narco-usurers for subsistence;*
- *opium requires no marketing or storage, as it can be sold easily on spot markets.*

Over the last two decades, in many Afghan provinces opium cultivation became part of the livelihood of rural households. The principal reason for farmers' deciding to grow opium poppy was that it was more profitable and up to 2000 it was *de-facto* legal to do so. Even after the Taliban ban on cultivation, opium trading remained *de-facto* legal until January 2002, when the Karzai Government banned it.

Legality combined well with opium's high profitability relative to other crops. Poppy cultivation's comparative cost disadvantage (its labor intensity is high, about 10 times more than that of cereals) *was remedied* by cheap labor provided by women, children and returning refugees.

Farmers' decisions in favor of opium crops have been facilitated by easy access to other inputs for opium cultivation, including planting, weeding and harvesting techniques. The know-how was disseminated countrywide by a large pool of itinerant labourers.

The role of opium as a source of credit, in a country where a formal financial system had virtually ceased to exist, has also been crucial to farmers' decisions. Indeed, some of the expansion of opium cultivation in 1999, (the highest ever production year: 90,000 ha, 4,500 tons) can be linked directly to the need to repay earlier loans in kind (opium). As loans could not be repaid in 1998 because of drought and poor yields, financial obligations to narco-usurers doubled or even tripled in value. In order to meet these obligations, many farmers were forced to increase their opium production substantially in 1999.

In 2002, by contrast, the main reason for the expansion was the high profitability of opium production, due to much higher opium prices ($350/kg), themselves the result of shortages created by the Taliban cultivation ban (when prices were only $35/kg). Average annual gross income of farmers in 1994-1999 was close to $1500 per hectare. It fell to about $1100 in 2000 (and thus close to the revenue from cultivation of legal crops of around $900 per ha), but it rose to about $16,000 per hectare in 2002 (because of higher prices). The average size of a plot in the opium growing areas is less than one-third of a hectare, thus generating a substantial income of about $4000, compared to the $500 per year that a worker would have earned.

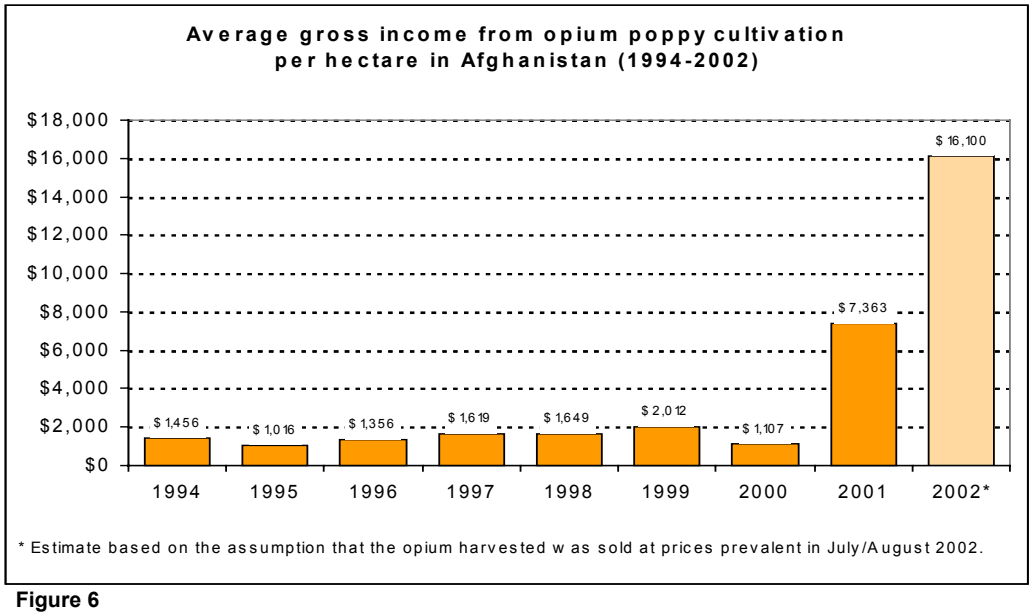


Figure 6
Source: UNDCP/ICMP, *Afghanistan Opium Survey 2002* and previous years.

Chapter IV. Bazaars, finance and narco-usurers

- *Opium has become an "economic narcotic" for whole segments of Afghan society:*
  - *as a commodity, it is an income generator;*
  - *as a source of liquidity, it is a means of exchange;*
  - *as a payment mechanism, it is a way to store value and fund transactions.*
- *Opium traders frequently act as narco-userers (money lenders) because:*
  - *opium serves as a means of* salaam *(informal advance payments);*
  - *they have capital to assist farmers. They regenerate cash-flows via rapid turnover trade (low profit); or via shipments to border regions (medium profit); or by smuggling opiates across borders (high profit). Risks vary accordingly.*

It has been said that the Taliban succeeded in securing the transition from a first phase (up to 1996) of *localised predatory warlordism,* to a second phase (1996-2001) of a *rentier state structure* based on a criminalized semi-open economy. Ongoing efforts to curtail drug cultivation and trade are intended to prevent a third phase (from 2002 onward), namely the perpetuation of a *large-scale criminal opium economy* nourishing domestic instability and international terrorism.

Money-lenders have been part of the deepening and widening opium economy. Their enhanced role as a *de-facto* institutional power and as key economic agents is due to the deterioration of the country's financial system as a consequence of the war, and the complete breakdown of the banking system under the Taliban regime. Money-lenders thus played a useful role, as there was a need for alternative payment mechanisms that could provide the services usually fulfilled by the banking sector. Opium-based lending became the medium to fulfill these needs.

Historically opium has been also used as a means of savings and as a collateral for credit. Over time traders have generated sufficient liquidity to supply opium farmers with credit before planting (September-December). Opium farmers could sell their harvest in advance (forward) at a fixed price (i.e. using their future crop as collateral) and received cash immediately. The repayment of the loan was in kind. The real *per annum* interest which farmers had to pay for these loans was, however, extremely high. According to a United Nations study in the late 1990s, the annualized interest rate charged to poor Afghan farmers by these money-lenders exceeded 500%, thus making it appropriate to refer to them as narco-usurers.

Chapter V. Greed, warlords and the opium trade

- *Opium is an ideal commodity for marketing, trade and speculation:*
  - *it is compact to transport and durable to store, with high intrinsic value ($350-400/kg). At present, only a few licit agricultural commodities, such as truffles ($800/kg) are more expensive on international markets;*
  - *given high risk of interdiction at the borders with neighboring countries, high profits (five-fold increases of price) are generated by trafficking;*
  - *it is a commodity suitable for trafficking, especially in the provinces controlled by warlords who levy a tax in exchange for protection.*
- *In some regions, traffickers gain respect from the local community when they recycle part of their income for the benefit of poor villages.*
- *There is a clear nexus between drug trafficking and warlordism.*
- *The re-emergence of drug cultivation and the recrudescence of violence in certain provinces are well-known phenomena.*

The opium trade evolved over the last two decades as a *de-facto* legal activity, to become an integral part of Afghanistan's war economy, with opium going out of the country and arms coming in. Smuggling of licit goods became another illegal pursuit supporting the war economy, chiefly as a result of the earlier (1950s) Afghan Transit Trade Agreement (ATTA) that enabled land-locked Afghanistan to import goods duty-free into the country *via* Pakistan. The same goods were then smuggled back to Pakistan to circumvent that country's import duties. A World Bank study estimated that this contraband was worth $2.5 billion in the late

1990s, equivalent to nearly half of Afghanistan's estimated GDP and thus significantly more than the overall trade in opiates (about $1 bn) at the time.

The main reason for traders entering the opium economy was the large profit, and often simply greed. Opium revenues enabled traders to pay for things that were beyond the reach of a majority of the population living by honest means: buying land or a vehicle, paying a bride-price (at times for more than one wife), or affording the *haj* to Mecca. In addition, the opium trade enabled persons to gain respect from the local community for providing income to the village.

The progression from profit to greed is usually a function of the appetite for risk-taking. In the late 1990s, profit margins were relatively small in the local opium trade. They increased substantially (up to 10-fold) once the borders with neighboring countries were crossed. They could become considerable (up to 100-fold) when the heroin was trafficked internationally. (For example, one gram of heroin, at about 60% purity, cost $2-$3 in Afghanistan, and approximately $70, at 20% purity, on the street in Western Europe in 2002).

The mark-up on the rapid turnover trade (opium purchased from farmers and sold quickly in the various bazaars) was 3% to 26%. Approximately two-thirds of the traders traded less than 100 kg per year; most of the rest traded up to 500 kg and one was selling up to 20 tons a year. There could have been about 15,000 opium traders in the country in the late 1990s, i.e. one trader per 13 opium farmers.

A quarter of the opium traders in southern Afghanistan were involved in shipping the opium to border areas, with cargoes up to several tons – an activity rendered possible by the tacit support of local warlords. These traders confirmed gaining, on average, about $11–12.5/kg in the late 1990s. Taking into account transport costs, their net profits amounted to more than 12% of the value of the merchandise and more than twice the rate they could reckon with from the local rapid-turnover trade. Up to the year 2000 (when opium prices were $35-40/kg) a bulk trader could make over $200,000/year. At today's prices (10 times higher) these profits can reach extraordinary levels.

The largest profits are made by smuggling opium across the border. Taking into account all costs (raw materials, intermediaries, and transportation), cross-border traders could reckon with profits several times the value of the merchandise at origin. Crossing the border was, and is, a risky endeavour, and many Pashtun traders confirm leaving the task to specialised Baluchi traffickers with Afghan, Iranian or Pakistani passports. (In Iran, for instance, drug dealing carries the death penalty).

Profits could increase enormously, along with the risks, once opiates were smuggled beyond the border and moved further. The price of opium smuggled within Pakistan from Quetta (close to southern Afghanistan) to the seaport of Karachi would rise by some 30%. Throughout the 1990s -- and current seizures levels indicate that the trend continues -- there were well armed caravans crossing Pakistan and then Iran, because opiate prices were still significantly higher there. Opium prices in the Teheran wholesale market amounted to a more than six-fold increase from the prices in Pakistan's border region with Afghanistan or a 10-fold increase with respect to the opium prices in southern Afghanistan in the late 1990s. Since the Taliban ban, profit margins declined, falling from a 10-fold increase to a three-fold increase by mid 2002. At the same time, however, gross profits per unit trafficked more than tripled, from $360 per kg in 2000 to $1260 per kg in mid 2002.

Profit margins also used to be rather high for the manufacture of heroin (around 100%), but fell significantly in recent years as local heroin processing capacity increased in Afghanistan itself. Following the Taliban ban, opium prices increased more strongly than heroin prices. In order to remain profitable, illicit laboratories had to have opium stocks, gain direct access to heroin markets abroad, or simply improve laboratory efficiency. In such circumstances, profit ratios in the manufacture of heroin of up to 65% were still possible. Trafficking heroin across the border to Pakistan or Tajikistan earned around 100% profit in 2001. Trafficking it to less accessible locations in neighboring countries could offer five to 10-fold profits.

PART 3: REGIONAL CONSEQUENCES

Chapter VI. Devastation in neighboring countries

Trafficking

- *More than 60% of global opiate seizures take place in the few countries neighbouring Afghanistan;*
- *Most seizures are made by Iran, followed by Pakistan and Tajikistan.*

The impact of Afghanistan's opium economy on neighbouring countries (Iran, Pakistan and the Central Asian states) can be measured in terms of trafficking, abuse and the spread of HIV/AIDS. In 2000, 61% of world-wide seizures of opiates (opium and heroin) took place in Afghanistan's neighboring countries. The area that constitutes the market for most of Afghanistan's opium production (i.e. Afghanistan's neighbours, the Near & Middle East and Europe) together seized more than 70% of global opiates.

In 2001, 56% of total opiate seizures in Afghanistan's neighbouring countries were made by Iran, followed by Pakistan (28%). In recent years the Central Asian countries, in particular Tajikistan where the United Nations *Office on Drugs and Crime* has developed a special-purpose project, reported the biggest increase in seizures. There is also evidence of increased heroin manufacture within Afghanistan, reflected in heroin seizures in neighbouring countries.

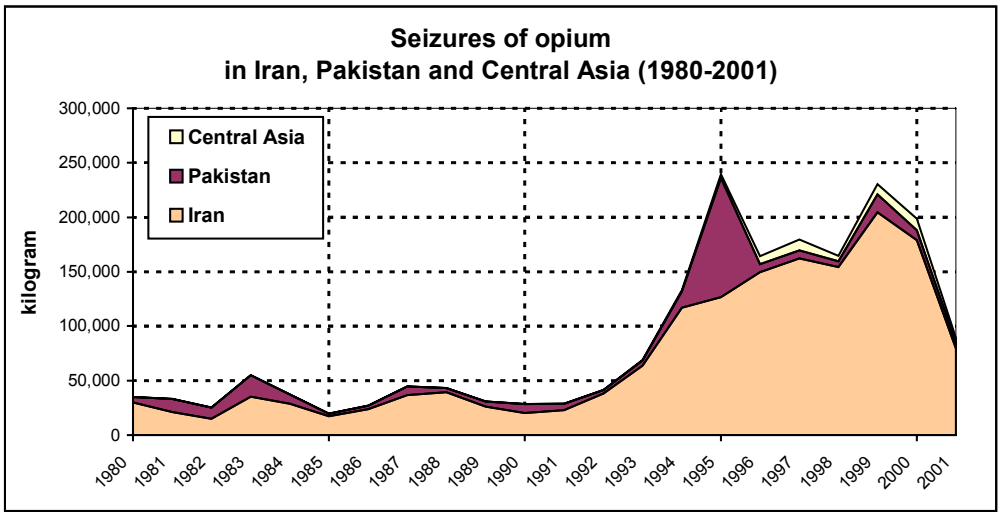


Figure 7
Source: UNDCP, DELTA.

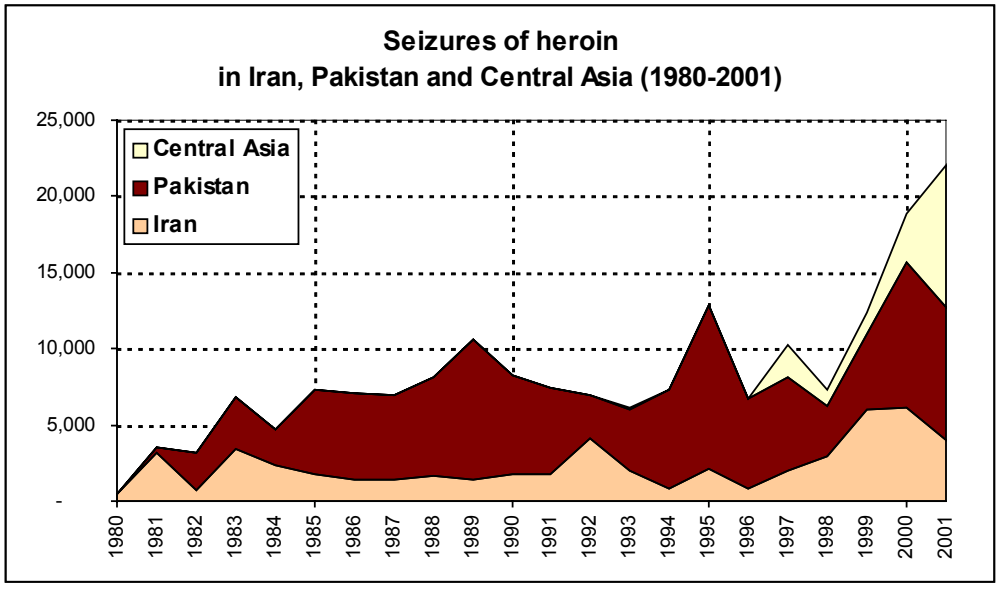


Figure 8
Source: UNDCP, DELTA.

Mega-incomes and economic vulnerability

- *Opiate trafficking profits in the countries neighbouring Afghanistan amount to some $4 billion in 2002, equivalent to 2% of GDP;*
- *Most profits are made in Central Asia, followed by Iran and Pakistan;*
- *Economic growth in countries neighbouring Afghanistan was below the global average.*

In 2002 the largest gross profits from trafficking were made by criminal groups from Central Asia ($2.2 billion, equivalent to 7% of the area's GDP). Gross trafficking profits in Iran were estimated at $1 to $1.3 billion, equivalent to 1% to 1.3% of GDP. For Pakistan, they were estimated at $400 to $800 million, equivalent to 0.7% to 1.3% of GDP.

Contrary to the popular perception that an inflow of funds, whatever its origin, is positive for an economy, there is evidence that huge funds in the hands of criminal organizations destabilize a country's political system, civil society as well as its economy. The smaller countries of Central Asia are particularly vulnerable: corruption, violence and dirty money, which includes financial support for terrorist organizations, have negative repercussions for legitimate investment and thus compromise economic growth in the long run.

Abuse

- *Countries neighboring Afghanistan suffer from rising levels of abuse;*
- *The strongest rise, in recent years, was in the countries of Central Asia, which were also affected by the strongest increases in drug trafficking.*

Parallel to rising levels of trafficking, Afghanistan's neighbouring countries are also affected by growing levels of abuse, resulting from a spill-over of trafficking, often a consequence of remuneration in kind (opium, heroin). There are 800,000-1.2 million chronic opiate abusers in Iran, 700,000 in Pakistan (including 500,000 addicted to heroin) and more than 300,000 in Central Asia, i.e. together far more than in Western Europe (1.2 million). Expressed as a percentage of the population age 15 and above, 0.9% in Pakistan and in Central Asia and up to 2.8% of the people in Iran consume opiates, a far higher percentage than in Western Europe (0.3%).

The highest levels of opiate abuse in Central Asia have been reported from Kyrgyzstan and Kazakhstan. The strongest growth in the 1990s was reported from Tajikistan.

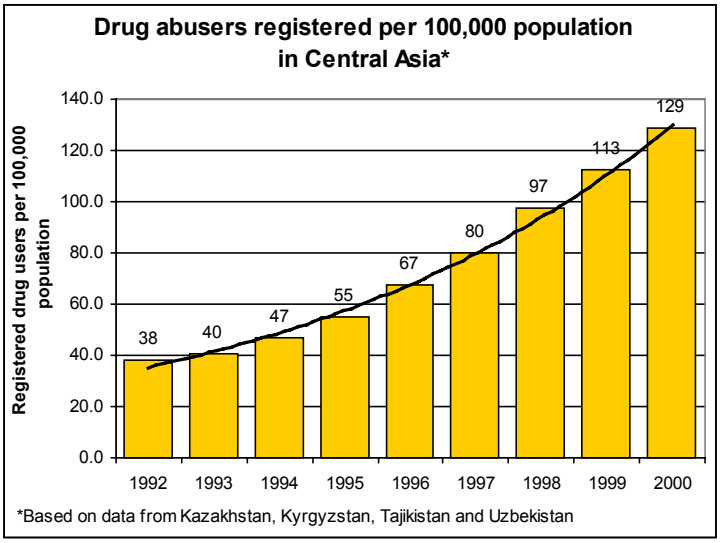


Figure 9

Sources: Annual Report of the Agency of the Republic of Kazakhstan for Drug and Drug Business Prevention, 2000; Agency for Drug Control under the President of the Republic of Tajikistan; State Commission on Drug Control under the Government of the Kyrgyz Republic; Government of Uzbekistan, National Information and Analytical Centre on Drug Control.

HIV/AIDS

- *HIV/AIDS is increasing in all countries neighboring Afghanistan, notably in the countries of Central Asia;*
- *Central Asia has one of the highest rates of IDU related HIV/AIDS infections in the world.*

A particularly serious side-effect of opiate abuse has been the trend towards injecting drug use (IDU) and the related spread of HIV/AIDS. The highest levels of IDU are reported from Central Asia (66% of all problem drug users). Central Asia is also faced with the strongest increases in HIV infections (a more than 600 fold increase between 1994 and 2001), of which 88% were IDU-related in 2001. AIDS cases are still relatively small but, unless drastic measures are taken, it is only a matter of time before they increase and affect the general population. This is bound to put a heavy burden on both the productivity and the health budgets of these countries.

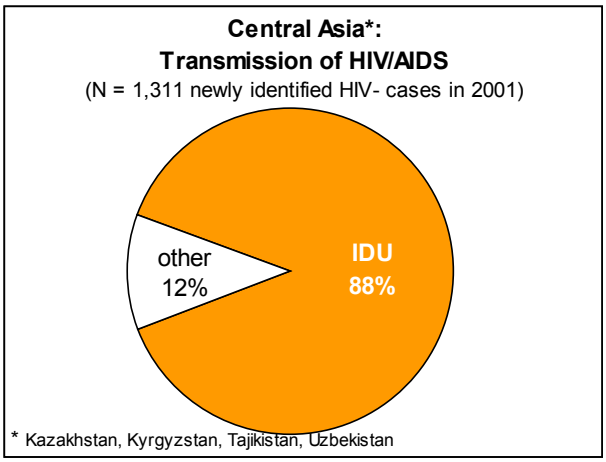


Figure 10
Source: UNODC, Calculations based on Euro-HIV data.

There is still a small window of opportunity to contain the HIV infection to the community of drug users. Should other segments of society be exposed to this virus, it would become much more difficult (and costly) to contain the problem.

CONCLUSION: The way forward

For more than two hundred years, the international geo-political situation has worked against the consolidation of an effective central government in Kabul, because it has exacerbated Afghanistan's endemic problems of regional warlordism and particularistic nationalism. Over the past quarter century, the opium economy grew because of the failure of the state. Today, there is a window of opportunity for the state to consolidate because democracy is taking root and the collective force of the international community has superseded the geo-political interests of foreign powers and of Afghanistan's neighbours. That window must be kept open by means of continuous international support for Afghanistan's Transitional Government.

Apart from supporting the central institutions of the state, the international support has to be targeted at solving the problems, documented in this book, which created the opium economy in the first place. The problems can be solved by:

(i) alternate crops, seeds, fertilizers and equipment for opium farmers;
(ii) alternative sources of income for land-less labour and returning refugees;
(iii) jobs for women and schooling for children, especially girls;

(iv) macro-economic structures within which commodity markets (including presently unregulated bazaars) can grow free from the perverse incentives provided by opium and other forms of contraband;
(v) informal financial structures able to extend harvest-based collateralized loans (even micro-credits) to farmers and returning refugees, so as to bankrupt the narco-usurers at their game;
(vi) effective law enforcement against opium markets within the country to combat the perverse economic and political impact of warlordism, and against the international trafficking of opiates.

These measures coincide with what the United Nations *Office on Drugs and Crime* advocates as part of a balanced approach: balancing measures to reduce the supply of illicit drugs with those to reduce the demand for them. Since, all considered, the problems faced by Afghanistan are more serious than those created by the opium economy, drug control will have to be linked into the mainstream of other development efforts to re-build the country. It is equally clear, and documented in this book, that unless the drug problem is solved, there will be no sustainable development for Afghanistan.

United Nations *Office on Drugs and Crime*
Vienna, January 2003

PART 1 : DIMENSIONS

Chapter I

AFGHANISTAN'S ILLICIT OPIUM ECONOMY: SIZE AND SHAPE

1.1. The socio-economic context

Two decades of war created much hardship for the people of Afghanistan. The country's infrastructure was destroyed, its human resource base depleted and its social capital eroded. The majority of the population was left extremely poor, lacking food, clothing, housing and medical care. The economy virtually collapsed:

- A formal financial sector *de-facto* ceased to exist. Loans and monetary transactions were organized through an informal financial sector. In the opium poppy growing areas, it was largely based on opium (see Chapter IV below). However, the capital and/or credit thus made available were commonly used for basic needs rather than investment. Over two thirds of the loans accessed were for food, clothing, medicine, marriage costs, etc, while only about one third were used for investment purposes.[1]

- Equally important, the prolonged war virtually destroyed the country's monetary system. Thus, in many of the opium producing regions, opium became both the medium of exchange and the only form of saving.

- Basic infrastructure – roads, bridges, irrigation systems, telecommunications, electricity, markets – were either destroyed or oriented towards the war effort and/or towards the production of opium poppy as a strategic input to finance the war effort (see Chapter 2 below).

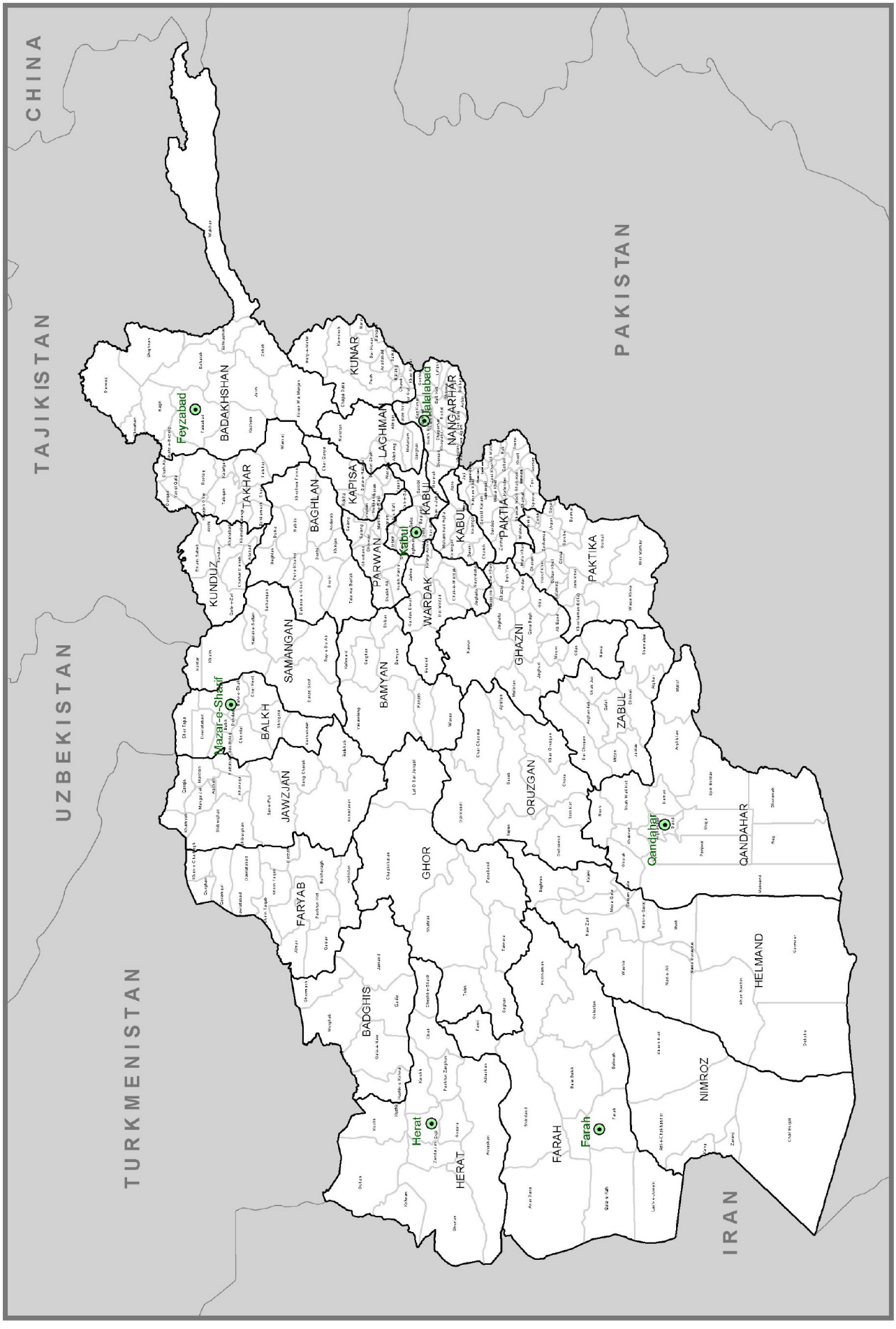
- State institutions were dysfunctional and the economy and society fragmented. A number of state institutions – central bank, treasury, tax collection system, customs, police, judiciary – were either extremely weak, politically corrupted, or simply missing. Taxing opium income of farmers and traders was often the only reliable source of income for which ever authority prevailed.

- A severe drought in 2000 and 2001 aggravated the situation further. Prior to the end of the Taliban regime in late 2001, some 7 million people, or a third of the population, were considered by the World Bank to have been vulnerable to famine.

In addition to widespread loss of life, large-scale destruction of infrastructure and widespread emigration, the prolonged situation of violent conflict and political instability repeatedly disrupted inter-regional trade and brought it at times to almost a standstill, exacerbating the already dismal situation of the Afghan people. Millions were forced to look for refuge in neighbouring countries and other regions of Afghanistan.

People were not only killed or disabled in direct military confrontations but also from mines that were planted throughout Afghanistan. Some 700 square kilometers of land is still contaminated by mines and unexploded ordnance, making farming an extremely hazardous occupation. A study funded by the World Bank estimated that in recent years as many as 500 persons per month were victims of accidents involving mines and unexploded ordnance. The clearance of these landmines alone would cost as much as $500 million[2]. As a result of twenty years of war, Afghanistan also has one of the highest proportions of disabled persons in the world.[3] The survival of those remaining in their villages was guaranteed by practicing their traditional subsistence production of wheat and other cereals and husbanding their livestock, as best as they could, taking the constant risk of becoming land-mine victims. The only crop which – under these conditions - promised something like a decent income, turned out to be opium poppy. It is thus no surprise that opium poppy production surged in Afghanistan over the last two decades.

When the Taliban took Kabul in 1996, they imposed a fundamentalist regime on the country, marked by gross violations of human rights. The industrial sector remained subdued, having been destroyed over the previous decade. The few remnants of the financial sector disappeared almost entirely and the provision of social services deteriorated – including health services and education – as a result of Taliban policies which excluded girls from school and women from work. Nonetheless, the overall economic situation at least stopped deteriorating in the first years of the Taliban regime as inter-regional trade resumed in areas controlled by the regime. Agriculture recovered as well. Wheat production rose by 1998 to levels close to those existing prior to the outbreak of the war in 1979/1980. Livestock increased, taking advantage of unutilized grazing lands, and horticultural production grew based on the restoration of orchards.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Herat
Farah
Qandahar
BADAKHSHAN
KUNAR
LAGHMAN
NANGARHAR
TAKHAR
BAGHLAN
KAPISA
KABUL
PARWAN
KUNDUZ
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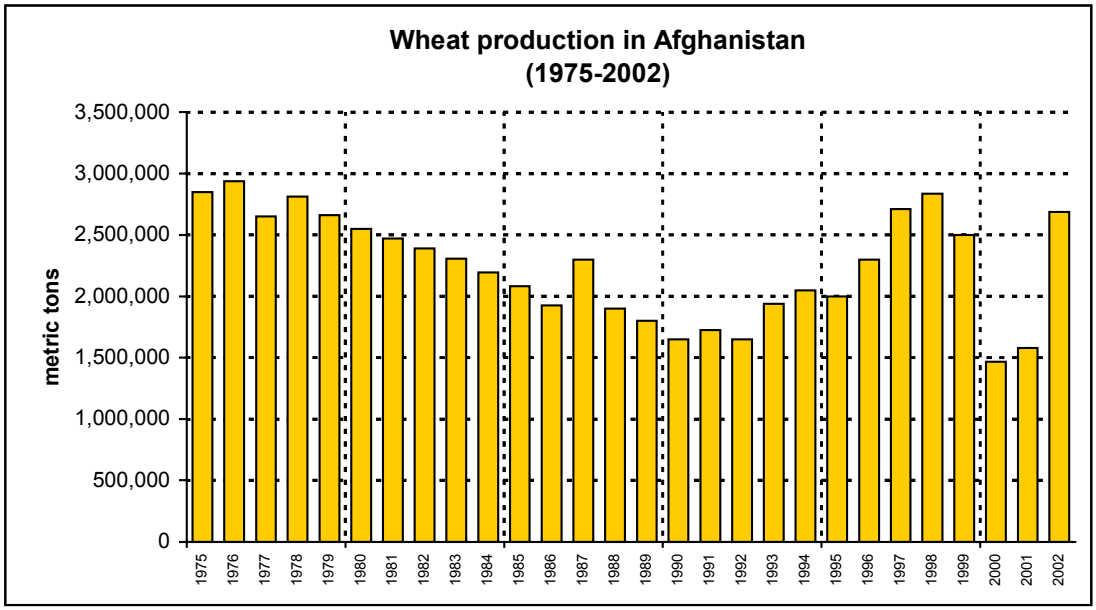


Figure 1
Source: FAO.

Much of the progress made over the 1996-99 period, however, disappeared following a severe drought in 2000 and 2001 which affected most parts of the country, causing a reduction of close to 50% in the country's cereal output from 1998 to 2001. Total livestock is estimated to have declined by about 60% since 1998, particularly after the massive death and distress selling of animals during the summer and autumn of 2001.[4] The dramatic drop in food supply, at a time of great disruption in domestic and foreign trade - a consequence of Taliban international policy - created a severe food emergency, making several million people dependent on international food aid in 2001.[5] FAO estimated Afghanistan's cereal requirements at around 5 million tons, including 4 million tons of wheat. But actual domestic production of wheat was less than 1.6 million tons in 2001, i.e. only about 40% of domestic requirements.[6]

Thus, as of late 2001 all available social and economic indicators pointed to Afghanistan being a country on the verge of complete collapse, having already been close to social and economic breakdown for many years before.

According to the WHO's *World Health Report 2002*, average life-expectancy at birth was just 42 years in Afghanistan in 2001, in comparison to more than 60 years in neighbouring countries and 77 or more years in the developed countries. Afghanistan had the lowest life-expectancy among all countries in Asia. A lower life-expectancy than for Afghanistan was only reported for a number of Sub-saharan African countries, suffering from civil war, drought or HIV/AIDS. One out of four children born in Afghanistan dies before having reached the age of 5, which is the worst situation of any country in Asia.[7]

Table 1: Life-expectancy at birth (males and females) in years in 2001

	Neighbouring countries							Selected developed countries					
Afghanistan	Pakistan	Turk-menistan	Kazakh-stan	Tajiki-stan	Kyrgyz-Stan	Uzbeki-Stan	Iran	USA	UK	Ger-many	France	Italy	Japan
42.3	61.3	62.5	63.0	63.3	64.1	65.5	68.6	77.0	77.5	78.2	79.3	79.3	81.4

Source: WHO, World Health Report 2002, p. 178-185.

Afghanistan had also among the highest infant, child and maternal mortality rates and the lowest literacy rates in the world[8]:

Nearly one thousand children died in the measles epidemic during the spring of 2000 in Afghanistan. Every one of these deaths could have been prevented if the children had been immunized or had access to basic health services. Many more thousands of children have been dying of diarrhea and pneumonia each year. In addition an estimated 15,000 women died in recent years from pregnancy related causes.

There is an average of only one physician for every 50,000 people in Afghanistan. Even these meager resources are not equally distributed. Fifty of the country's 330 districts have neither a basic health centre nor access to immunization services.

Maternal and child health services are lacking in most areas of Afghanistan. Only 11 of the counrty's 31 provinces have essential obstetric care services. Health services collapsed, especially in the 1990s, due to the Taliban ban on women in the workplace, including most hospitals and health clinics.

Only an estimated 23% of the total population has access to safe water, and only 12% to adequate sanitation.

The primary gross enrolment ratio, prior to the establishment of the new transitional Government, was calculated as 39% for boys, and 3% for girls, with the assistance community only being able to provide education to about 7% of 4.4 million children of primary school age[9]. The literacy rate was only at 31%, and, for obvious reasons, significantly biased toward men. [10]

About 12 million Afghans were affected by the drought, three to four million severely in 2001. An estimated 3.8 million Afghans were dependent on food aid. Overall, there were an estimated 5.3 million vulnerable people in the country. There were approximately 1.2 million peopled displaced internally. There were also 2 million Afghan refugees in Pakistan and 1.5 million in Iran.

The total in-country population was estimated by the World Bank to have amounted to 18-20 million or to about 25 million people if refugees abroad were included.[11] A previous population survey, undertaken during the Taliban period and published by the Taliban Central Statistics Administration, had put Afghanistan's population at 23 million people in 2000.[12] A number of other population estimates for 2000/2001, including the United Nations and UNDP, put the in-country population at around 21 million. The World Bank – in its Afghanistan data profile – showed estimates for the country's total population of 26 to 27 million in 2000 and 2001.[13] As these data show, there is considerable uncertainty about even the most basic statistics for the country.

Hardly any statistics on the economic situation were collected during the Taliban period. This means that there is no reliable information on most of the key economic indicators usually used to describe a country's economic performance. What is available are only a few estimates from different international institutions. All of them suggest that Afghanistan, despite its large-scale opium production, is still one of the poorest countries in the world.

According to UNDP's *Human Development Report 1999,* Afghanistan's GNP per capita was $250. Taking the United Nations population estimate of around 21 million people, total GNP was equivalent to $5.3 billion. Taking the World Bank's estimate of around 26 million Afghan people, Afghanistan's GNP could have amounted to $6.5 billion. A reference in the *Human Development Report* notes, however, that the GNP estimate of $250 per capita actually referred to the year 1981 and was only used as a tentative proxy for the level of income in the year 1997.[14]

A previous estimate for the year 1991/92 published by UNDP in its 1993 rehabilitation action plan saw Afghanistan's GDP at US$1.7bn[15], equivalent to just $104 per inhabitant (based on a population estimate of 16.6 million for that year). This was extremely low by any international standard[a].

Table 2: Afghanistan's GDP in million US-dollars 2001 (tentative estimate)

	in million US-$	as a percentage of GDP
Agriculture and forestry	2,438	53%
Mining and light industry	1,288	28%
Trade	368	8%
Construction	276	6%
Other	230	5%
	4,600	100%

Source: Asian Development Bank, *Asian Development Outlook 2002.*

[a] However, calculated on the basis of purchasing power parities, as done in UNDP's *Human Development Report 1995*, Afghanistan's real GDP was estimated to be $819 per capita, equivalent to 15% of global average GDP per capita, 32% of the developing countries' average, or 92% of the least developed countries' average in 1992. This was – together with Myanmar – the lowest figure for any Asian country, but still higher than in a number of Sub-Saharan African countries. (UNDP, *Human Development Report 1995*, p. 159)

The Asian Development Bank (ADB) estimated Afghanistan's GDP per capita for the late 1990s at around $300 per capita. Given the severe drought and the intense fighting in the last quarter of 2001, the ADB lowered its estimate in its 2002 report, *Asian Development Outlook* (April 9, 2002), to $200 per capita for the year 2001, stressing that "any assessment of recent economic performance (of Afghanistan) is necessarily tentative since the underlying information base is extremely weak".[16] The ADB, using its population estimate of 23 million, estimates Afghanistan's overall GDP to around $4.6 billion.

More than half of the GDP was estimated to have been generated by the agricultural sector, a far higher percentage than in most other countries. The breakdown of GDP actually dates back to 1989. Given the destruction of the country's infrastructure and its industrial sector over the last two decades as well as Taliban restrictions on many services sector activities (education, health services, music, entertainment etc.), the proportion of agriculture in the country's GDP is likely to be even larger today. There is only one other country in Asia - Myanmar, the other large producer of opium – which is as heavily dependent on agriculture as Afghanistan.

Table 3: Importance of agriculture for GDP

	Neighbouring countries (data refer to 2001)							Selected high-income countries (data refer to 2000)					
Afghanistan	Kyrgyz-stan	Uzbe-kistan	Turk-menistan	Paki-stan	Tajiki-stan	Iran	Kazakh-stan	France	Italy	USA	Japan	Germany	UK
53%	37.9%	34.5%	25.8%	25.0%	24.4%	19.4%	8.7%	2.9%	2.9%	1.8%	1.5%	1.2%	1.0%

Sources: Asian Development Bank, World Bank, Economist Intelligence Unit.

Afghanistan's estimated GDP per capita is not only significantly lower than the developing countries' average, but also as compared to neighbouring countries.

Table 4: GDP per capita in Afghanistan (tentative estimates), in neighbouring countries as well as in developing countries and OECD countries (data refer to 2000)

	Afghanistan	Pakistan	Central Asia	Iran	Developing countries	OECD countries
GDP per capita in US-$	250	436	574	1,492	1,315	22,710
GDP per capita in PPP- $	819[a]	1,928	3,213	5,884	3,783	23,569

a/ estimate refers to 1992 as provided in UNDP *Human Development Report 1995*.

Sources: UNDP, *Human Development Report 2002* and 1995.

Average daily wages of unskilled casual labour amounted to just $0.95 per day in Kabul in 2001. Even lower rates were reported from other parts of the country (Herat and Mazar $0.85, Kandahar $0.68). Average daily wages in the Northern Alliance controlled town of Faizabad were $1.22 per day in 2001, but the cost-of-living was also higher.[17] With an average income of about $1 per day, gross annual income per worker did not exceed $360 in 2001.

More significant than nominal wages are real wages, measured in terms of purchasing power, for they reflect the relation of wages to the price of necessities. Systematic data on consumer prices in Afghanistan are not available. Data on bread prices, however, are available. Since food accounts for a large part of total expenditure in any poor country, the price of bread is a reasonably good indicator for measuring the overall purchasing power of wage income in Afghanistan.

Calculating real wages in terms of such bread equivalents, the daily wage of a casual worker in Kabul was sufficient to buy 4.2 kg of bread in 2001. This was already an above-average income by Afghan standards. For Afghanistan as a whole, the average daily wage – based on these calculations – was sufficient to buy just 3.2 kg of bread in 2001 (Jalalabad 4.1 kg, Herat 3.2 kg, Kandahar 2.9 kg, Mazar 2.7 kg and Faizabad 1.9 kg).[18] For comparison, in 2000 a worker in Germany earned, net of all taxes and contributions, an amount equivalent to 5 kg of bread per hour[19] which meant that he/she could earn, in less than 40 minutes, what an Afghan worker would earn in a whole day.

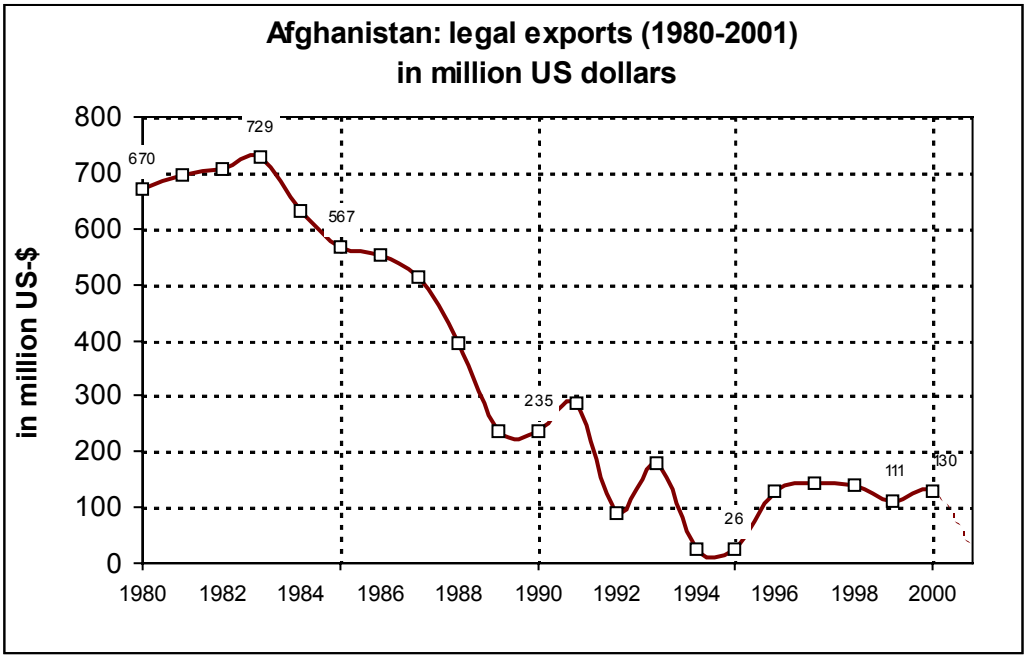


Figure 2
Sources: International Monetary Fund (IMF), Economist Intelligence Unit (EIU), UNDP.

The decline in Afghanistan's foreign trade, notably its exports, seems to have been even more pronounced than the decline of GDP. Afghanistan's legal exports, expressed in current US-$, fell by 83% over the 1980-1999 period, and again declined drastically in 2001.

Afghanistan's foreign trade has also been characterized by a severe imbalance. The latest directly comparable trade statistics, dating back to 1999, indicate that total imports were about three times larger than legal exports. The resulting trade deficit was equivalent – depending on the source – to between 5% and 10% of GDP. Based on trading partner countries' statistics, collected by the International Monetary Fund, and compiled by the Economist Intelligence Unit, exports amounted to $111 million. Based on ADB estimates, exports amounted to $235 million. Such exports comprised mainly fruits and nuts, carpets, wood, sheepskin ('karakul'), cotton as well as some mining products.

Table 5: Foreign trade of Afghanistan in 1999 and 2000 in million US-$

	1999				*2000*	
	million US-$ EIU (based on IMF)	in % of GDP	*m US-$ ADB*	in % of *GDP*	*m US-$* UNDP	*in % of GDP*
Export	111	1.6%	235	3.4%	130	2.3%
Imports	468	6.8%	900	13.0%	396	6.9%
Trade balancet	-357	-5.2%	-665	-9.6%	-266	-4.6%
GDP estimate			6,900		5,750	

Sources: Asian Development Bank, *Asian Development Outlook 2002*, The Economist Intelligence Unit, *Afghanistan Country Report*, August 2002, UNDP, Afghanistan's International Trade Relations with Neighbouring Countries, January 2001, quoted in IPC, *Afghanistan: The Scope for Promoting Micro, Small and Medium-Sized Enterprises in the Private Sector by Establishing a Microfinance Bank*, March 2002.

In the 1980s, Afghanistan's main trading partner was the Soviet Union. In recent years, Pakistan has been the most important trading partner, accounting for 19% of imports and 32% of legal exports in 1999.[20] In 2000, the importance of Pakistan as a trading partner seems to have increased further.

In addition to indigenous exports, Afghanistan was for years involved in re-exports, based on the Afghanistan Transit Trade Agreement (ATTA) with Pakistan (see Chapter V below). From an income generating point of view, the transit trade was even more important than opium production and the opium trade. According

to a World Bank study, such illegal re-exports of legal goods amounted to about $2.5 billion in 1997. A UNDP estimate suggests that following the introduction of UN Security Council sanctions in late 1999, such re-exports fell to $1.1 billion in the year 2000. Re-exports accounted for about 90% of overall Afghan exports ($ 1.2 billion, see Table 6). Of Afghanistan's unofficial trade, excluding opium and heroin exports, 87% went to Pakistan and 13% was estimated to have gone to Iran in 2000 (see Table 7). The legal transit trade accounted for 4% of all Afghan exports, and another 4% was accounted for by exports as part of bilateral trade.

Afghanistan's foreign trade fell massively in 2001 as the international sanctions against the Taliban regime were strengthened, and notably after 11 September when the borders between Pakistan and Afghanistan were closed and the transit trade agreement between Pakistan and Afghanistan was suspended (September 18). The suspension lasted until 13 May 2002.

Table 6: Afghanistan export estimates for the year 2000

	million US-$	in % of all exports
Indigenous exports	130	10.6%
Re-Exports	1,097	89.4%
Total Exports	1,227	100.0%

Source: UNDP, Afghanistan's International Trade Relations with Neighbouring Countries, January 2001, quoted in IPC, Afghanistan: The Scope for Promoting Micro, Small and Medium-Sized Enterprises in the Private Sector by Establishing a Microfinance Bank, March 2002.

Table 7: Estimates of Afghanistan's transit, bilateral and unofficial trade in 2000 (in percent of total cross-border trade)

	Imports	Exports
Official transit trade	50.1%	**3.9%**
Of which:		
Via Pakistan	13.8%	13.3%
Via Iran	86.2%	86.7%
Official bilateral trade	29.9%	**3.9%**
Of which:		
With Pakistan	84.4%	98.9%
With Iran	14.8%	0.9%
With Turkmenistan	0.8%	0.2%
Unofficial Trade of legal products	20.1%	**92.3%**
Of which:		
With Pakistan	46.4%	**87.1%**
With Iran	53.4%	12.9%
With Turkmenistan	0%	0%
Total Trade of legal products	100%	**100%**

Source: UNDP, Afghanistan's International Trade Relations with Neighbouring Countries, January 2001, quoted in IPC, Afghanistan: The Scope for Promoting Micro, Small and Medium-Sized Enterprises in the Private Sector by Establishing a Microfinance Bank, March 2002.

Following September 11, the Taliban regime was ousted and a new transitional government was installed. At the International Conference on Reconstruction Assistance to Afghanistan, held in Tokyo (January 21-22), the international community pledged a cumulative total of more than $4.5 billion (equivalent to the country's GDP) over the next few years, including $1.8 billion for the year 2002.

There are positive signs of progress. The food supply situation has improved and salaries, though still very low, show a clear upward trend. In parallel, large-scale international food aid meant that wheat prices declined in Afghanistan. Expressed in bread equivalents, the average daily wages of casual labour improved in

Kabul by 74% over the first 9 months of 2002 as compared to a year earlier (from 4.2 kg of bread per day in 2001 to 7.3 kg of bread per day in 2002) and in Afghanistan as a whole by 69% (from 3.2 kg to 5.4 kg of bread per day in 2002).

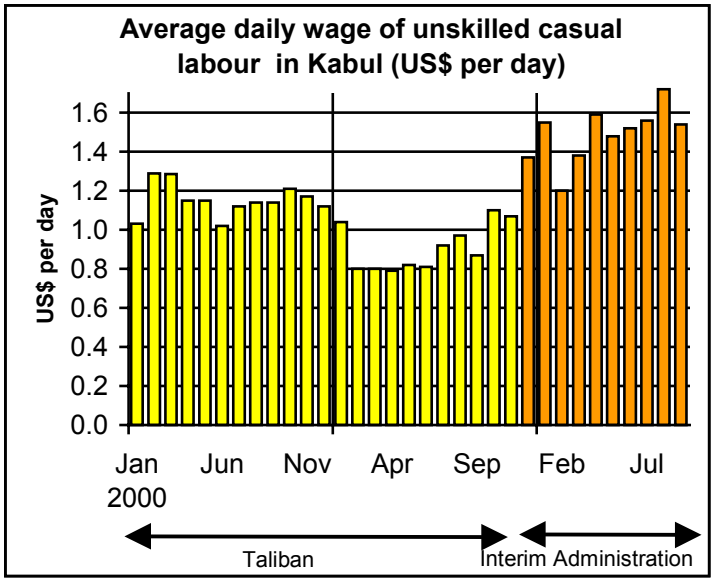


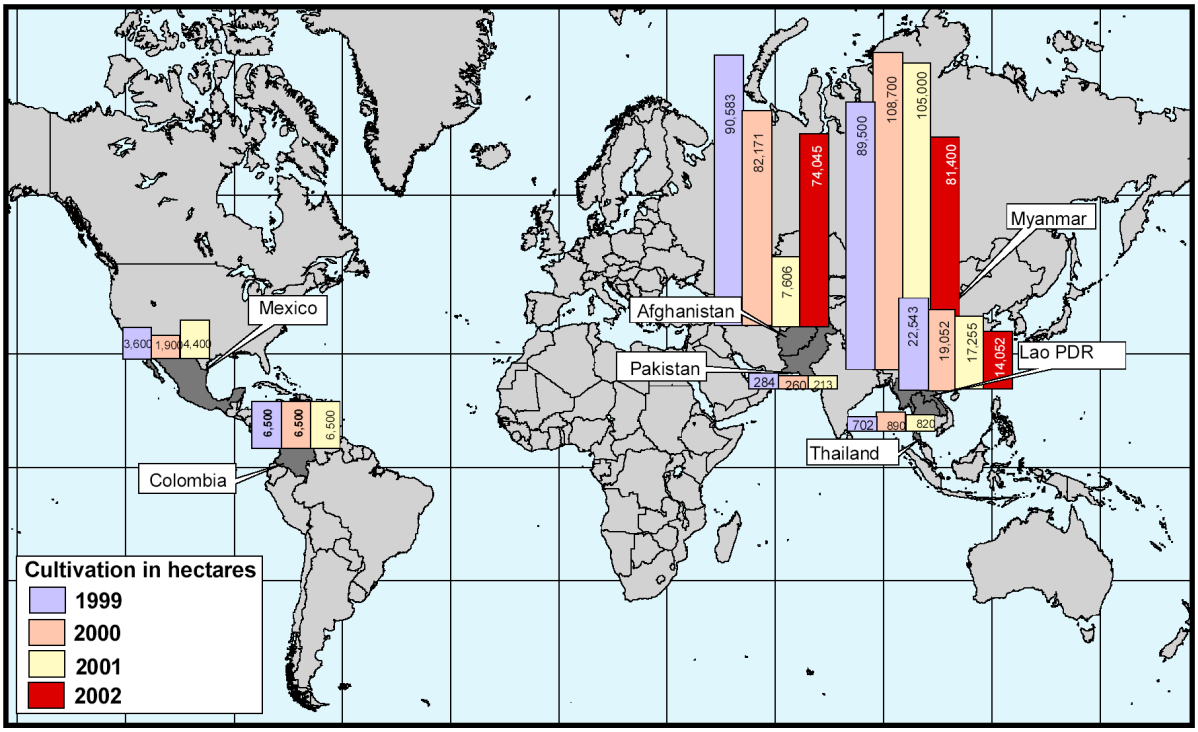
Figure 3
Source: Hector Maletta, The Wages of War: Food prices and labour pay in Afghanistan, 1996-2002, Kabul, Oct. 2002.

The security situation in the country is now better than it has ever been in the last 20 years. Nonetheless, the new government still has to carry the burden of governing a destroyed country and is hampered by the existence of several powerful regional warlords who do not accept its authority. Afghanistan continues to suffer from the scourge of large-scale opium production which, contrary to popular belief, does not act as an incentive but rather as an impediment to sustainable economic development.

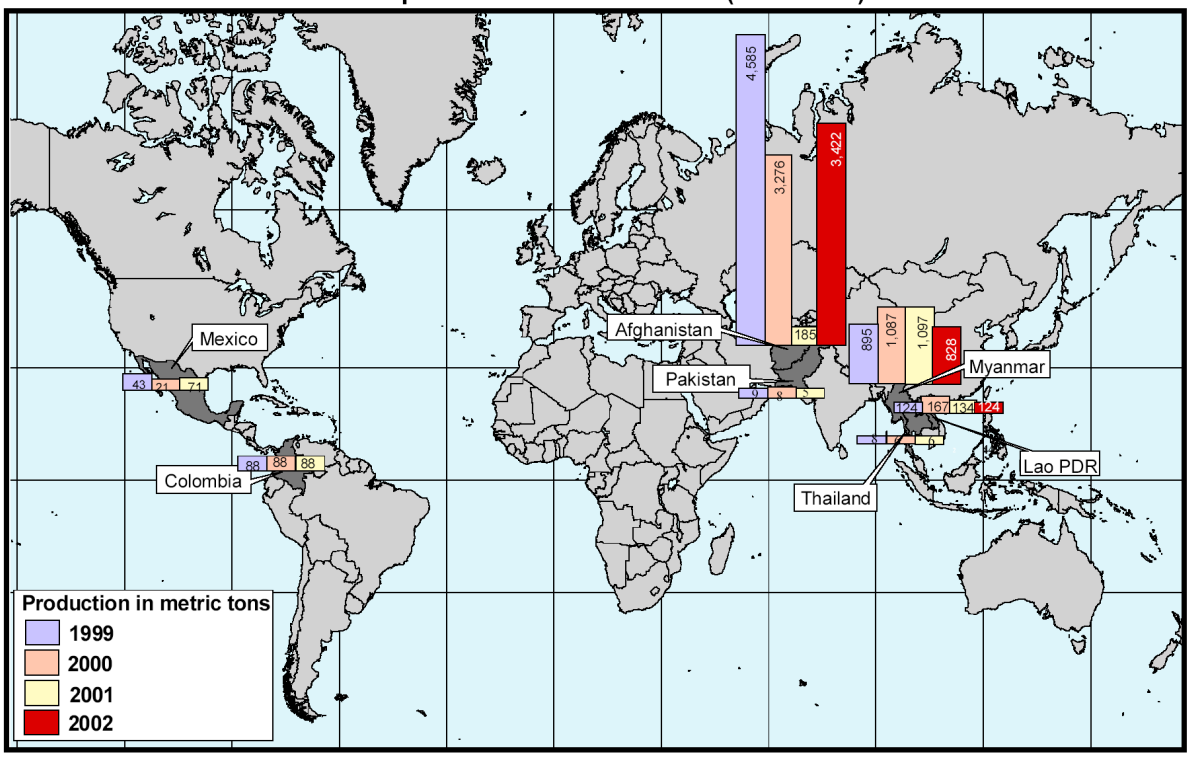
1.2. Afghanistan as a source of illicit opium

During the 1990s, Afghanistan firmly established itself as the main source of the illicit opium and heroin in the world. UNDCP began to conduct annual surveys of opium poppy cultivation in Afghanistan in 1994. During the period 1994-2000, UNDCP estimates that a cumulative total of 34,000 metric tons of illicit opium were produced in the world. Of that total, Afghanistan's share represented almost two-thirds, with 21,300 mt, against 12,700 mt for the rest of the world. For the year 2000, with a production of about 3,300 metric tons, Afghanistan was the source of 70% of the 4,700 metric tons of illicit opium harvested in the world, ahead of Myanmar (23%), Laos (4%) and Colombia (2%)[21]. The year before, as a result of an exceptional harvest of almost 4,600 mt, Afghanistan's share had reached an all-time high of 79% of global illicit opium production. In 2001, as a result of the Taliban ban on opium poppy cultivation, production fell to 185 tons but with the power vacuum created following the demise of the Taliban regime in late 2001, farmers started growing poppy again.

Map 2. OPIUM POPPY CULTIVATION (1999-2002)



Map 3. OPIUM PRODUCTION (1999-2002)



Sources: UNODC, Global Illicit Drug Trends 2002; UNODC/ICMP, Afghanistan Opium Survey 2002, Myanmar Opium Survey 2002 and Lao PDR Opium Survey 2002.

Table 8: Illicit opium poppy cultivation (hectares harvestable after eradication)									
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Afghanistan	**71,470**	**53,759**	**56,824**	**58,416**	**63,674**	**90,583**	**82,171**	**7,606**	**74,045**
Rest of the world	201,009	196,160	200,791	193,432	174,145	125,621	139,581	136,688	108,955*
of which:									
Myanmar	146,600	154,070	163,000	155,150	130,300	89,500	108,700	105,000	81,400
Laos	18,520	19,650	21,601	24,082	26,837	22,543	19,052	17,255	14,052
Colombia	15,091	5,226	4,916	6,584	7,350	6,500	6,500	6,500	n.a.
Mexico	5,795	5,050	5,100	4,000	5,500	3,600	1,900	4,400	n.a.
Thailand	478	168	368	352	716	702	890	820	n.a.
Pakistan	5,759	5,091	873	874	950	284	260	213	n.a.
Others	5,700	5,025	3,190	2,050	2,050	2,050	2,479	2,500	n.a.
WORLD	**272,479**	**249,919**	**257,615**	**251,848**	**237,819**	**216,204**	**221,752**	**144,294**	**183,000***

*preliminary estimates
Source: UNDCP, *Global Illicit Drug Trends 2002.*

Compared to the other significant source countries, illicit opium poppy in Afghanistan has a very high yield. While South-East Asian and Andean growers typically harvested around 7 kg/ha (Laos), to 11 kg/ha (Myanmar), to 13kg/ha (Colombia), Afghans, with an average of 45 kg of opium per hectare, collected about four times more in their fields during the period 1994-2000. Beyond differences in varieties of opium poppy, the main factor contributing to the productivity gap between opium field's in Afghanistan and in the rest of the world appears to be differences in growing methods. Opium poppy is grown extensively in South East Asia, but intensively in Afghanistan. To produce the equivalent of only one-quarter of Afghanistan's opium output in 2002, Myanmar farmers devoted about 81,000 hectares to poppy cultivation, against about 74,000 hectares in Afghanistan.

Table 9: Illicit opium production (potential metric tons)									
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Afghanistan	**3,416**	**2,335**	**2,248**	**2,804**	**2,693**	**4,565**	**3,276**	**185**	**3,422**
Rest of the world	2,204	2,117	2,108	2,019	1,653	1,199	1,415	1,441	1,178*
of which:									
Myanmar	1,583	1,664	1,760	1,676	1,303	895	1,087	1,097	829
Laos	120	128	140	147	124	124	167	134	124
Colombia	205	71	67	90	100	88	88	88	n.a.
Mexico	60	53	54	46	60	43	21	71	n.a.
Thailand	3	2	5	4	8	8	6	6	n.a.
Pakistan	128	112	24	24	26	9	8	5	n.a.
Others	103	87	57	33	32	32	38	40	n.a.
WORLD	5,620	4,452	4,356	4,823	4,346	5,764	4,691	1,626	4,600*

*preliminary estimates
Source: UNDCP, *Global Illicit Drug Trends 2002*

Opium poppy fields are normally rain-fed in Myanmar and Laos, while most of them are irrigated in Afghanistan. Also, unlike their South East Asian counterparts, Afghan growers tend to use fertilizers. South East Asian opium poppy fields are located in remote, rugged and forested areas of the countries where they are cultivated by ethnic minorities, while the bulk of Afghanistan's opium production takes place on the best agricultural land in the irrigated valleys of the country. It is therefore not surprising that, in the crop calendar of the main opium producing provinces of Afghanistan, opium poppy cultivation overlaps with wheat cultivation, the predominant legal crop. In South East Asia, by contrast, opium poppy has been traditionally grown as a dry season (winter) crop, alternating in the crop calendar with rice, the predominant legal crop, which is cultivated during the rainy (summer) season. These differences highlight the fact that massive opium production in Afghanistan is not an ancestral tradition, that opium poppy cultivation has only relatively recently expanded at the expense of legal crops, and that this phenomena is clearly the result of a choice made by a number of Afghan farmers to modify their agricultural practice based on the prevailing market conditions. This point will be examined in more detail in a subsequent section.

Based on a conversion ratio of 10%, the potential heroin production of Afghanistan would have amounted to about 330 metric tons in 2000 (or 340 metric tons in 2002), and the world total to about 470 metric tons in 2000 (or 360 metric tons in 2002). For comparison purposes, it is estimated that Western Europe, not the largest but certainly the most lucrative illicit opiate market in the world, consumes between 80 and 120 metric tons of heroin per year. There are however uncertainties regarding the exact morphine[b] content of the opium produced in Afghanistan and the efficiency of the transformation process in clandestine laboratories. (See chapter V). Also, a significant proportion of the harvest is trafficked and consumed in the form of opium in the region. Finally, a proportion of the opium and heroin trafficked is seized by law enforcement authorities in transit and destination countries. Based on seizure data compiled by UNDCP, 97 metric tons of heroin equivalent, or 21 %, of global illicit opiate production was intercepted throughout the world in 2000, leaving a potential of about 370 metric tons of heroin equivalent available for consumption.

Against this background, the total prohibition of opium poppy cultivation by the Taliban regime a few months after the 2000 opium harvest on the territory under their control – which included all the high density opium poppy growing areas of the country and represented more than 80% of the national opium production – came as an unexpected event of potentially far-reaching consequences for Afghanistan and for international drug control.

The decree banning the cultivation of opium poppy was issued in July 2000, well before the poppy planting season, which starts in October. Surveys conducted by UNDCP in 2001 indicated a high degree of compliance with the ban. Final results showed that 7,606 hectares of opium poppy were cultivated in Afghanistan during the 2001 season, down by 91 % from the previous year's estimate of 82,171 ha. Most major former opium poppy growing provinces had become totally, or nearly, opium free. No opium poppy cultivation was found in Helmand, the province with the largest cultivation area in 2000 (42,853 ha), and only 218 ha were recorded in Nangarhar, the second ranking province in 2000 (19,747 ha). In the northern province of Badakhshan, however, cultivation increased from 2,458 ha in 2000 to 6,342 ha in 2001. With weighted average yields of 31 kg of opium per hectare on irrigated land, and 18 kg/ha on rain-fed land, potential opium production amounted to 185 metric tons in Afghanistan in 2001, a reduction of 3,100 mt, or 94%, from the 2000 total of 3,276 mt.

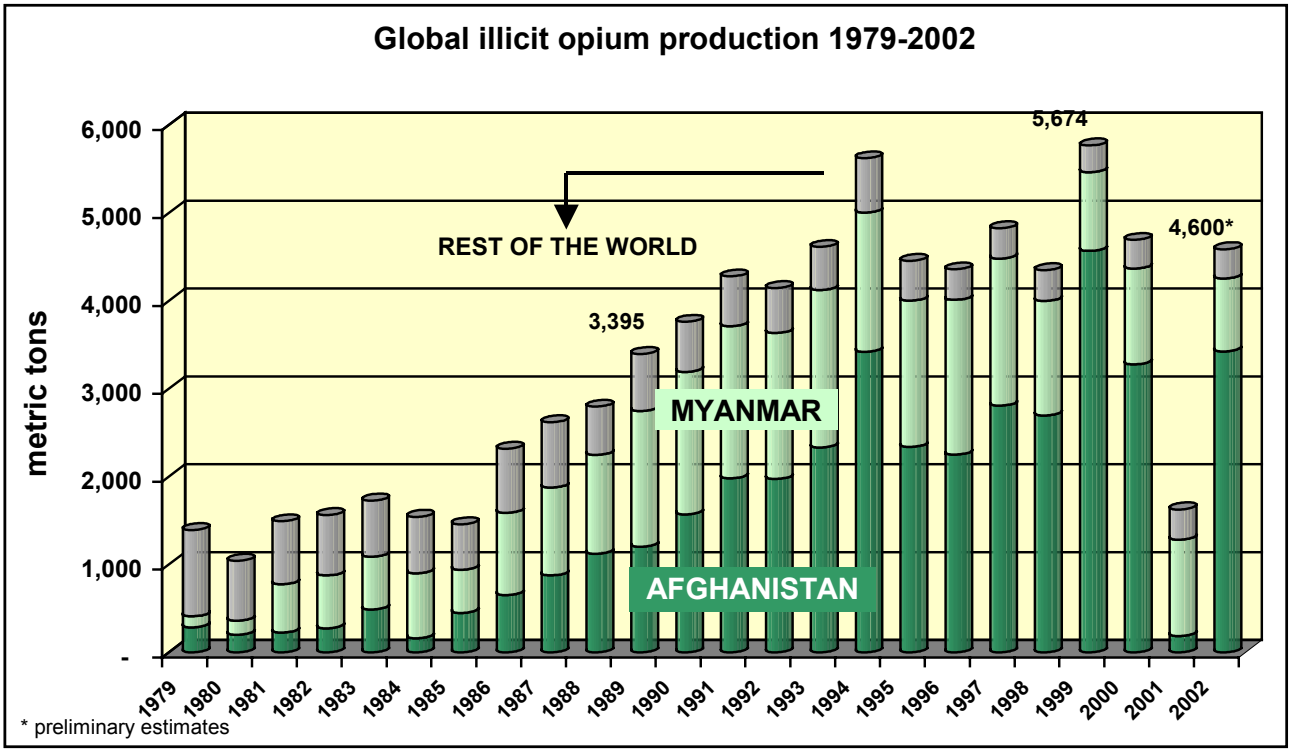


Figure 4
Source: UNDCP, *Global Illicit Drug Trends 2002*.

[b] Morphine is extracted from opium and then transformed into heroin.

The reduction in opium production in Afghanistan was not offset by increases in other countries.

While Myanmar became the largest source of illicit opium in 2001 (followed by Afghanistan and Laos), the area under cultivation remained relatively stable in that country.

The global pattern of opium poppy cultivation and opium production was therefore deeply modified in 2001. The 91 % reduction in the area under cultivation in Afghanistan translated to a 35 % reduction at the global level, from about 222,000 ha in 2000 to about 144,000 ha in 2001. The resulting potential production of opium at the global level went down by 65%, from about 4,700 metric tons in 2000, to about 1,600 metric tons in 2001.This production was considered by UNDCP to be well below the point of equilibrium for the world demand and supply of illicit opiates.

The monitoring of key indicators by UNDCP showed however that the shortage anticipated on the markets traditionally supplied with heroin of Afghan origin was delayed or limited throughout 2001[22]. Earlier speculations about the existence of large opiate stocks were thus confirmed by the of seizures and prices in the source region and further along the trafficking routes during 2001.

Despite the delayed reaction of markets attributed to the existence of stocks, the elimination of more than two-thirds of the global annual illicit opium production in 2001 remained a fact of considerable significance. First signs of the depletion of opiate stocks started to appear both around Afghanistan and in Europe at the end of 2001. Since those regions have been almost exclusively supplied with opiates of Afghan origin, and since Afghanistan represented 70% of the world production in 2000, a severe and sudden shortage would have had the potential to break their illegal heroin markets, especially if it was sustained in the following year.

But another turn in the troubled history of Afghanistan reversed the situation again. The post September 11 war in Afghanistan and the fall of the Taliban regime coincided with the opium planting season. Afghan peasants reacted to the vacuum in central government authority and sowed their fields. Results of the pre-assessment survey of opium poppy cultivation conducted by UNDCP in early February 2002 showed that opium poppy cultivation resumed at a high level.[23] These initial findings were confirmed by UNDCP's annual opium poppy survey of Afghanistan that took place in the months that followed.

The Afghan Interim Administration banned opium poppy cultivation on 17 January 2002. At that time, however, most opium poppy fields had already been sown. Although most farmers interviewed during the pre-assessment survey said they were uncertain about being able to harvest opium later in the spring because of the ban, the high prices offered by local traders created a powerful incentive. Despite an eradication campaign launched by the Afghan Interim Administration in April 2002, it became clear that Afghanistan regained its position as the world's primary illicit opium producer in the world.

UNODC's survey found opium poppy cultivation to have taken place on 74,000 hectares in 2002. This was more than the 8000 hectares under cultivation in 2001 but still slightly less than the 82,000 hectares under cultivation in 2000 or the 91,000 hectares under cultivation in 1999. The yield in 2002, however, was rather high: 46 kg per hectare, on average. As a result, opium production amounted to about 3,400 tons and was thus not only higher than in 2001 but also marginally higher than in 2000 (3,300 tons). Afghanistan's opium production thus accounted for about three quarters of global illicit opium production. Opium poppy cultivation was found in 24 out of 32 provinces in Afghanistan in 2002. Almost 95% of the cultivation, however, was concentrated in just five provinces: Helmand in the South came first, with nearly 30,000 ha, followed by Nangarhar in the East (about 20,000 ha), Badakshan in the North (about 8,000 ha), Uruzgan in the South/Center (about 5000 ha) and Kandahar in the South (about 4000 ha).

1.3. Trafficking

From a purely commercial point of view, the success of illicit Afghan opiates as a global commodity is remarkable. After two decades of increasing production, at the end of the 1990s, they represented :

- almost 100% of the illicit opiates consumed in neighbouring countries, notably the ECO countries (the Islamic Republic of Iran, Pakistan, Turkey, Kazakhstan, Turkmenistan, Kyrgyzstan, Tajikistan, Uzbekistan, Azerbaijan, and the Russian Federation); the number of opiate users in that area can be very roughly estimated at 4 million (including 2 million in Russia, 0.8 to 1.2 million in the I.R. of Iran, 0.7 million in Pakistan and 0.3 million in Central Asia);

- 80 % to 90 % of the heroin found in European markets (both western and eastern Europe), which has traditionally been trafficked along the so-called "Balkan" route (Afghanistan - the I.R. of Iran -Turkey - Balkan countries - West Europe) with indications in recent years of the development of an alternative route through Central Asia and Russia; the number of heroin users in Western Europe can be estimated at 1 million to 1.5 million;

- most of the opiates found in the countries of the Arabian Peninsula and in Africa (notably in eastern and southern Africa);

- significant amounts of the heroin found in South Asia (notably in India and Sri Lanka).

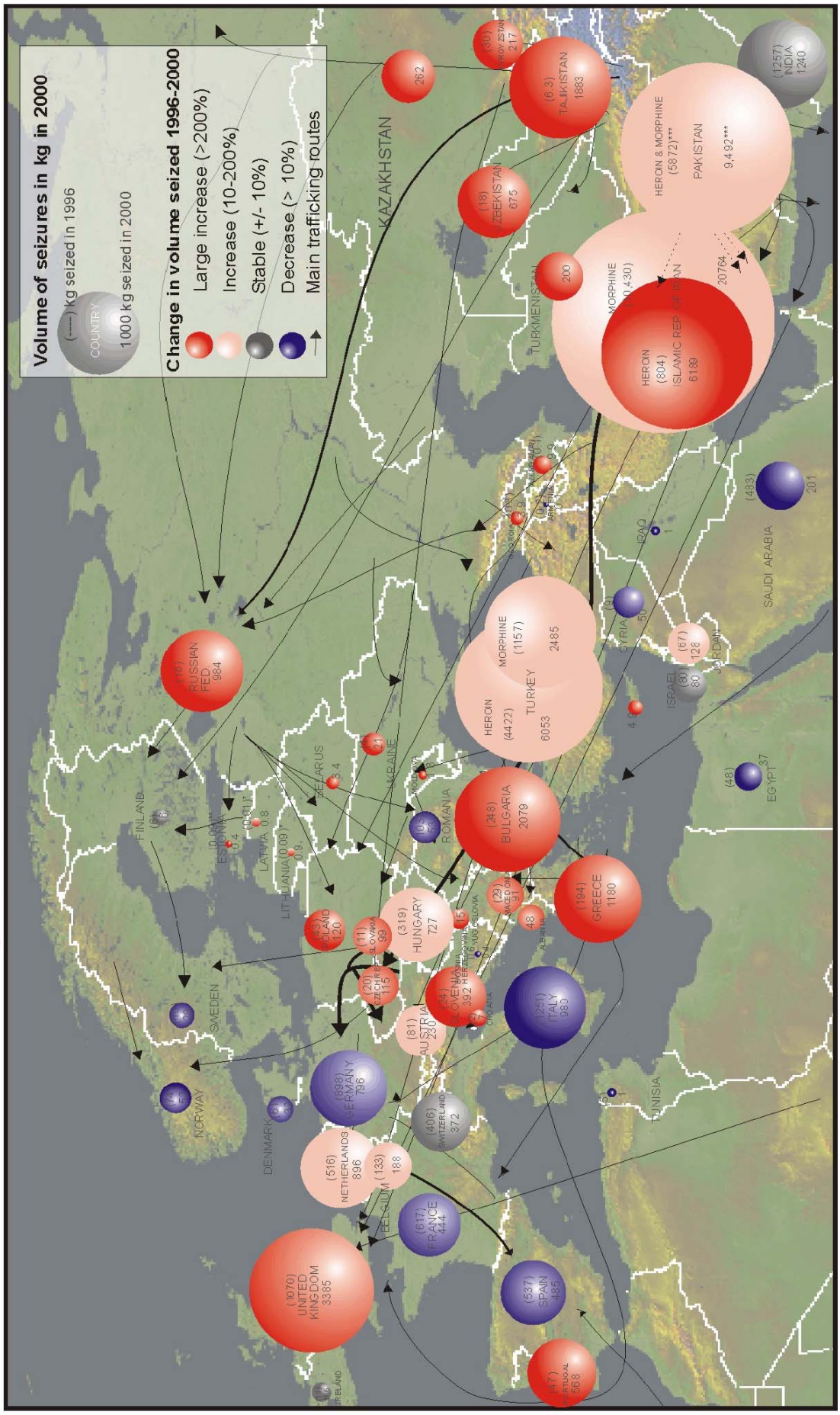
Afghan opiates have been largely absent from Latin America, South-East Asia and China which are supplied by other sources. They have been marginally present in North America (Canada and USA), Australia and Japan. It is however worth noting that, if South West Asian heroin represented only 6% of US heroin seizures in 1999, it was once dominant on the US market (from 1980 to 1985), and markets continue to shift quickly, reacting to changes in supply. Following Afghanistan's bumper opium harvests of 1999 and 2000, which had been partly stock-piled, research undertaken on behalf of the United States Office on Drug Control Policy (ONDCP) suggest that the share of South-West Asian heroin in the US market increased to around 15% by the year 2001, representing two thirds of all Asian heroin imports, up from just one third of Asian heroin imports in 1999.

The following map provides an overview of the main trafficking routes from Afghanistan to Europe and the heroin and morphine seizures made in the various countries in the year 2000. The size of the spheres reflects the amounts seized. A colour code is used to identify the trends between 1996 and the year 2000. Blue indicates a decline in seizures, grey indicates stable seizures (+/-10%) while shades of red indicate an increase. Insofar as seizures are a reflection of underlying trafficking activities, the general pattern is one of increase. However, in Western Europe the trend was towards a stabilization or decline (Germany, Italy, Spain, France, Swizterland and all of the Nordic countries), although there were also exceptions (notably the UK, but also the Benelux countries, the Netherlands, Belgium, Greece, Portugal and Austria). Almost all East European countries, by contrast, reported increases. The strongest increases were reported by the countries of Central Asia, which increasingly emerged, as of the late 1990s, as an important transit zone for opiates produced in Afghanistan. The highest seizures still take place in Iran, Pakistan and Turkey, though in 2001 heroin and morphine seizures of Tajikistan were only slightly less than those reported from Turkey.

While in the early 1980s a number of European countries still identified the countries of the so-called Golden Triangle (Myanmar, Laos, Thailand) as the main source of heroin for their markets, opiates from Afghanistan increasingly dominated the European market in subsequent years. Since the late 1990s, most West-European countries report that between 80% and 90% of their illicit opiates were either manufactured from opium produced in Afghanistan and/or that seized opiates could be traced back to countries along the main trafficking routes from Afghanistan to Europe. In countries neighbouring Afghanistan and in the countries of the former Soviet Union virtually all illegally imported opiates originate in Afghanistan.

Heroin and Morphine Trafficking 1996-2000: extent and evolution of seizures

(seizures refer to heroin unless specified otherwise)



*data for 1997 **data for 1998

*** Includes data for morphine base seizures; individual seizures show a ratio of heroin to morphine of 60%:40% in Pakistan in 2000.

Table 10: Main transit/destination countries of opiates produced in Afghanistan				
Reporting country	Year	Main source of (imported) opiates	In % of opiates trafficked in the country	Main source of information
Neighbouring countries				
Pakistan	2001	Afghanistan	100% of imported opiates	ARQ
Iran	2001	Afghanistan (directly or via Pakistan)	100%	Govt. Rep.
India	2000	South-West Asia (remainder: domestic origin (54%) and from South-East Asia (7%))	39%	ARQ
Tajikistan	2001	Afghanistan	100%	ARQ
Uzbekistan	2000	Afghanistan, directly from Afghanistan or via Tajikistan	100% of imported opiates	INCSR
Kyrgyzstan	2001	Afghanistan, via Tajikistan	100%	ARQ
Kazakhstan	2000	Afghanistan, via Tajikistan or via Kirgyzstan	close to 100%	INCSR
Turkmenistan	2000	Afghanistan, directly or via Uzbekistan	close to 100%	INCSR
Balkan-route countries				
Turkey	2000/01	South-West Asia (Afghanistan) via Iran	100%	ARQ
Bulgaria	2001	Golden Crescent (Afghanistan) via Balkanroute (Turkey)	100%	ARQ
Romania	2001	Afghanistan (via Iran and Turkey)	close to 100%	ARQ
Yugoslavia	2001	South-West Asia (Afghanistan), via Balkanroute	100%	ARQ
Croatia	2001	(Afghanistan) via Balkan route	90%	ARQ
Slovenia	2000	(Afghanistan) via Turkey and via other countries along the Balkan route	close to 100%	ARQ
Hungary	2001	Afghanistan, via Turkey, Bulgaria, Romania (or Yugoslavia)	95%	ARQ
Slovak Rep.	2001	South-West Asia (Afghanistan), via Hungary and via the Ukraine	close to 100%	INCSR
Czech Rep.	2000	(Afghanistan) via Balkan route (80%); via Central Asia (20%)	close to 100%	ARQ
Poland	2001	Golden Crescent (Afghanistan) mostly via the Balkanroute (50%) and to a lesser extent via Russia (25%); rest unknown.	close to 100%	ARQ
Other East European countries				
Russian Federation	2001	Afghanistan, mainly via Tajikistan, Kyrgystan and other Central Asian countries	99.5%	ARQ
Ukraine	2001	South-West Asia (Afghanistan) via Central Asia and Russia; via Turkey (Black Sea) and via the Balkanroute (i.e. via Romania and Moldova)	close to 100% (of imported opiates)	INCSR
Moldova	2001	Afghanistan (via Russia and Ukraine)	close to 100%	ARQ
Belarus	2000	Afghanistan via Tajikistan and Russia	> 80%	ARQ
Lithuania	2000/01	Afghanistan via Tajikistan, Russia (incl. via Kaliningrad) and via Belarus	100%	ARQ
Latvia	2000/01	Afghanistan (90% via Russia, 10% from South-West Asia via the Balkan route and Western Europe)	100%	ARQ
Estonia	2001	(Afghanistan) via Central Asia and Russia	close to 100%	ARQ
West European countries				
Italy	2000/01	(Afghanistan) via Albania (43%), Turkey (43%), Greece and other countries along the Balkanroute	close to 99%	ARQ
Austria	2001	(Afghanistan) via Turkey and Balkan route	close to 100%	ARQ, Govt. Report
Germany	2000	Afghanistan, mostly via Pakistan, Iran, Turkey and along the Balkanroute	80%-90%	ARQ

Table 10: Main transit/destination countries of opiates produced in Afghanistan				
Reporting country	Year	Main source of (imported) opiates	In % of opiates trafficked in the country	Main source of information
Switzerland	2000	Afghanistan via the Balkan route	80%	ARQ
Belgium	2001	Afghanistan via the Balkan route	95%	ARQ
France	2001	South-West Asia (Afghanistan), mainly via Balkanr route	close to 100%	ARQ
Spain	2000	(Afghanistan) via Turkey and the Balkan route (66%) and via France, Italy and UK (6%)	72%	ARQ
Portugal	2001	Via Turkey, Spain and the Netherlands	n/a	ARQ
Greece	2001	Afghanistan via Albania (66%) and Turkey (31%)	close to 100%	ARQ
Cyprus	2000	Afghanistan via Turkey, Iran and Greece	90%	ARQ
Malta	2000	(Afghanistan) 70% via Turkey; rest via North African and South European countries	close to 100%	ARQ
UK	2001	South-West Asia (Afghanistan), via Turkey, via Balkanroute, via Pakistan, via India, via United Arab Emirates, via Russia etc.	>95%	ARQ,Govt. Report
Norway	2000	South-West Asia (Afghanistan)	90%	ARQ
Sweden	2001	Golden Crescent (Afghanistan), mostly via Turkey and Germany	80%	ARQ
Denmark	2000	Afghanistan via Yugoslavia, Pakistan, Turkey	75%	ARQ
Finland	2001	Afghanistan via Russia and/or via Estonia	close to 100%	ARQ
Sources: UNDCP, Annual Reports Questionnaire Data (ARQ) and United States Department of State, International Narcotics Control Strategy Report, March 2002.				

Given the strong and rising importance of opiates of Afghan origin for supplying the markets in South-West Asia, Central Asia, and Europe, it is also not surprising to find a rather strong correlation between Afghan opium production and seizures of opiates in these regions. Over the 1980-2000 period that correlation amounted to R = 0.92, which is very high (a hundred percent fit would have resulted in a correlation coefficient of 1.00).

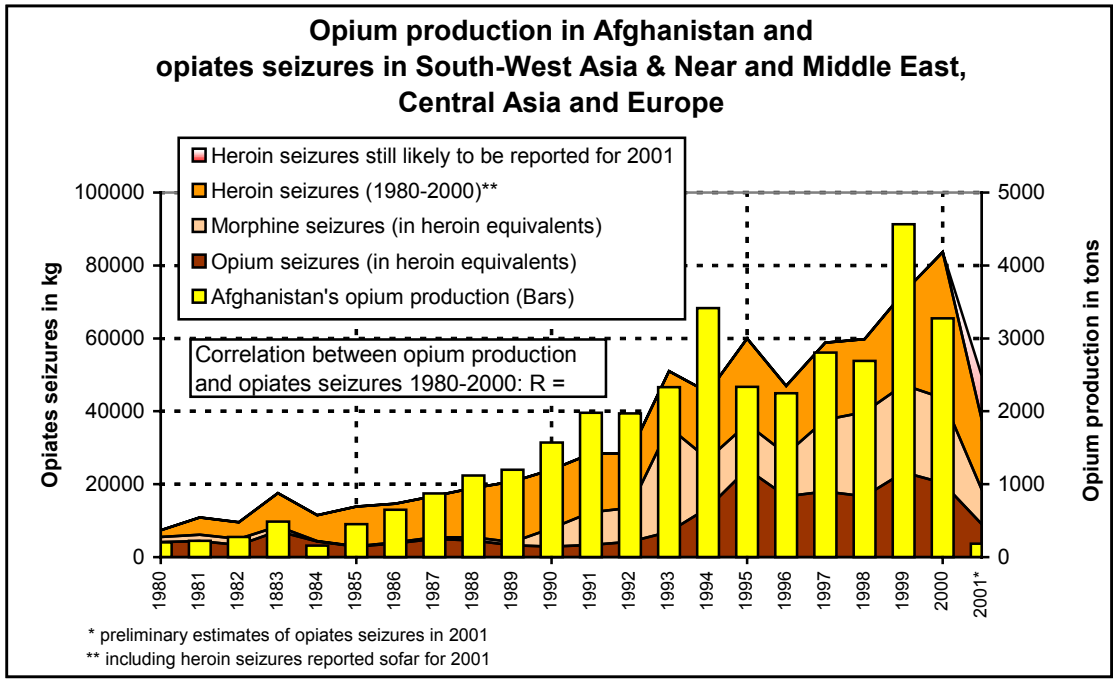


Figure 5
Source: UNODCCP, *Global Illicit Drug Trends 2002* and UNDCP, DELTA

Nonetheless, there are also some differences with regard to the specific opiates involved.

While opium and partly also morphine seizures tend to react to changes in the very same year in which shifts in opium production have been recorded, the impact on heroin seizures is usually observable over a two year period, with the change in production mostly felt one year later. Thus, the increase in Afghanistan's opium production in 1994 was not so much reflected in rising heroin seizures in that year but in 1995; the decline of opium production in 1995 was not really seen in 1995 heroin seizure data but in data for 1996. Similarly, the strong increase in Afghan opium production in 1999 was only partially reflected in rising heroin seizures in 1999 but was clearly seen in rapidly increasing heroin seizures in the subsequent year. Preliminary seizure data for opiates for 2001, the year of Afghanistan's opium ban, show a significant decline in opium and morphine-base

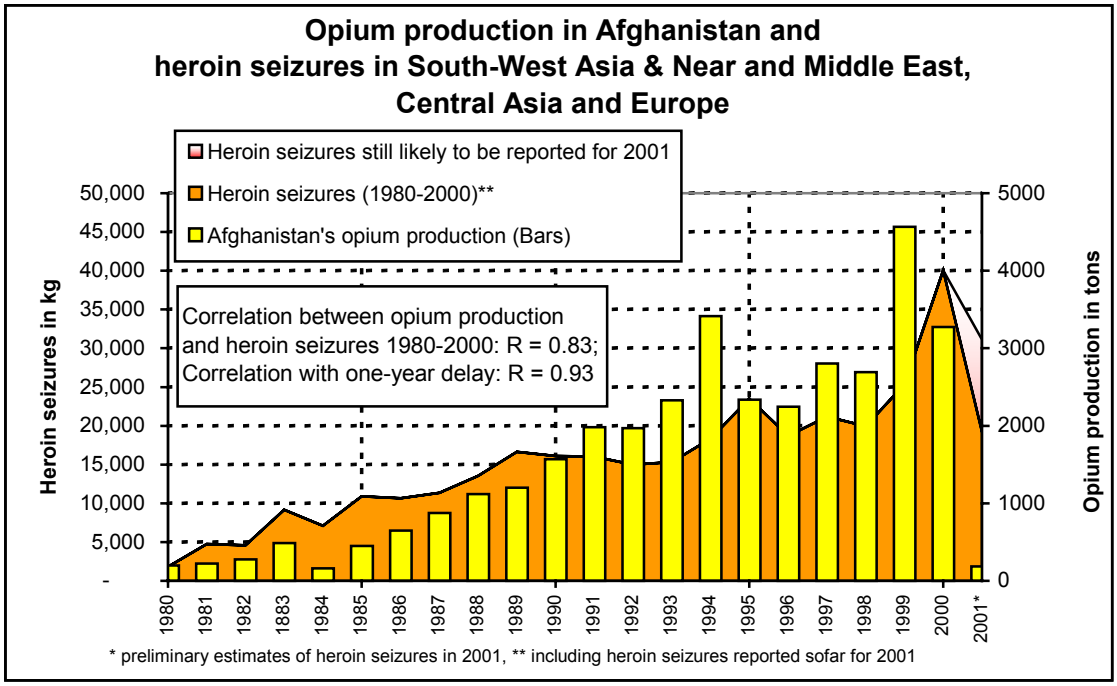


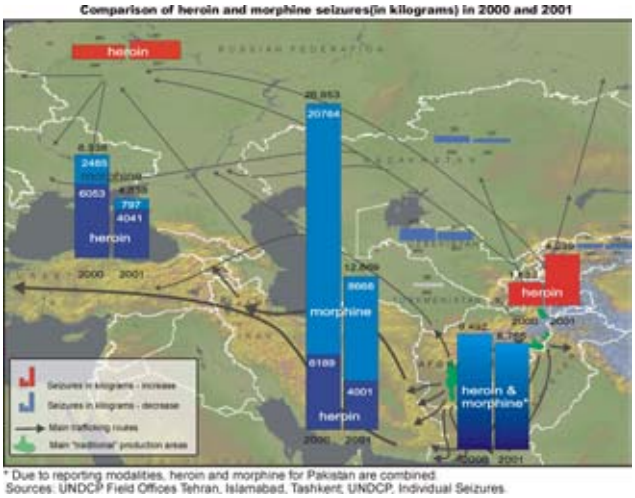
Figure 6
Source: UNODCCP, *Global Illicit Drug Trends 2002* and UNDCP, DELTA.

seizures, but only moderate declines in heroin seizures, again suggesting that heroin markets in Europe are largely supplied with heroin manufactured out of Afghan opium produced a year earlier. Expressed in statistical terms, the correlation coefficient between opium production and heroin seizures over the 1980-2000 period was 0.83; if the correlation, however, is made between opium production and the heroin seizures made in the subsequent year, the correlation coefficient increases to 0.93.

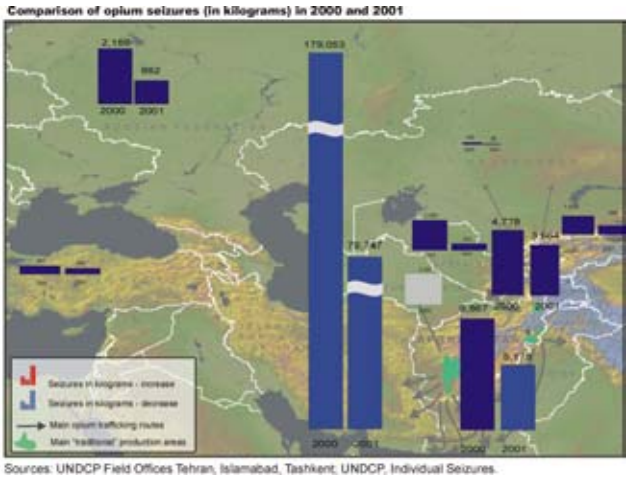
In any case, the supply push resulting from Afghanistan's record opium harvests of the late 1990s was already receding in 2001, the year of Afghanistan's opium poppy ban.

Except for Tajikistan, which is increasingly faced with growing trafficking from northern Afghanistan through its territory and has improved its enforcement capabilities in recent years, practically all other countries around Afghanistan reported falling seizures of opiates in 2001 (see Map 5 and Map 6).

- In Pakistan, seizures of opium fell by more than 40% and seizures of heroin (including morphine) by almost 10%.
- In Iran seizures of opium and of morphine fell by more than half, and seizures of heroin declined by a third.
- In Turkey seizures of morphine fell by two thirds, seizures of heroin declined by a third.
- In Russia opium seizures fell by more than 50% while heroin seizures continued to increase slightly.



Map 5
Source: UNDCP, *Global Illicit Drug Trends 2002* and UNDCP, DELTA.



Map 6
Source: UNDCP, *Global Illicit Drug Trends 2002* and UNDCP, DELTA.

Available heroin purity data of seized heroin showed a clear downward trend in 2001, reversing the upward trend observed in previous years.

- Average heroin purity in Turkey fell from 50% in the first quarter of 2001 to 41% in the fourth quarter of 2001;
- Similarly average heroin purity found in the UK – after having increased from 37% in early 1997 to 53% in the first quarter of 2001, fell to 43% by the fourth quarter of 2001 and to about 30% in mid 2002.
- A general reduction in the supply push was also observed in Germany. The number of newly registered heroin users declined slightly, the number of reported heroin seizure cases fell by 6% and the number of drug related deaths (which are largely related to abuse of opiates in Germany) fell by about 10% in 2001 after having increased by 35% over the 1997-2000 period, at the time when Afghan opium production expanded.

Given the resumption of Afghan opium production at high levels in 2002, it is likely, however, that trafficking will again increase in the second part of 2002, and in 2003.

1.4. Geography of opium cultivation and trafficking

In the 19th century and early 20th century, one of the main opium production centres of the country was apparently Badakshan (northern Afghanistan), known for its high-quality opium. However, the subsequent expansion of opium production, notably the expansion in the 1980s and the 1990s took place mainly in the east and, in the 1990s, in the south of the country. By the year 2000, before the Taliban ban, the two provinces, Helmand (southern Afghanistan) and Nangarhar (eastern Afghanistan) accounted for slightly more than 75% of the total area under poppy cultivation (51.9% and 23.9% respectively). The area under cultivation in Badakshan was 3% of the country's total poppy cultivation.

The most striking phenomenon of the last decade of the 20th century was the spread of opium poppy cultivation across the country. While opium production in the 1930s was reported from just 3 provinces, this increased to 8 provinces by the year 1994 and 22 provinces in the year 2000. This meant that close to 80% of all provinces of the country (28 provinces in total) were reported to have been cultivating opium poppy in the year 2000.

The overall increase in cultivation of opium poppy over the 1995-99 period was 70%[24].The increase from 1994 - the year of a bumper harvest and the first year in which a detailed country-wide UNDCP ground survey took place - to 2000, the first year of Taliban efforts to curtail cultivation, was still 15%. The strongest increase in the area under cultivation – in absolute terms – over the 1994-2000 period was reported for the province of Helmand, cultivating 45% more in 2000 than in 1994. Cultivation in Badakshan rose by 43% over the 1994-2000

period, though rising from low levels. The strongest decline in absolute terms over the same period was reported from the province of Nangarhar (-32% in relative terms). The basic regional trends over the 1994-2000 period were thus a decline of production in the East of Afghanistan, but strong increases in the South as well as in the North of the country.

It is interesting to note that trafficking trends, as reflected in seizures, went largely parallel to production trends within Afghanistan. The largest seizures of opiates in the second half of the 1990s and the strongest increase – in absolute terms – in opiates seizures from the mid 1990s to the late 1990s took place in Iran, reflecting, *inter alia,* the growth of opium production in southern Afghanistan, while the strongest increases – in relative terms – were reported from Central Asia, notably Tajikistan, reflecting, *inter alia,* the growth of opium production in northern Afghanistan. By contrast, opiates seizures in Pakistan fell in the second half of the 1990s, in line with less production reported from eastern Afghanistan. Within Pakistan by far the largest seizures in 2000 were reported from the province of Baluchistan, bordering southern Afghanistan while opiates seizures in the North-West Frontier Province and the Tribal Areas, bordering Nangarhar became less significant. These patterns have much to do with the destroyed transport infrastructure within Afghanistan and years of high transportation risks created by local warlords kidnapping whole convoys or demanding high tolls for allowing them a safe passage through their territory. Though these risks declined markedly since the mid 1990s when many of the warlords had to hand over their arms to the Taliban[25], the trading patterns of opium and heroin, developed in the late 1980s and the first half of the 1990s, continued through the late 1990s and the beginning of the 21st century.

Table 11. Opium Poppy Cultivation in Afghanistan, 1994-2000, sorted by results in 2000 (hectares)*

Province	1994	1995	1996	1997	1998	1999	2000	2000 % of total cultivation	change 1994-2000
Helmand	29,579	29,753	24,909	29,400	30,673	44,552	42,853	52.2%	13,274
Nangarhar	29,081	15,722	15,643	14,567	17,822	22,990	19,747	24.0%	-9,334
Oruzgan	6,211	2,573	7,777	4,587	4,288	4,479	4,331	5.3%	-1,880
Qandahar	4,034	2,461	3,160	4,521	5,602	6,032	3,427	4.2%	-607
Balkh			1,065	710	1,044	4,057	2,669	3.2%	2,669
Badakhshan	1,714	2,970	3,230	2,902	2,817	2,684	2,458	3.0%	744
Farah		9	630	568	171	787	1,509	1.8%	1,509
Kunar	115	152	19		75	288	786	1.0%	671
Jawzjan						2,593	746	0.9%	746
Zabul	54		255	154	161	611	725	0.9%	671
Laghman					77	297	707	0.9%	707
Takhar						201	647	0.8%	647
Kunduz						38	489	0.6%	489
Kabul						132	340	0.4%	340
Nimroz	682	119	136	642	11	203	219	0.3%	-463
Baghlan				328	929	1,005	199	0.2%	199
Kapisa						5	104	0.1%	104
Samangan							54	0.1%	54
Logar					4	29	46	0.1%	46
Badghis							41	0.0%	41
Herat				38			38	0.0%	38
Faryab							36	0.0%	36
Total	**71,470**	**53,759**	**56,824**	**58,416**	**63,674**	**90,983**	**82,171**	**100.00%**	**11,045**

* blank = province not surveyed
Source: UNDCP/ICMP, Afghanistan Annual Opium Poppy Survey 2000, Islamabad 2000.

The opium poppy ban decreed by the Taliban in July 2000 led to massive declines of between 90% and 100% of cultivation in the provinces controlled by them in 2001. Cultivation in Helmand ceased entirely and cultivation in Nangarhar fell by 99%. Increases were only reported from two northern provinces, Badakshan (+158%) and Samangan (+1,037%). In the other northern provinces cultivation fell as well: a decline of two thirds was reported in Takhar, which neighbours Badakshan, as well as an almost complete elimination in Kunduz and Balkh, the two provinces neighbouring Samangan.

The decline of opium production in 2001 was also reflected in the number of villages cultivating opium poppy. In 2000, UNDCP's ground survey identified 6,645 opium poppy growing villages of out of 7,541 villages surveyed in the opium growing districts. In 2001, this number fell to 914 villages out of 10,030 villages surveyed in the opium producing districts.

Overall, Badakshan accounted for 83% and Samangan for 8% of all cultivation in Afghanistan in 2001. The main northern provinces (Badakshan, Samangan, Takhar, Balkh), were responsible for almost 95% of Afghanistan's opium poppy cultivation in 2001. Most of the rest – close to 5% - was produced in eastern Afghanistan (Nangarhar, Kunar, Kabul, Laghman, Paktia). Southern Afghanistan virtually ceased to be an opium production area.[c]

The situation changed again in 2002. As opium poppy cultivation resumed, a similar pattern to that of the year 2000 was observed. The five provinces of Helmand (40%), Nangarhar (27%), Badakshan (11%), Uruzgan (7%) and Kandahar (5%) accounted for 90% of Afghanistan's total area under poppy cultivation, almost the same percentage as in the year 2000.

Table 12: Opium Poppy Cultivation in Afghanistan[a] in hectares, 1999-2002, sorted by results in 2002 (hectares)*

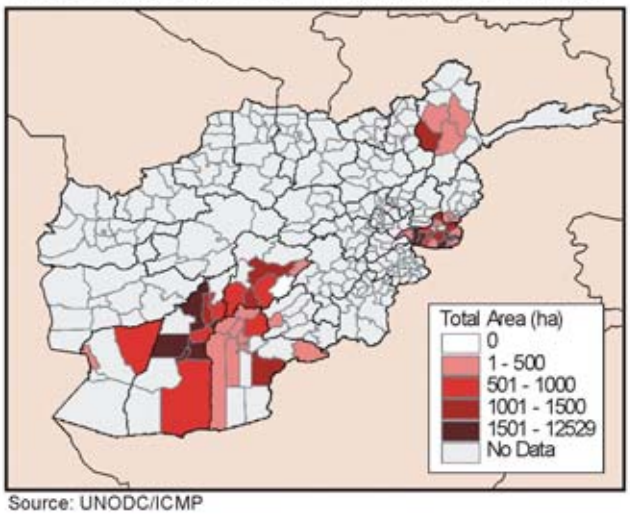
	1999	2000	2001	2002	2002 in % of total
Helmand	44,552	42,853	-	29,950	40.4%
Nangarhar	22,990	19,747	218	19,780	26.7%
Badakshan	2,684	2,458	6,342	8,250	11.1%
Uruzgan	4,989	4,725	1	5,100	6.9%
Kandahar	5,522	3,034	-	3,970	5.4%
Ghor	-	-	-	2,200	3.0%
Kunar	288	786	82	972	1.3%
Laghman	297	707	15	950	1.3%
Takhar	201	647	211	788	1.1%
Farah	787	1,364	-	500	0.7%
Nimroz	203	219	-	300	0.4%
Balkh	4,057	2,669	4	217	0.3%
Kapisa	5	104	-	207	0.3%
Zabul	611	725	1	200	0.3%
Baghlan	1,005	199	82	152	0.2%
Jawzan	2,593	600	-	137	0.2%
Samangan	n.a.	54	614	100	0.1%
Kabul	132	340	29	58	0.1%
Sari Pul	n.a.	146	-	57	0.1%
Herat	-	184	-	50	0.1%
Paktya	29	46	1	38	0.1%
Faryab	-	36	-	28	0.04%
Badghis	-	41	-	26	0.04%
Kunduz	38	489	-	16	0.02%
Khost	-	-	6	-	0.00%
Afghanistan	**90,983**	**82,173**	**7,606**	**74,045**	**100.0%**

a/ Some of the provincial boundaries changed in 2002

Source: UNDCP/ICMP, Afghanistan Opium Survey 2002.

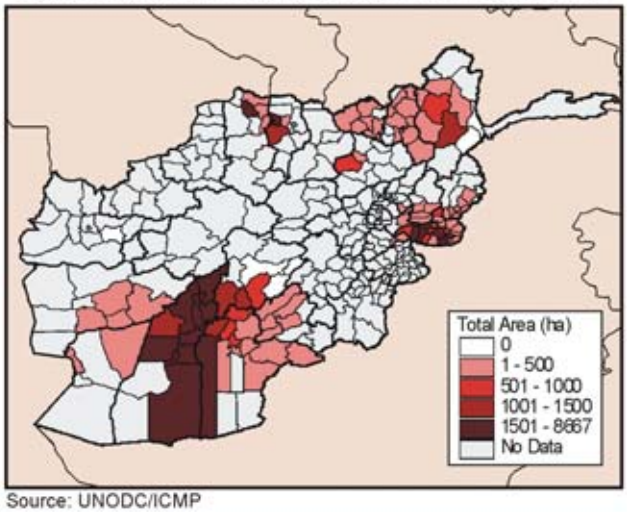
[c] Trafficking trends, as reflected in seizure statistics, went parallel to these production patterns. Opiates seizures in 2001 increased strongly in Tajikistan and they fell strongly in Iran. Pakistan reported a decline, though a less significant one than was reported by Iran.

Map 7. Afghanistan: Opium Poppy Cultivation, 1994



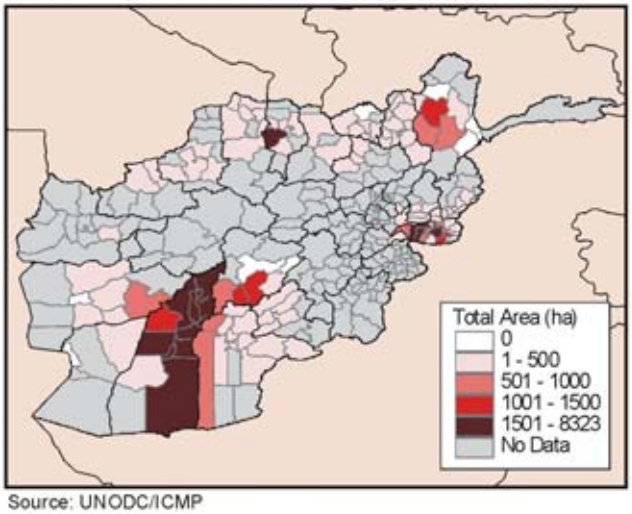
Source: UNODC/ICMP

Map 8. Afghanistan: Opium Poppy Cultivation, 1999



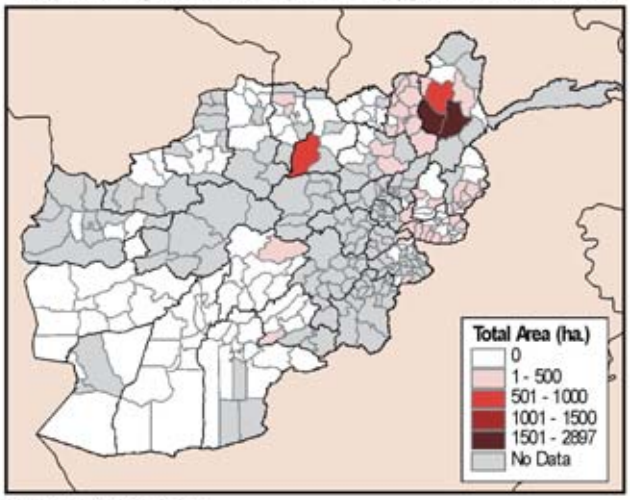
Source: UNODC/ICMP

Map 9. Afghanistan: Opium Poppy Cultivation, 2000



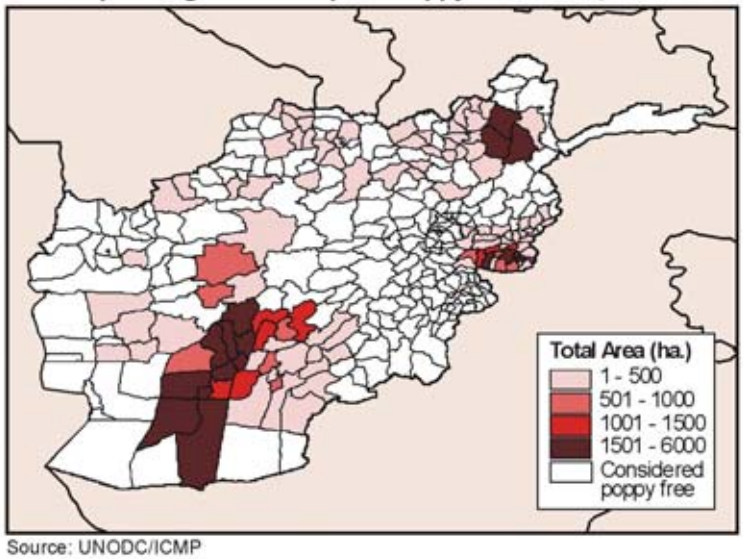
Source: UNODC/ICMP

Map 10. Afghanistan: Opium Poppy Cultivation, 2001



Source: UNODC/ICMP

Map 11. Afghanistan: Opium Poppy Cultivation, 2002



Source: UNODC/ICMP

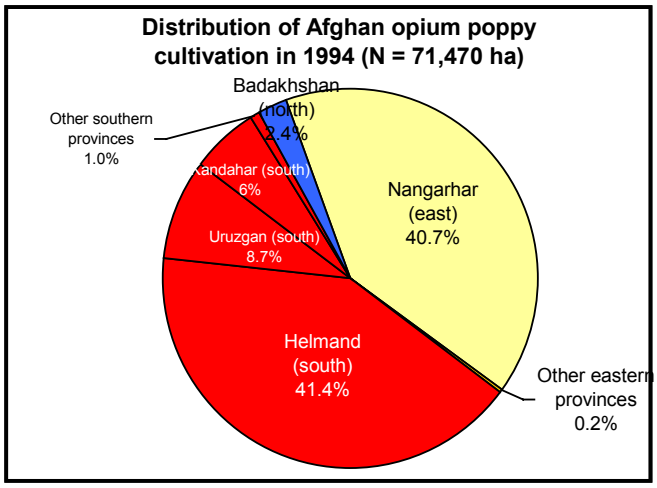


Figure 7
Source: UNDCP, *Afghanistan Opium Poppy Survey 1994*.

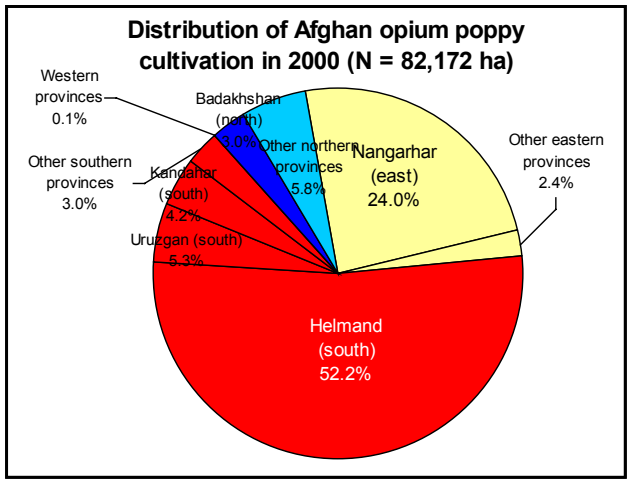


Figure 8
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000.*

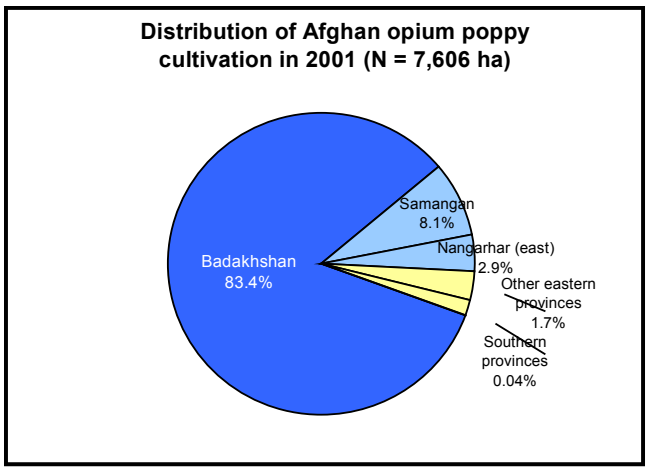


Figure 9
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2001*.

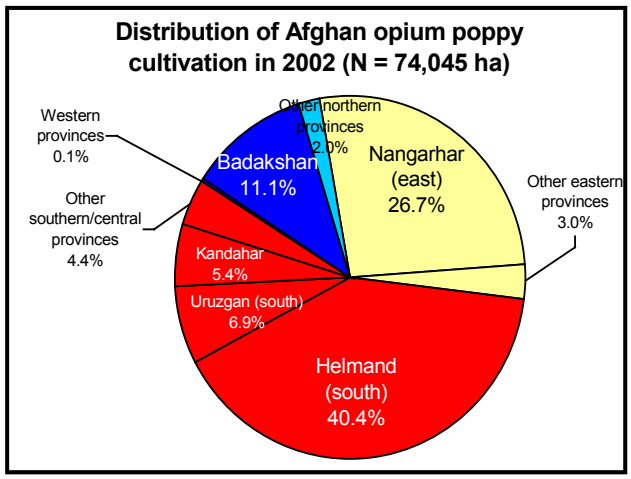


Figure 10
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2002*.

For security reasons the 2002 opium poppy survey could only be accomplished through remote sensing (i.e. high-resolution satellite images complemented by ground truthing) in several parts of the country. Therefore, the work of field surveyors was more limited as compared to previous years when UNDCP was running census-type ground surveys in all of the opium producing areas of the country. Given the overall similarity of results of the 2000 and the 2002 surveys, several additional findings of the 2000 survey, presented below, are likely to be valid for 2002 as well.

The overall area under poppy cultivation in Afghanistan, for instance, was equivalent to only 1% of total arable land in the country in 2000 (0.9% in 2002), or just 8% of all cultivation in the poppy growing villages in the year 2000. Despite the importance of Afghanistan in global opium production, it would be thus misleading to see Afghanistan as a location where nothing else but opium poppy was grown. Even in the peak year of Afghanistan's opium production (1999), the area under cultivation of opium poppy was equivalent to just 1.2% of total arable land or 4.5% of the land under wheat cultivation. The area under poppy cultivation was also less than the areas dedicated for barley, maize or rice cultivation as well as for the cultivation of oil crops.

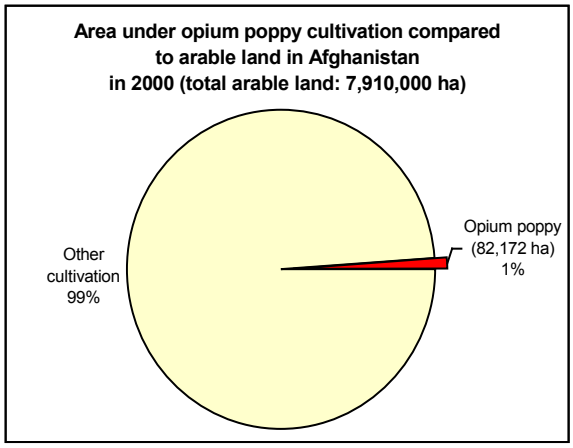


Figure 11
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

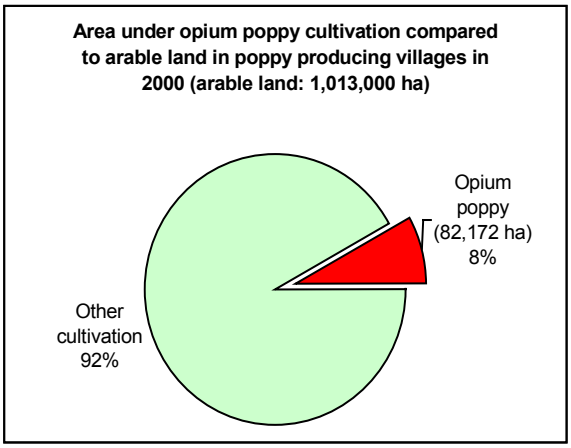


Figure 12
UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

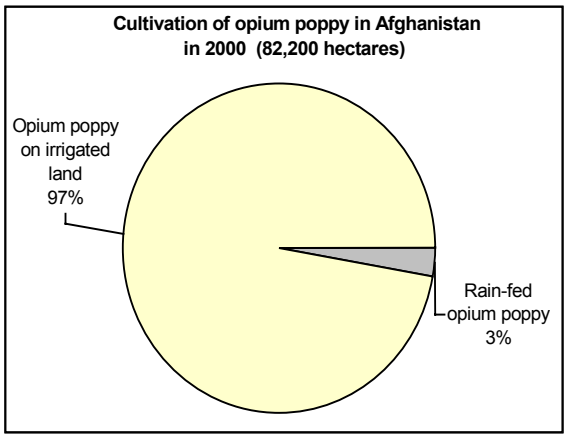


Figure 13
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

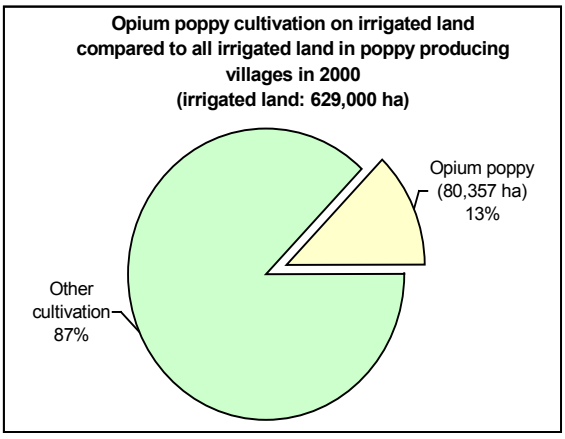


Figure 14
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

In 2002, the area under opium poppy cultivation was equivalent to 0.9% of arable land, 3.3% of the land under production of cereals or 4.2% of the land dedicated to wheat production in the country, and continued to be less than the land used for barley, rice or maize production. In other words, these data clearly indicate that the large majority of Afghan peasants did not live on opium but on the production of other crops. Nonetheless, in some of the key opium producing provinces, opium poppy cultivation reached significant proportions. In Nangarhar more than a fifth of arable land (22%) was used for poppy cultivation in 2002, and around 17% of arable land in Uruzgan and Helmand (southern Afghanistan) were used for such cultivation. In Badakshan (northern Afghanistan) the respective proportion was 8% in 2002. The provinces of Kunar and Laghman in the East and Kandahar in the South were also clearly above the overall average of 0.9%.

The regional concentrations of opium poppy cultivation become even more apparent when cultivation of opium poppy is compared to the cultivation of Afghanistan's main agricultural crop - wheat. In Nangarhar the area under poppy was equivalent to almost 60% of the land under wheat cultivation in 2002. In Helmand the corresponding ratio was 48%. In Badakshan and Uruzgan the area under opium poppy cultivation was equivalent to 15% of the area under wheat cultivation. Proportions ranging from 1% to 10% were reported from Kunar, Ghor, Kandahar, Laghman, Kapisa and Nimroz. Overall the highest concentrations of opium poppy as compared to wheat production were found in eastern Afghanistan, followed by southern Afghanistan.

Table 13: Agricultural land use in Afghanistan in 1999 in hectares	
TOTAL LAND	65,209,000
of which	
Pasture	30,000,000
Potentially arable land	7,910,000
of which used for:	
Cereals, total	2,534,000
Wheat	2,027,000
Coarse grain, total	367,000
Barley	180,000
Maize	160,000
Oil-crops	146,800
Rice, Paddy	140,000
Opium poppy	**91,000**
Seed Cotton	60,000
Vegetables	57,000
Grapes	52,000
Linseed	39,000
Pulses, total	37,000
Sesame Seed	35,000
Millet	27,000
Roots and tubers, total	14,000
Potatoes	14,000
Sunflower Seed	11,500
Tree nuts, total	11,500
Watermelons	7,800
Berries	6,600
Almonds	5,500
Apricots	5,150
Anise, Badian, Fennel	4,500
Plums	4,500
Figs	3,300
Stone fruits	3,000
Pistachios	3,000
Apples	2,350
Walnuts	2,300
Citrus fruits, total	2,270
Cantaloupes & other melons	2,100
Sugar cane	2,000
Peaches and nectarines	1,920
Oranges	1,500
Olives	1,300
Nuts	700
Pears	320
Sugar Beets	70

Sources: FAO Database and UNDCP/ICMP, *Afghanistan Annual Opium Poppy Survey 1999*.

Table 14: Cultivation of opium poppy and of arable land in Afghanistan in 2002 (in hectares)– provinces ranked according to the proportion of opium poppy cultivation to total arable land				
		Opium	**Arable land**	
Nangarhar	East	19,780	89,000	22.2%
Uruzgan	Centre/south	5,100	29,000	17.6%
Helmand	South	29,950	181,000	16.5%
Badakshan	North	8,250	103,000	8.0%
Kunar	East	972	16,000	6.1%
Laghman	East	950	21,000	4.5%
Kandahar	South	3,970	137,000	2.9%
Other		5,073	7,334,000	0.1%
Afghanistan		74,045	7,910,000	0.9%

Table 15: Agricultural land use in Afghanistan in 2002 in hectares						
	Cereals of which:	Wheat	Barley	Rice	Maize	***Opium poppy***
Hectares	2,213,000	1,742,000	236,000	135,000	100,000	**74,000**
Sources: FAO/WFP *Crop and Food Supply Assessment*, Mission to Afghanistan, 15 August 2002. ,						

Table 16: Cultivation of opium poppy and of wheat in Afghanistan in 2002 (in hectares)– provinces ranked according to the ratio of opium poppy cultivation to wheat cultivation				
Province	**Location**	Opium poppy in hectares	Wheat in hectares	Cultivation of opium poppy as a percentage of wheat cultivation
Nangarhar	East	19,780	33,000	59.9%
Helmand	South	29,950	63,000	47.5%
Badakshan	North	8,250	54,000	15.3%
Uruzgan	Centre/south	5,100	35,000	14.6%
Kunar	East	972	10,000	9.7%
Ghor	Centre	2,200	31,000	7.1%
Kandahar	South	3,970	58,000	6.8%
Laghman	East	950	14,000	6.8%
Kapisa	East	207	5,000	4.1%
Nimroz	South	300	30,000	1.0%
Farah	South	500	65,000	0.8%
Zabul	South	200	30,000	0.7%
Paktya	East	38	6,000	0.6%
Takhar	North	788	130,000	0.6%
Jawzan	North	137	47,000	0.3%
Kabul	East	58	21,000	0.3%
Balkh	North	217	120,000	0.2%
Baghlan	North	152	95,000	0.2%
Sari Pul	North	57	40,000	0.1%
Samangan	North	100	155,000	0.1%
Heart	West	50	155,000	0.0%
Badghis	West	26	130,000	0.0%
Faryab	West	28	167,000	0.0%
Kunduz	North	16	105,000	0.0%

Table 16: Cultivation of opium poppy and of wheat in Afghanistan in 2002 (in hectares)– provinces ranked according to the ratio of opium poppy cultivation to wheat cultivation				
Other		-	143,000	0.0%
Afghanistan		74,045	1,742,000	4.3%
	East	22,005	89,000	24.7%
	South	40,020	281,000	14.2%
	Centre	2,200	31,000	7.1%
	North	9,717	746,000	1.3%
	West	104	452,000	0.0%
Sources: UNDC/ICMP, *Afghanistan Opium Survey 2002*, October 2002, FAO/*WFP Crop and Food Supply Assessment*, Mission to Afghanistan, 15 August 2002				

It is also interesting to note that prior to the ban by the Taliban and again in 2002, the bulk of opium poppy was cultivated on irrigated land. In 2000, this proportion reached 97%. Following the ban it dropped temporarily to 52% in 2001[26] but recovered to around 93% in 2002.

Yields on irrigated land in general, are substantially higher than on rain-fed land. In 2002, a year of good weather conditions, average opium yields per hectare on irrigated land were 48 kg per hectare and thus 50% higher than yields on rain-fed land (32 kg per ha). In 2000, the first year of a severe drought, yields per hectare on irrigated land averaged 35.7 kg and were twice as high as yields on rain-fed poppy fields (18.5 kg/hectare).

In regional terms, most of the irrigated land used for poppy production is in the south. In 2000, the highest proportions of irrigated land out of total land dedicated to poppy cultivation, approaching 100%, were reported from Helmand province and Kandahar (southern Afghanistan) as well as from a number of less important opium producing provinces – in alphabetical order - Badghis, Farah, Faryab, Herat, Jawzjan, Kabul, Kapisa, Logar, Nimroz, Oruzgan, Samangan and Zabul. In Nangarhar, 99% of the land used for opium production was irrigated. The highest proportions of rain-fed cultivation were reported from northern Afghanistan: Badakshan (50%), Takhar (45%) and Balkh (16%).

Similarly in 2002 almost all production in southern and eastern Afghanistan took place on irrigated land. Significant proportions of rain-fed cultivation, by contrast, were still reported from northern and north-western Afghanistan: on average 56%. Proportions differ strongly, however, from province to province. In Badakshan, bordering Tajikistan (60%), as well as in Faryab, bordering Turkmenistan (87%) and in the province of Baghlan, located to the north of Kabul (89%) rain-fed poppy cultivation dominate. The proportions of rain-fed cultivation in Takhar, bordering Tajikistan (34%) and Badghis, bordering Turkmenistan (32%) are still important though most of the cultivation there already takes place on irrigated land. By contrast, in the two northern provinces of Jawzjan (bordering Turkmenistan) and Kunduz (bordering Tajikistan) poppy production was reported to have taken place exclusively on irrigated land, and in Balkh, bordering Uzbekistan, almost all production (99%) shifted to irrigated land in 2002. [27]

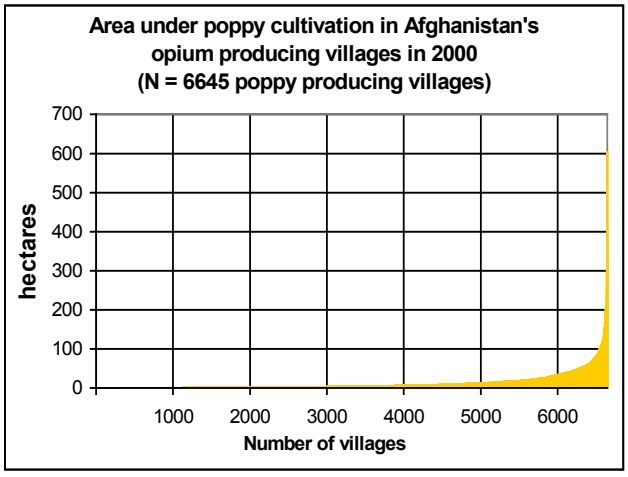


Figure 15
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

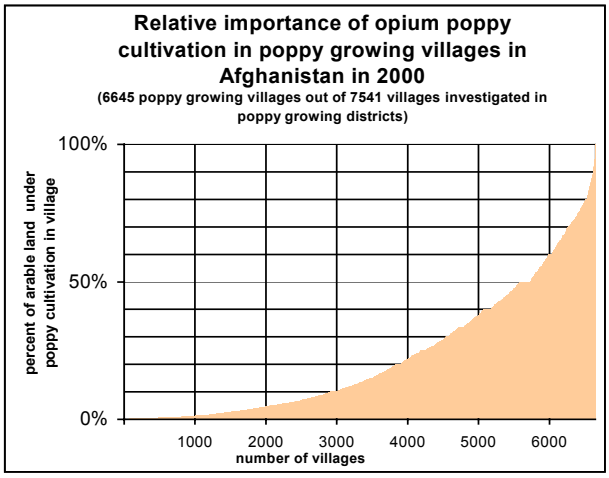


Figure 16
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

In opium producing villages, opium poppy cultivation on irrigated land accounted for 13% of all cultivation on irrigated land while poppy cultivation in general accounted for 'just' 8% of all agricultural activity in poppy producing villages in 2000. All of this indicates that farmers, whenever possible, used their irrigated land rather than their rain-fed land for opium poppy cultivation.

The area under opium poppy cultivation in an opium producing village was found to have been, on average, 12 hectares in 2000, out of a total area of cultivation averaging 150 hectares per village. However, this figure conceals significant variations among villages and thus concentrations of production. The smallest poppy producing villages cultivated poppy on as little as 0.02 hectares; by contrast, 91 villages, i.e.1.4% of all poppy cultivating villages, had areas under cultivation of more than 100 hectares in 2000. One village reported poppy cultivation of more than 600 hectares. All of the 10 largest opium poppy producing villages in 2000 were located in Helmand province (southern Afghanistan). Out of the 91 villages with more than 100 hectares of opium poppy cultivation, 68 villages were in Helmand province and 15 in Nangarhar (eastern Afghanistan). These were, over the last decade, the two main opium producing provinces in every year except 2000.

Similarly, in terms of relative importance of poppy cultivation at the village level, UNDCP's opium poppy survey data for the year 2000 show that there was substantial variation around the average ratio of 8% of land being used for poppy cultivation. In 15% of all opium poppy producing villages more than half and in 10% of the villages more than 60% of the land was dedicated to opium poppy cultivation. In five villages basically all land was used for poppy cultivation. Four of these villages were located in Nangarhar (eastern Afghanistan) and one in Kandahar (southern Afghanistan). Overall, in half of all poppy growing villages the land dedicated to poppy cultivation was less than 13%.

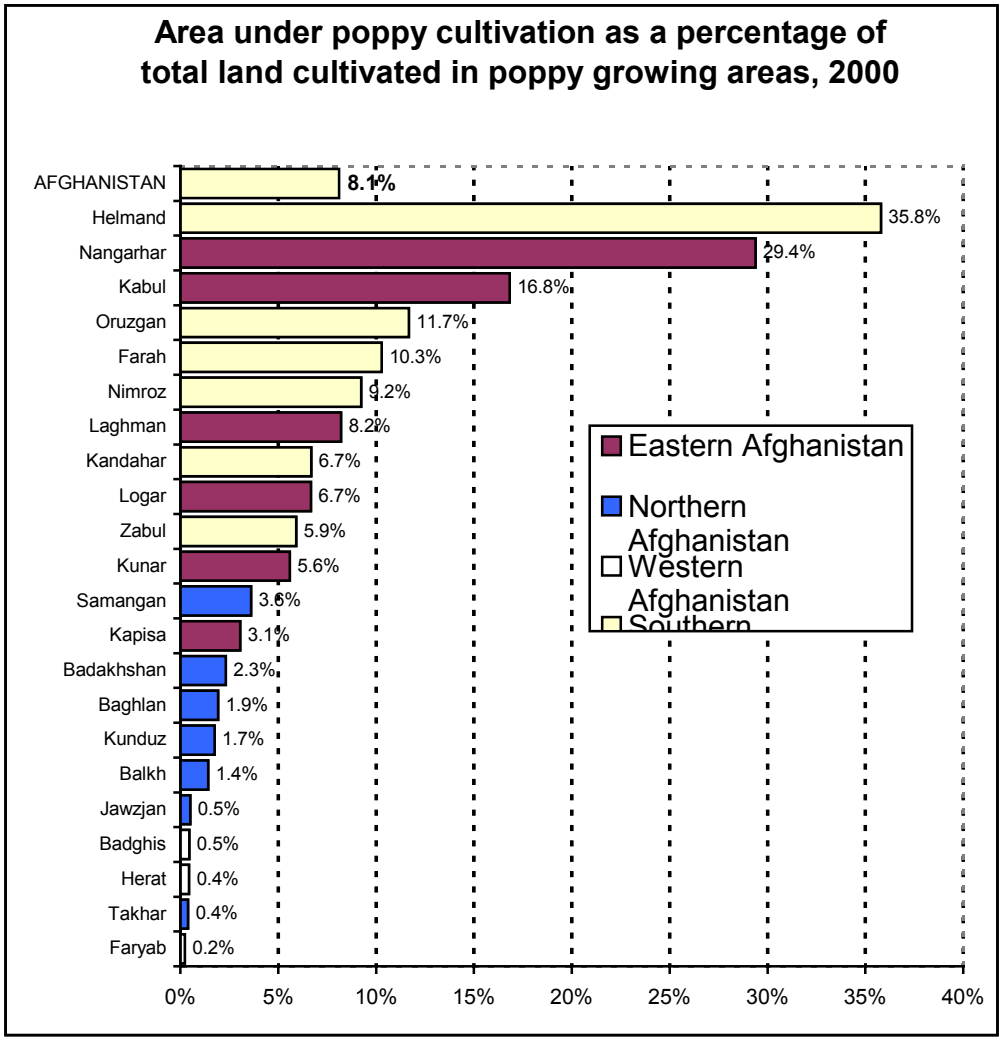


Figure 17
Source: UNDCP/ICMP, *Afghanistan Opium Poppy Survey 2000*.

All of these data suggest that the impact of opium production – as well as the impact of a poppy ban – would be quite different from village to village, even within the opium producing regions of Afghanistan.

Once the opium producing villages are re-grouped according to provinces, it can be seen that Helmand and Nangarhar, the two main poppy growing provinces, also had the highest proportions of available land dedicated to opium poppy cultivation, 36% and 29% in 2000 respectively. This was significantly above the overall average in poppy growing villages (8%).

By contrast the proportions of land used for poppy cultivation in western and northern Afghanistan are rather small. In Badakshan, Afghanistan's sixth largest opium producing province in 2000 and third largest opium producing province in 2002, only 2% of the overall arable land was dedicated to opium poppy in 2000. As the area under poppy cultivation in Badakshan rose strongly in 2001 (+158%) and in 2002 (+30%)[28] the proportions of cultivated land used for poppy cultivation increased to 6% in 2001 and 8% in 2002. But even these proportions are rather modest compared to those reported from Helmand or Nangarhar.

1.5. The regional dimensions of the opium economy

Afghanistan's opium economy also has important ethnic dimensions. This is the case with opium production as well as trafficking and the links to neighbouring countries.

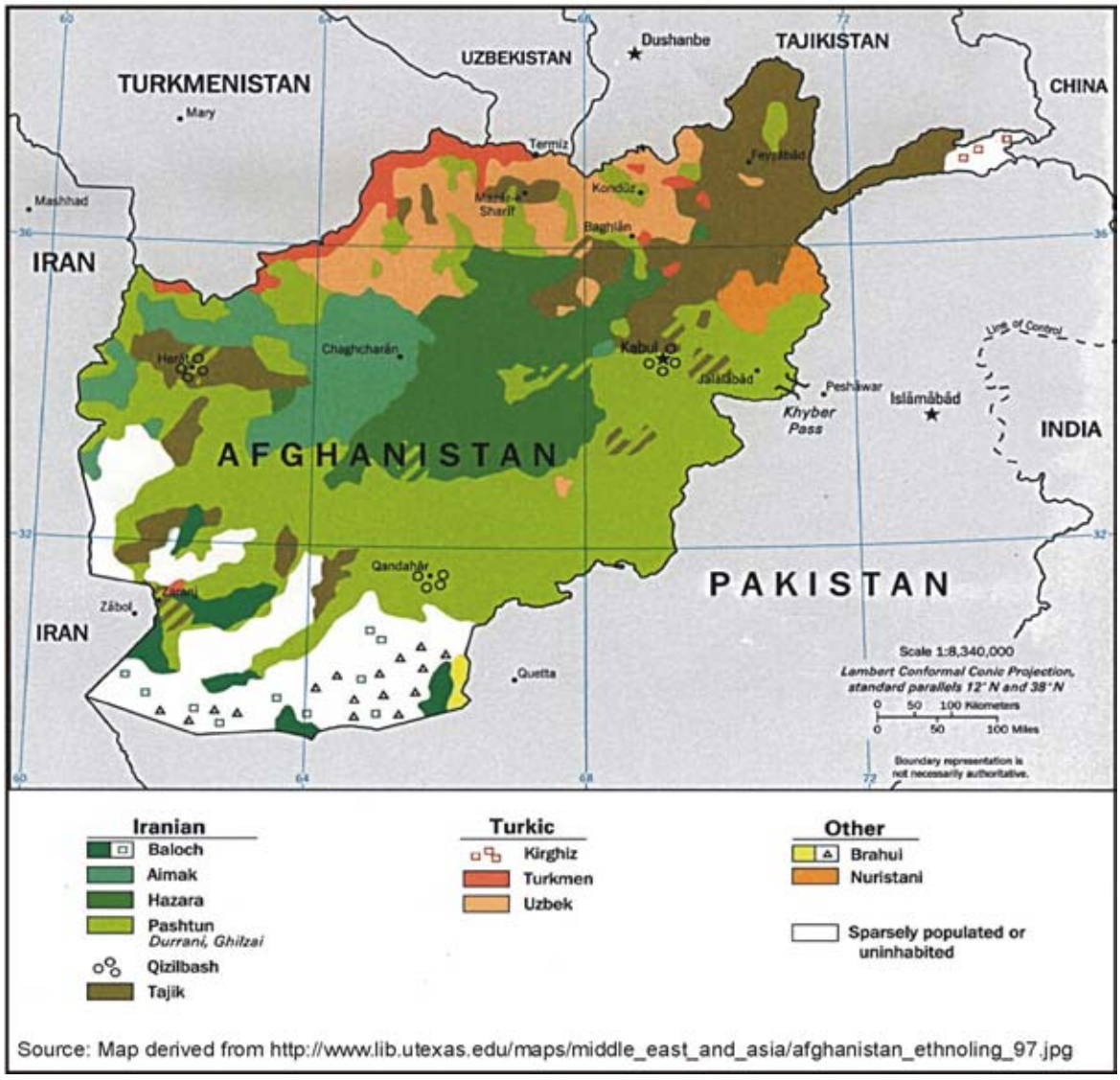
Estimates of Afghanistan's population range from less than 21 million to more than 26 million inhabitants.[d] The two most widespread languages spoken across the country are Dari (Persian, close to 50%) and Pashtu (40-50%). The Pashtuns are the dominant ethnic community, accounting for 40%-50% of the population. They are concentrated in the east and the south. Dari-speaking Tajiks from the eastern and northern valleys constitute a further 20%-25%. Some 15% of the population are Hazaras, living in the centre of Afghanistan. Some 10% of the population are Turkic, mostly Uzbeks (5%) and Turkmens who live on the northern plains. There are some 20 other distinct ethnic groups-of which the Baluch in the desert south and the Nuristanis in the mountainous east are the largest ones. Other groups include the Aimaks and the Kyrgyz. In total, some 30 languages are spoken.[29] The geographical distribution of these ethnic groups is shown in map 12.

In UNDCP's first Afghanistan opium poppy survey, conducted in 1994, data on the ethnic composition of villages producing opium were collected. The survey found that 84% of the poppy cultivating villages were Pashtun, reflecting the importance of the mainly Pashtun populated provinces of Helmand and Nangarhar for opium production. Nine percent of the opium producing villages were mainly inhabited by Tajiks, reflecting opium production in Badakshan and 2% were Uzbek villages. Other ethnic groups living in Afghanistan hardly played a role in opium production. Hazara and Baluchi villages accounted for just 0.1% each of all poppy producing villages. Even if ethnically mixed villages with a population of Hazaras and Baluchis are included, the share of Hazara villages only amounted to 1.3% and the share of Baluchi villages was only 0.5% of all the villages producing opium.

In terms of output, 88% of all opium was produced in Pashtun villages. Most of the rest of the production (10%) took place in ethnically mixed villages, the majority of which had both a Pashtun and a Tajik population. (see Table 17). It is also interesting to note that the importance of ethnically mixed villages for production was twice as large as the proportion of such villages among all poppy growing villages.

[d] UNDP, in its electronic publication UNDP, *Afghanistan Recovery, Some Basic Facts*, put the population of Afghanistan at 18 million people. The United Nations Population Division estimates Afghanistan's population at 21.2 million in 1999 and 21. 8 million in 2000. A survey conducted by the Taliban in 1999/2000 arrived at a population figure of 23 million. The Economist Intelligence Unit, based on another UNDP report, put the figure 'in excess of ' 25 million people. Similarly, the Fischer Weltalmanach 2002, based on World Bank data, put the figure at 25.9 million for 1999. The World Bank, in its *World Development Indicators 2002* estimated the figure at 26.6 million in 2000.

Map 12. Ethnolinguistic Groups in Afghanistan



Source: Map derived from http://www.lib.utexas.edu/maps/middle_east_and_asia/afghanistan_ethnoling_97.jpg

Distribution of poppy producing villages by main ethnic group in 1994 (N = 2008 villages)

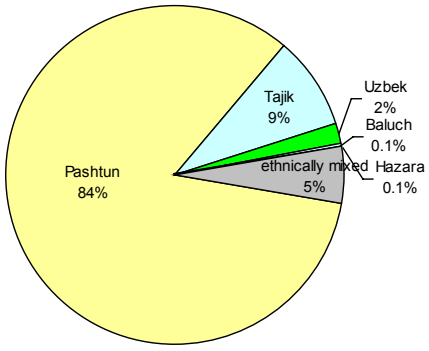


Figure 18
Source: UNDCP, Opium Poppy Survey 1994 data.

Distribution of opium production by main ethnic group of villages in 1994 (N = 3,415 tons of opium)

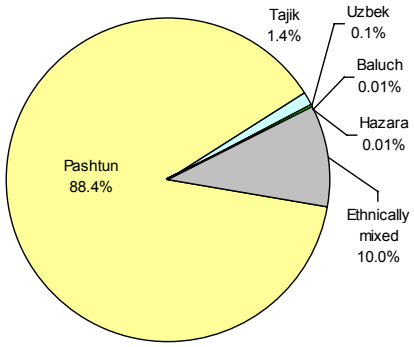


Figure 19
Source: UNDCP, Opium Poppy Survey 1994 data.

Table 17: Production of opium poppy according to ethnic distribution in 1994, sorted according to production							
Ethnic group / combination of ethnic groups	Number of villages	Population in villages	Cultivated area in ha	Opium poppy in ha	% poppy	Production- in metric tons	in % of total production
PASHTUN	1,679	1,863,265	273,043	62,595	23%	3,019.61	88.4%
PASHTUN, TAJIK	50	116,937	17,345	4,192	24%	217.24	6.4%
PASHTUN, HAZARA	8	8,067	4,390	1,214	28%	74.59	2.2%
TAJIK	180	174,166	13,555	1,822	13%	47.37	1.4%
PASHTUN, UZBEK, TAJIK	3	4,060	1,220	380	31%	21.19	0.6%
PASHTUN, UZBEK	1	2,000	480	178	37%	11.21	0.3%
UZBEK	40	19,467	3,358	277	8%	4.83	0.1%
FARS, PASHTUN, BALUCH	2	1,295	6,180	117	2%	4.10	0.1%
TAJIK, PASHTUN	2	10,320	300	100	33%	3.50	0.1%
PASHTUN, SAYEED, TAJIK	1	560	300	60	20%	1.68	0.05%
PASHTUN, BALUCH	2	763	320	32	10%	1.63	0.05%
HAZARA, TAJIK	13	4,450	1,507	192	13%	1.42	0.04%
PASHTUN, TAJIK, HAZARA	3	2,260	296	27	9%	1.38	0.04%
UZBEK, TAJIK	1	1,350	360	36	10%	0.69	0.02%
SAIDAN	4	1,570	486	79	16%	0.66	0.02%
FARS, PASHTUN	1	476	250	18	7%	0.63	0.02%
PASHTUN, HAZARA, UZBEK	1	490	1,140	17	1%	0.60	0.02%
FARS, BALUCH	2	1,015	1,200	15	1%	0.54	0.02%
BALUCH	2	554	284	18	6%	0.51	0.01%
TAJIK, UZBEK	1	400	240	24	10%	0.42	0.01%
HAZARA	2	510	276	8	3%	0.26	0.01%
HAZARA, UZBEK	1	300	120	20	17%	0.21	0.01%
SADAAT	1	480	130	4	3%	0.20	0.01%
PASHTUN, SHEYAH	2	424	574	9	2%	0.22	0.006%
GOJURI	2	1,120	76	18	24%	0.13	0.004%
PASHTUN, TAJIK, SAYEED	1	350	20	4	20%	0.11	0.003%
BALUCH, FARS	2	240	404	2	0%	0.08	0.002%
ISHAN, TAJIK	1	480	80	8	10%	0.06	0.002%
Grand Total	2,008	2,217,369	327,936	71,466	22%	3,415	100.0%
Source: UNDCP, *1994 Afghanistan Opium Survey database*.							

In Helmand province (southern Afghanistan), 85% of all opium production took place in Pashtun villages, in Nangarhar (eastern Afghanistan) the respective proportion was 92% and in Kandahar (southern Afghanistan) the proportion was 95%. Pashtun villages also dominated opium production in the provinces of Kunar (76%), Nimroz (81%), Uruzgan (96%) and Zabul (100%). Only in Badakshan, not a single Pashtun village producing opium was found in the 1994 survey. 62% of all production of Badakshan took place in Tajik villages and 22% in Uzbek villages.

These results are not particularly surprising as they reflected, more or less, the overall ethnic distribution patterns in Afghanistan. However, the 1994 survey also found some unexpected results:

- Though Badakshan is the traditional centre of Tajiks living in Afghanistan, and 82% of all Tajik poppy producing villages were located in Badakshan, only 28% of all opium produced by Tajik villages

actually came from Badakshan. The bulk (68%) was produced by Tajik villages located in Nangarhar (eastern Afghanistan). In addition, the survey also found Tajik villages producing opium in Kunar and in Helmand province.[e]

- Similarly, Uzbek villages producing opium were not only found in northern Afghanistan, the traditional areas of Uzbek settlement, but also in Helmand (southern Afghanistan) and in Kandahar.

- Hazara villages (including ethnically mixed villages with a Hazara population) producing opium were found in Badakshan and to a lesser extent in Helmand and Uruzgan.

After 1994 opium poppy cultivation gradually expanded from the core areas of Helmand/Kandahar, Nangarhar and Badakshan to neighbouring districts and provinces. A number of pockets of production also emerged across northern Afghanistan which began to expand quickly. The number of poppy growing villages increased from 2008 to 6645 villages over the 1994-2000 period. In 1994, Pashtun villages in traditional 'Pashtun provinces' (Helmand, Kunar, Nangarhar, Nimroz, Kandahar, Uruzgan and Zabul) accounted for 93% of all the opium producing villages in these areas.

Taking the village data of the 1994 opium poppy survey and the village data of UNDCP's 2000 Opium Poppy Survey and assuming

(i) that the proportion of Pashtun opium producing villages in the mainly Pashtun populated provinces remained largely unchanged and that

(ii) the districts in neighbouring Pashtun provinces (Laghman, Logar, Kapisa, Kabul, and Farah) which started cultivation in subsequent years had, on average, a similar proportion of Pashtun villages (93%), the overall number of opium producing Pashtun villages is likely to have tripled over the 1994-2000 period.

The number of 'ethnically mixed and non-Pashtun villages' - using the same approach - are likely to have quintupled over the same period. This reflected growth in poppy cultivation across all of northern Afghanistan. Provinces of northern Afghanistan are mainly populated by ethnic Tajik, Uzbek and mixed populations and have only a small Pashtun population (see Map 12). As there is a concentration of opium production in Badakshan, which has a high proportion of Tajik villages, it can be assumed that Tajik villages accounted for most of the non-Pashtun opium producing villages in 2000.[f] Based on the growth rates derived above, the proportion of non-Pashtun and ethnically mixed villages rose from 16% in 1994 to about 25% in 2000 while the proportion of Pashtun villages is likely to have fallen from 84% to about 75% over the same period.

A significant change occurred in 2001 as a consequence of the opium poppy ban. The ban affected Pashtun villages disproportionately. A tentative estimate, based on the assumptions made above[g] suggests that about 95% of Pashtun villages were forced to give up opium production in 2001. As a result, opium production was – for the first time in decades – concentrated in non-Pashtun villages in 2001, accounting for almost three quarters of all opium producing villages, mainly Tajik villages (more than 40% of all poppy growing villages)[h] and, to a lesser extent, Uzbek villages (some 20%)[i]. Pashtun villages made up about a quarter of all poppy producing villages in 2001. Most of the rest was accounted for by ethnically mixed villages.

The situation changed again dramatically with the large-scale resumption of opium production in 2002. Pashtun villages accounted, once again, for the bulk of Afghanistan's opium production. Since the 2002 survey

[e] If one includes ethnically mixed villages with a Tajik population, Tajik opium production could be also identified in Uruzgan (southern Afghanistan) and including such villages data suggest that most 'Tajik opium' production might actually have taken place in Helmand province in southern Afghanistan, followed by Nangarhar province (eastern Afghanistan). Badakshan (northern Afghanistan) ranked only third.

[f] A tentative estimate suggests that the proportion of Tajik villages in all opium producing villages increased from 9% in 1994 to 12% in 2000, and the proportion of Uzbek villages from 2% in 1994 to around 5 percent in 2000.

[g] Assumptions: 93% of all poppy producing villages in traditional 'Pashtun provinces' being actually Pashtun villages, with no or only negligible amounts being produced by Pashtun villages in northern Afghanistan.

[h] This is based on 2001 cultivation data and the assumption that – as in 1994 – 2% of all villages in the Pashtun provinces were Tajik, 70% of all villages in Badakshan were Tajik, and that in provinces not covered by the 1994 survey, about 40% of opium producing villages in other parts of northern Afghanistan were Tajik. The figure thus calculated was 400 villages or 44% of all poppy producing villages in 2001.

[i] This is based on 2001 cultivation data the assumption that – as in 1994 – 0.1% of all villages in the Pashtun provinces were Uzbek, 19% of all villages in Badakshan were Uzbek , and that in provinces not covered by the 1994 survey, about 40% of opium producing villages in other parts of northern Afghanistan were Uzbek. The figure thus calculated was 164 villages or 18% of all poppy producing villages in 2001.

did not collect village-by-village census data, the method used for estimating the ethnic composition of poppy producing villages could not be used. The alternative method was to determine the area of cultivation of each ethnic group in the 1994 opium survey; determine the proportion of each ethnic group cultivating opium per province; and extrapolate these proportions on to the more recent cultivation data. This method would give a proportion of about 80% to Pashtun villages in 2000 (see Figure 18) rather than the 75% shown in Figure 16. In 2002 the proportion of Pashtun villages cultivating opium increased from the low in 2001 to 76%, but is still lower than in 2000. The largest single group among the ethnically mixed and non-Pashtun villages were Tajik villages, estimated to account for about 10% of the total area under poppy cultivation.

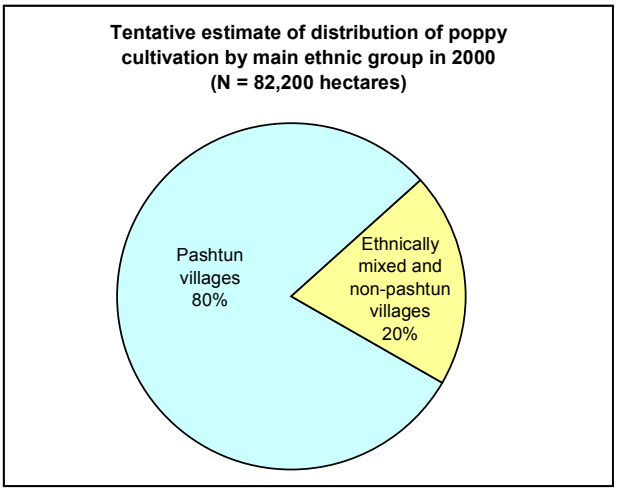


Figure 20
Sources: UNDCP/ICMP, *Afghanistan Opium Survey 2000* and UNDCP, Afghanistan Opium Survey 1994 database.

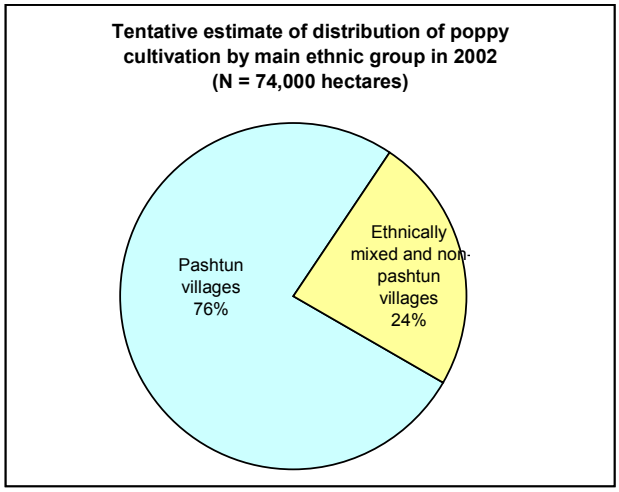


Figure 21
Sources: UNDCP/ICMP, *Afghanistan Opium Survey 2002* and UNDCP, Afghanistan Opium Survey 1994 database.

While the decline of opium poppy cultivation in 2001 and the resumption in 2002 were largely due to political decisions - Pashtun villages were disproportionately affected simply because most of them were in areas under Taliban control - much of the expansion of opium poppy over the 1994-2000 period was more directly associated with ethnic links.

UNDCP research in Afghanistan's Helmand province, the largest opium producing province in the late 1990s, showed that in 1999, the year of the largest ever harvest, 70% of the farmers used itinerant labour.[30] The local labor market was not sufficient to meet this demand. Itinerant labourers thus often came from adjacent districts, and from other provinces. In the latter cases, ethnic links played a key role. For instance in Helmand, Pashtun itinerant laborers from distant provinces worked primarily on fields belonging to Pashtun farmers. Similar patterns of cross-province co-operation along ethnic lines probably existed among other ethnic groups.

The spread of poppy cultivation thus largely followed the pattern of itinerant labour, which followed ethnic patterns. Apart from the gradual expansion of poppy cultivation to adjacent districts, poppy emerged in pockets of distant provinces, usually the home villages of itinerant labourers.

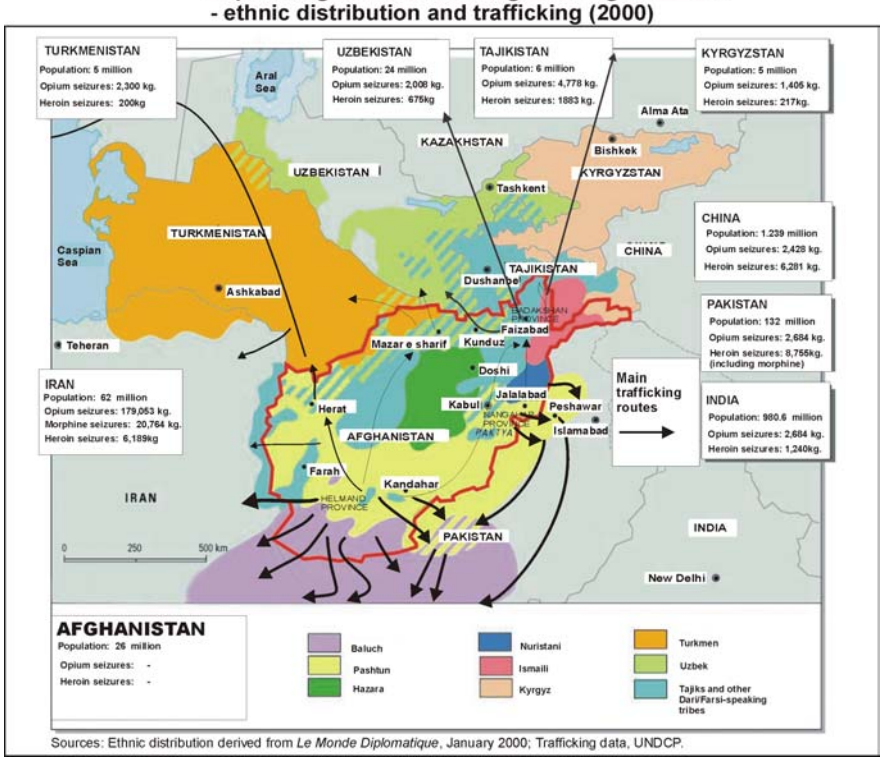
Having acquired know-how of various aspects of opium poppy cultivation and having established the necessary contacts to sell the opium which they usually received as payment, the itinerant labourers, once back in their home village, started to experiment with opium production themselves. In the initial year, cultivation of poppy tended to be undertaken on an experimental basis. Thus initial opium poppy cultivation was restricted to a small number of households in any one location until they were certain about the crop's profitability. In subsequent years, an even larger proportion of land was dedicated to the cultivation of opium poppy. The plots of poppy also provoked the interest of neighbours, thus contributing to the rapid spread of poppy cultivation at the local level wherever it had been introduced.[31]

Ethnic links have not only played an important role in the expansion of poppy cultivation, they have also been crucial in setting up networks for cross-border trafficking, thus providing the infrastructure for the opiate industry to flourish. Such networks have to rely on trust, and being of the same ethnic group provides this. Thus, irrespective of a general trend towards globalisation, most cross-border smuggling operations – worldwide - continue to be organized along ethnic lines. Afghanistan is no exception in this regard.

For years, as shown above, the bulk of Afghanistan's opium was produced in Pashtun villages.The bazaars where the farmers sold their opium, were usually in the midst of Pashtun settlements. Trafficking centres were located around Kandahar for southern Afghanistan and around Jalalabad for eastern Afghanistan. A large Pashtun population is also found across most of Afghanistan's eastern border with Pakistan, facilitating cross-border smuggling taking advantage of difficulties faced by Pakistan to effectively control their tribal border regions with Afghanistan. The main immediate destinations for opiates trafficked from Nangarhar province are Peshawar in Pakistan. For trafficking activities from Kandahar the main immediate destination is usually Quetta, the capital of Pakistan's province of Baluchistan. Cross border trafficking between Afghanistan, Pakistan and Iran was facilitated for years by the existence of Baluchi tribes on all sides of the border. Further to the west, Kurdish groups, located on both sides of the border between Iran and Turkey facilitated cross-border trafficking to Turkey. The existence of important Turkish/Kurdish minorities in several West European countries, (e.g. Germany) increased the possibilities to conceal trafficking in legal business operations.

In the 1990s, trafficking routes became increasingly diversified and a larger number of ethnic groups participated. Improved border control between Pakistan and Iran resulted in some heroin being smuggled from Pakistan to Europe by air or in container, often organized by Pakistani groups living in Europe (e.g. UK). In addition, opium, morphine and heroin was increasingly smuggled directly across the border from Afghanistan to Iran. With regard to trafficking between Turkey and Europe a number of other ethnic groups, including various criminal Albanian groups from Albania, Kosovo and Macedonia, gained important market share in recent years, partly at the expense of Turkish groups which previously dominated this market.

Map 13. Afghanistan and neighbouring countries - ethnic distribution and trafficking (2000)



Sources: Ethnic distribution derived from *Le Monde Diplomatique*, January 2000; Trafficking data, UNDCP.

In addition, as of the mid-1990s Central Asia emerged as another important outlet of opiates produced in Afghanistan. Initially Turkmenistan emerged as a transit zone (around 1997), for both shipments to Iran and shipments to the Caucasus region for destinations in Turkey and western Europe. Subsequently, the main transit route via Central Asia shifted to the north, to Tajikistan and, to a lesser extent, Uzbekistan, reflecting *inter alia* the fact that northern Afghanistan, in general, gained in importance as an opium production site in the second half of the 1990s. Mostly Tajik and, to a lesser extent, Uzbek villages have been involved in this increase of opium production in northern Afghanistan. In addition, as shown above, Tajik villages producing sizeable quantities of opium are also found in eastern and southern Afghanistan, thus enabling a flow of opiates from these areas to northern Afghanistan to supplement local production. Moreover, northern Afghanistan also became an important location for stocks of opiates in recent years, as indicated by a number of intelligence reports. Price patterns point also in this direction. In 2001 opium prices were temporarily lower in the border regions between Badakshan and Tajikistan than the average prices which farmers in other parts of Badakshan could obtain for selling their fresh

opium. This can be only explained by the existence of important stocks in the border region. In 2001, as discussed before, Tajik villages emerged as the main producers of opiates in Afghanistan. Again, the existence of ethnic Tajiks on both sides of the border facilitated cross-border smuggling operations. Once in Tajikistan, opiates are usually trafficked on to other central Asian countries as well as to several towns of the Russian Federation and other C.I.S. countries, often by rail and often organized by criminal Tajik groups in Tajikistan or other C.I.S.countries.[j]

In short, the ethnic diversity of Afghanistan has been a strong enabling factor for the expansion of muggling of all kinds, including trafficking in opiates. The situation is exacerbated by the fact that many of the main ethnic tribes involved in opium production and the local opiate trade are also found in basically all of Afghanistan's neighbouring countries. This means that most of the trafficking of Afghanistan's opiate exports, are still intra-ethnic in nature, thus limiting the overall risks of international trafficking.

1.6. Opium markets and bazaars

Given their *de-facto* legal status over the last two decades, opium markets in Afghanistan operated like any other commodity market. Even during the Taliban ban which was on cultivation, trade in opium was not restricted. Opium was sold by farmers to local traders and/or to shop-keepers at the closest bazaar. These traders and shop-keepers, also granted credit, and thus fulfilled the role of financial institutions. Large-scale traders, supplying opium markets in neighbouring countries, or morphine/heroin manufacturing installations in the region, turned to the bazaars to buy the opium.

Afghanistan's opium markets appear to have been rather fragmented. The lack of an adequate transport infrastructure, due to the destruction of twenty years of war, and the high costs and risks within Afghanistan (in terms of shipments being stolen, ransomed or associated with high transit tolls) also meant that opium markets developed quite apart from one another. Opium markets in southern Afghanistan were oriented towards Iran and southern Pakistan (Baluchistan); those in eastern Afghanistan were oriented towards northern Pakistan (North-West Frontier Province), and those in northern Afghanistan were oriented towards Central Asia, notably Tajikistan. Even though the inner-Afghan opium trade increased in recent years after some of the obstacles for trade were removed, many of the original trade links and orientations of these markets remained intact, so that it is still not possible to speak of one unified Afghan opium market.

There were also specific characteristics which distinguished opium markets in the east and in the south. While the opium market in the east was rather concentrated, the opium market in the south was atomistic and thus highly competitive. This will be discussed in more detailed below.

The opium trade is rendered complex by the different qualities of opium that are traded. They are regionally different and are thus not fully comparable with one another.

First , there is the difference between wet and dry opium. Wet opium is, on average, some 20-30% cheaper than dry opium (based on 1998-2001 data), but the actual price differential in different locations can deviate substantially from this average. The problem is that 'dry' and 'wet' are not always defined in the same manner and/or that the actual differences between 'dry' and 'wet' differ from location to location. They depend, *inter alia* on whether opium is grown on irrigated or on rainfed land. Opium grown on irrigated land tends to have a higher water content than rainfed opium. This means that the weight loss between wet and dry opium is substantially larger for opium grown on irrigated land. Thus, in the year 2000, the price difference between dry and wet opium in the province of Badakshan, which has a high proportion of rainfed cultivation, was substantially less than in Nangarhar where virtually all of poppy is grown on irrigated land.

In addition, there are different qualities of opium. In Nangarhar, for instance, there is *'spin'*, *'barani'* and *'sur'* opium. *Spin* and *barani* opium are considered poor quality, affected by excess ground water (*spin*) or rainfall during its collection (*barani*). *'Sur'* opium, which has a dark red or brown colour, is regarded to be of high quality and fetches a price that is twice the price of *spin* or *barani* opium. In southern Afghanistan, other qualities are traded. There is *tor* (black), *sur* (red) and *jar* (yellow) opium. The best quality in southern Afghanistan is not *sur* but *tor* opium; the lowest quality is *jar*. Again, the highest quality fetches a price that is about twice the price of the lowest quality.[32]

[j] The discussion above is based on the reports, which UNDCP receives regularly from members states in response to UNDCP's Annual Reports Questionnaire, as well as from various law enforcement bodies, including Interpol and the World Customs Organization, and several national law enforcement institutions of countries in the region and in Europe.

Adulterants are often added to opium by both cultivators and traders. This may explain the rather low amounts of morphine extracted from opium seized by the authorities in the Islamic Republic of Iran: around 5% in the late 1990s and 6% in 2000, compared to an average morphine content of 9% at the global level and 10% reported by developed countries to INCB, using licitly produced opium.[33] Adulterants of wet opium in the south include black tea, diammonium phosphate and sugar boiled in water; in eastern Afghanistan locally produced black sugar, known as *gur*, raisins and rice flour are often added to increase the value to weight ratio of opium[34].

In contrast to other commodities, shifts in demand are less of a problem. Demand for opium has been growing steadily over the last two decades. This was initially fuelled by increasing demand for heroin in western Europe. Since the 1990s, demand for Afghan opiates has been fuelled by growing consumption in countries along the main drug transit routes to western Europe, i.e. initially Pakistan, followed by Iran and several East European countries located along the Balkan route, and as of the mid 1990s, by the rapid growth of heroin consumption in Central Asia and the Russian Federation. Short-term price changes, which could be linked to the demand for Afghan opiates, occurred when trafficking networks or laboratories in the region were dismantled, thus creating a temporary glut on the Afghan market(s), More important still were large-scale purchases by traders, resulting in temporary price hikes.

Most of the price changes in recent years appear to have been supply-determined. The opium market acted in this regard like any other commodity market. As opium production increased, prices fell, while prices rose when production declined. Thus, the 1999 bumper harvest led to strong declines in opium prices. The Taliban ban resulted in a massive reduction in production and thus in strong price increases in 2001. A temporary price hike was also reported in 2002 at the time of the eradication campaign. It is also interesting to note that prices – like for other commodities - acted as incentives for peasants. Thus the first record harvest in 1994 resulted in falling prices which, in turn, appear to have prompted peasants to grow less in 1995. Similarly the rather high prices in 1998 prompted many peasants to expand opium poppy cultivation to an all-time high in 1999.

Like in many other markets, perceptions and expectations of traders play a role as well, sometimes leading to exaggerated market reactions to rumours. Thus, some of the initial fears of a very poor opium harvest in 1998 due to excessive rain during harvest time, did not fully materialize in the end. Still, the market reacted as if these fears reflected reality.

Stocks also played a role, usually smoothing the market over a one-year cycle. The bumper harvest of 1999 and the still above average harvest of 2000 facilitated an increase in the amounts of stocks at hand and thus enabled a steady supply of opiates in 2001, despite the ban on opium poppy cultivation. The stocks, however, had an opposite effect in the context of the September 11 events. They led to a temporary glut on the market and thus to a massive short-term fall in prices.

Research undertaken by UNDCP in Afghanistan in the late 1990s showed that within the broad picture outlined above, opium markets within Afghanistan were still quite different from one another. The operations of the opium markets in eastern and southern Afghanistan, the two main production areas at the time, were investigated, and the results are summarized below.

Opium markets in southern Afghanistan were found to be largely decentralized, basically operating like any other commodity market in Afghanistan. In economic terms, competition in southern Afghanistan could be characterized as being atomistic. There were a number of bazaars in the region where opium could be sold and where opium was purchased by Afghan traders as well as by traders from Pakistan, Iran and, less frequently, by traders from the Central Asian Republics. Each of these bazaars had a number of shops specialized in opium trading. In addition, during harvest time, other shops, which usually traded other goods, diversified to include small-scale opium trading. The largest bazaars at the time were found to be in Sangin, with around 200 shops selling only opium, followed by Musa Qala. Smaller district bazaars, such as in Kajaki, Nowzad, or Maiwand, where traders from Iran and Pakistan regularly came to purchase opium, also played a role. Opium trade in southern Afghanistan was reported to be competitive at all levels, but not aggressive. As a consequence, opium prices were found to vary little from district to district. In 1998 the typical farmgate price across the southern region for the highest quality opium varied by just 3%. Another consequence of competition is that profit margins are small. The majority of traders interviewed in the south claimed that they earned only $1.2 to $3.2 per kg on the buying and selling of wet opium post-harvest. This was equivalent to a mark-up ranging from 3%-7% based on opium prices ranging from $32 at harvest time in May to $63 in August 1998[35], and thus an 'average' price of around $48. Prices in the south also tended to follow the agricultural cycle, with relatively high prices in the months prior to harvest (January/February) when stocks begin to deplete, followed by low prices at harvest time (April/May) and price increases again in subsequent months.

The overall price level, of course, is affected by additional factors. For example, excess rain in 1998 at the harvest time caused crop damage, and meant that overall yields were some 20% less than expected. This boosted prices in 1998 which in turn prompted farmers to cultivate substantially more opium poppy in 1999.

In eastern Afghanistan, in contrast, the opium market was far more concentrated in one location, the bazaar of Ghani Khel in Shinwar district of Nangarhar province. Though some other district bazaars existed as well, Ghani Khel was generally regarded as the centre of opium trading in eastern Afghanistan. Ghani Khel was not only a market for opium but also for acetic anhydride, the main precursor chemical for heroin manufacture, as well as for heroin (and hashish). In the late 1990s it consisted of about forty shopkeepers specialized in buying and selling opium. By the first quarter of 2002, the number of shopkeepers in Ghani Khel was reported to have increased to about fifty. (The market, however, was closed by the authorities in April 2002.)

The overall market structure of the opium market in eastern Afghanistan was thus less atomistic in nature than southern Afghanistan, though the rising number of participants in the market suggests that it has started to loose its once rather oligopolistic structure. Indeed, opium prices in the past were significantly higher in the bazaars of Ghani Khel (more than 50%, on average, over the 1998-2000 period) than in southern Afghanistan. Differences in quality may explain some, but not all of the differences in prices. Moreover, price differences between the main markets of eastern and southern Afghanistan became less significant in recent years, with the spread falling to 16% in 2001 and just 10% over the first two quarters of 2002.

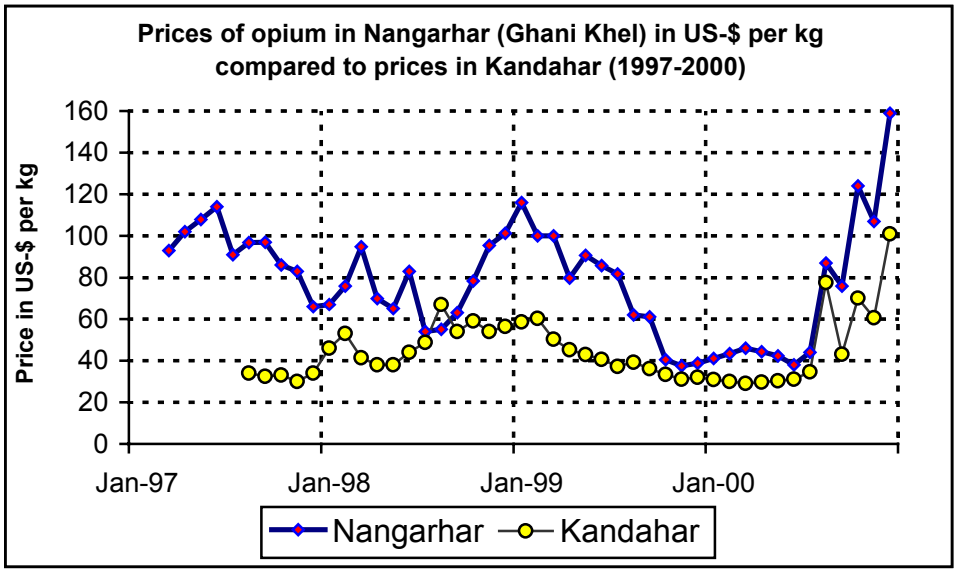


Figure 22
Sources: UNDCP, *Global Illicit Drug Trends 2002* and UNDCP, Field Office.

Ghani Khel gained its reputation, *inter alia*, from the fact that even large quantities of opium (often up to 10 tons) could be purchased there during one single visit, which made this bazaar attractive for many large traders who supply morphine-base and heroin laboratories in the border region of Pakistan. Nonetheless, such purchases had a temporary impact on prices. Thus prices in Ghani Khel used to fluctuate far more than in southern Afghanistan. This, in general, offered business opportunities for small-scale traders, buying opium directly from farmers in neighbouring districts or provinces and then selling it in Ghani Khel. Interviews with small-scale traders in 1998 revealed that such temporary operations usually resulted in mark-ups of between $3 and $9 per kg,[36] i.e. between 9% and 26% based on prevailing farm-gate prices at the time. Subsequently, however, many of the smaller bazaars in the region started to act as tributaries, channelling local purchases of opium directly to Ghani Khel.

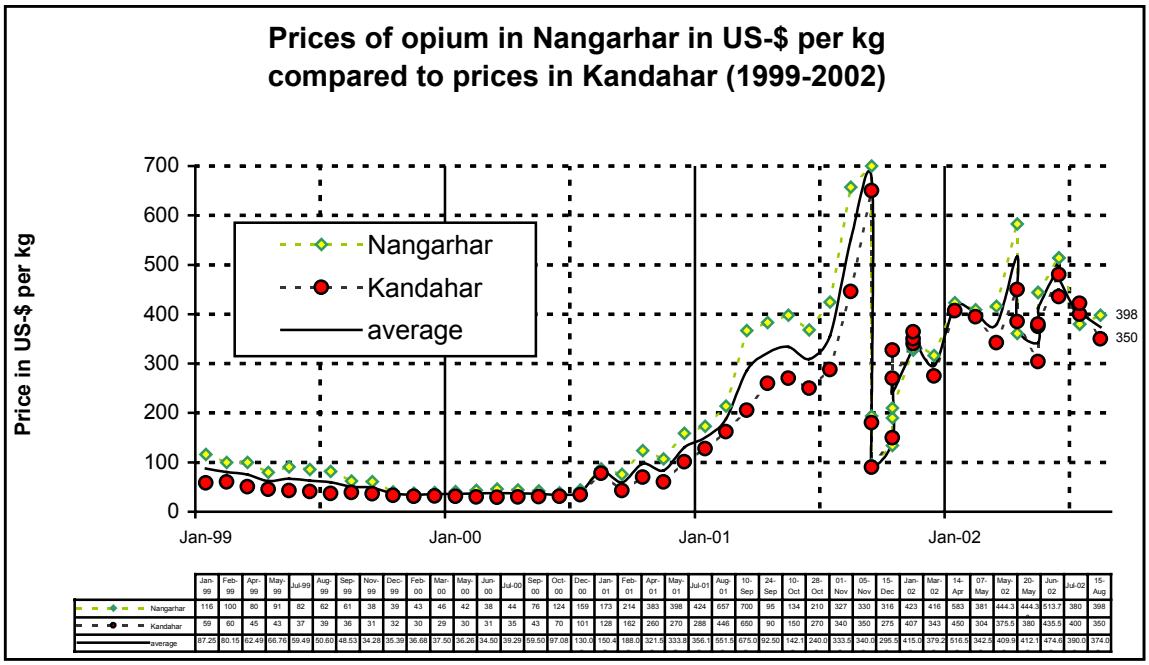


Figure 23
Source: UNDCP, Field Office.

Speculative/strategic purchases by large traders tended to play a more important role in eastern than in southern Afghanistan. Thus, the information on the lower than expected yields in 1998 prompted large traders buying in Ghani-Khel to invest in speculative opium stocks, resulting in a doubling of prices between July and December 1998 while in southern Afghanistan prices rose by just 15% over the same period. Thus, as of December 1998, opium prices in Ghani Khel were about 80% higher than in southern Afghanistan, creating very strong incentives for farmers to expand their opium poppy cultivation in 1999 - which they also did. As information on Afghanistan's 1999 bumper harvest became known, prices dropped in Nangarhar between January 1999 and December 1999 by two thirds and remained at these lower levels of around $40/kg until the announcement of the Taliban ban in July 2000.

Following the announcement of the Taliban ban, prices increased almost tenfold to some $380/kg until April 2001 and continued rising to close to $700 prior to September 11. In the following two weeks, prices plummeted to $90/kg as stocks were quickly disposed of in anticipation of military operations. Over the next few months prices recovered, a consequence of lower levels of stocks as well as a reaction to the Interim Administration's decision to announce a new ban on opium poppy cultivation in January 2002, which pushed up prices from levels around $300/kg in late December to $400/kg over the January to March period. With the eradication campaign in place in April 2002 prices temporarily rose to close to $600/kg before falling, after harvest (and a period of strong fluctuations), back to levels of around $400/kg by July, about the same level as a year earlier.

No detailed and systematic investigations of the opium markets of northern Afghanistan have been conducted so far. However, a number of price data collected by UNDCP informants in Faizabad (Badakshan) in the mid and late 1990s showed that prices there were systematically higher than in eastern or southern

Afghanistan. Farm-gates prices of opium, systematically collected as a part of UNDCP opium surveys from 1994 to 2001, confirm that prices in norther Afghanistan tend to be higher (see Tables 18 and 19). This, however, does not seem to be the result of less competitive markets in northern Afghanistan, but rather the result of higher opium prices paid to farmers. It may well be a consequence of Badakshan's reputation of producing high quality opium, better than the qualities found in southern and eastern Afghanistan. The basic orientation of the market in Faizabad to the north, supplying the thriving markets of Central Asia and the Russian Federation, may have also played a role in keeping opium prices relatively high in Badakshan throughout the 1990s and the first years of the 21st century.

This pattern changed, however, in 2002. Prices in Helmand and Nangarhar, the two main opium producing provinces, exceeded those of Badakshan. This was a reflection of stocks in northern Afghanistan remaining from previous years and a number of more or less speculative purchases in southern and eastern Afghanistan following a year of near negligible harvest in the latter two regions. In contrast to northern Afghanistan, many of the stocks in the Taliban controlled areas of southern and eastern Afghanistan were moved to neighbouring countries after September 11 in order to avoid destruction in air strikes. This created an opium supply shortage for clandestine laboratories and prompted them to pay premium prices when the new harvest came on to the market. Eradication efforts by the authorities in eastern and southern Afghanistan also contributed to price rises. Moreover, the abundant rain in Badakshan in 2002, resulted in a high water content of the opium, and thus in a lower opium quality, contributing to the lower prices.

Table 18: Unweighted average price of fresh opium reported by farmers (in US-$), 1998-2002

	1998**	1999	2000	2001	2002
Badakshan (northern Afghanistan)	89	84	43	275	207
Nangarhar (eastern Afghanistan)	34	33	27	192	333***
Helmand (southern Afghanistan)	25	25	22	n/a	385***
Afghanistan (unweighted average of all villages reporting)	**40**	**40**	**29**	**236**	**284**
Calculation based on following average black-market exchange rates	37,000 (70,000)	63,000	73,000	75,000	37,000
Number of villages reporting	1,275	3,038	3,341	636	98

* unweighted average price of all villages reporting
** Data for 1998 expressed in US-$ based on an exchange rate of 37,000 in southern and eastern Afghanistan and 70,000 in northern Afghanistan as reported to UNDCP; in subsequent years, the differences in exchange rates appear to have become smaller and data were translated at a uniform exchange rate as indicated above.
***prices reported in US-$

Source: UNDCP/ICMP, Opium Poppy Surveys database

Table 19: Unweighted average price* of dry opium reported by farmers (in US-$), 1988-2002

	1998**	1999	2000	2001	2002
Badakshan (northern Afghanistan)	100	97	50	347	257
Nangarhar (eastern Afghanistan)	62	68	42	336	397***
Helmand (southern Afghanistan)	36	30	25	260	423***
Afghanistan	**54**	**53**	**35**	**291**	**333**
Calculation based on following average black-market exchange rates	37,000 (70,000)	63,000	73,000	75,000	37,000
Number of villages reporting	4,063	4,948	5,981	8,367	159

* unweighted average price of all villages reporting
** Data for 1998 expressed in US-$ based on an exchange rate of 37,000 in southern and eastern Afghanistan and 70,000 in northern Afghanistan as reported to UNDCP; in subsequent years, the differences in exchange rates appear to have become smaller and data were translated at a uniform exchange rate as indicated above.
***prices reported in US-$

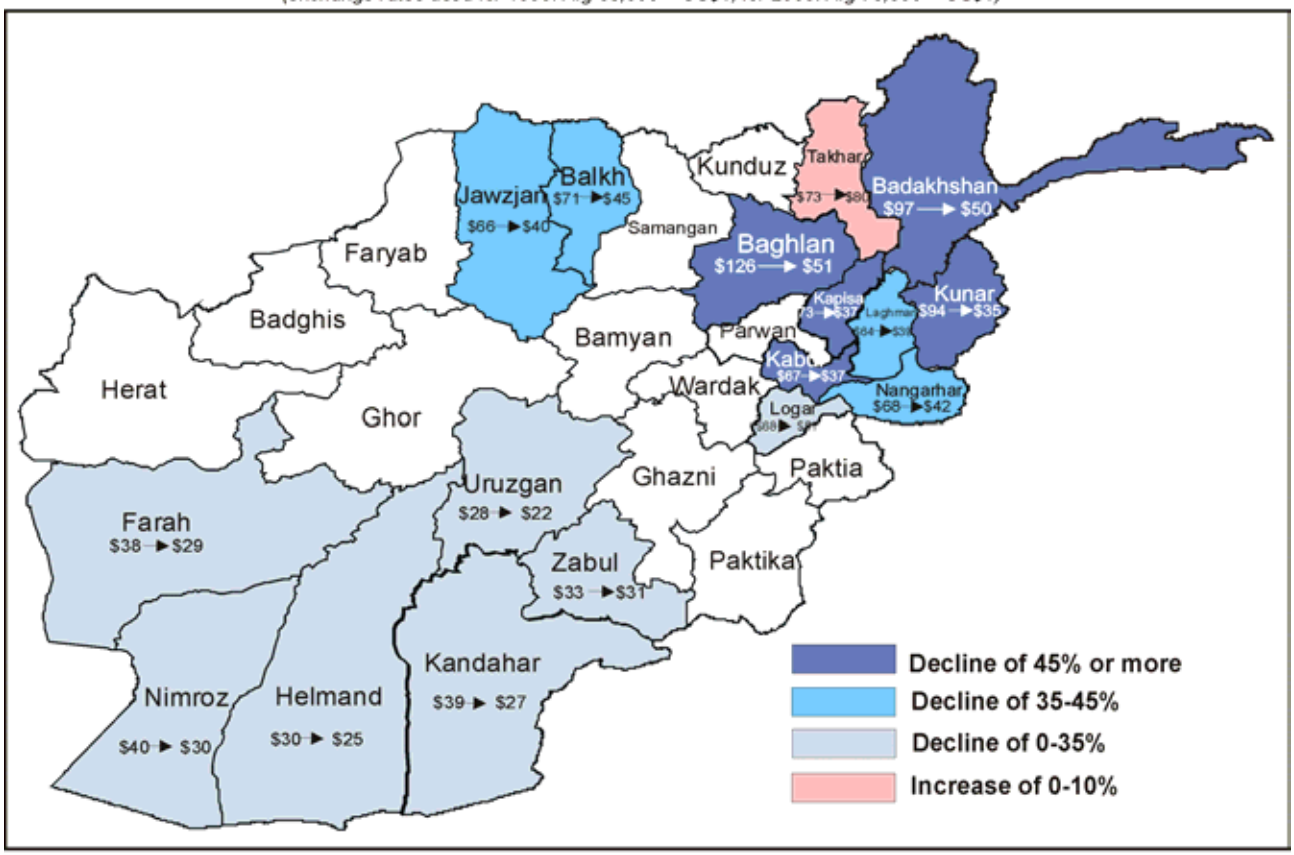
Source: UNDCP/ICMP, Opium Poppy Surveys database

Price differences between the provinces have, however, declined in recent years. In statistical terms, the standard deviation of prices across provinces divided by the average price, a simple measure for the spread of a variable, fell from 0.6 in 1998 to 0.25 in 2001.This suggests that Afghanistan's many local opium markets are on the way towards developing into one single integrated opium market.

There is a complementary explanation for the trends towards convergence of opium prices in recent years. The high opium prices of northern Afghanistan, apart from quality and demand arguments, also were related to the Afghan currencies used and the related exchange rates. In the calculations above, except for 1998, uniform exchange rates for Afghanistan as a whole have been applied. However, reports suggest that the black market exchange rates differed in the late 1990s from province to province, notably between northern Afghanistan and the rest of the country. The black market exchange rates were, in general, significantly less favorable for northern Afghanistan than for the Taliban controlled areas,[k] possibly a reflection of the much higher income from the 'exports' of opiates from Taliban controlled areas to neighbouring countries[l]. After 1998 the black market exchange rates of Taliban controlled areas deteriorated as the Taliban increasingly lost the confidence of the outside world while the black-market exchange rates of territories under Northern Alliance control, though fluctuating, did not deteriorate further.[m] So the overall differences between the value of Taliban and Northern Alliance Afghani *vis a vis* the outside world eventually disappeared, which may also have contributed to the convergence of opium prices within Afghanistan in recent years.

Map 14. Change in average dry opium prices in 2000 at harvest time in Afghanistan in US dollars compared to the same period in 1999

(exchange rates used for 1999: Afg 63,000 = US$1, for 2000: Afg 73,000 = US$1)



Sources: UNDCP/ICMP, *Afghanistan Opium Poppy Survey, 1999 and 2000* data.

[k] There is an official exchange rate of Afg3000 for 1 US-$. However, drug operators cannot rely on the official exchange rate, which is hardly used at all for business transactions. When the Taliban seized Kabul in 1996 they began organizing their own currency. The result was two sets of Afghani, the northern and the Kabul one which had different black-market exchange rates. The Kabul Afghani turned out to be the stronger currency (EIU *Country Profile Afghanistan* 2001, p. 64).

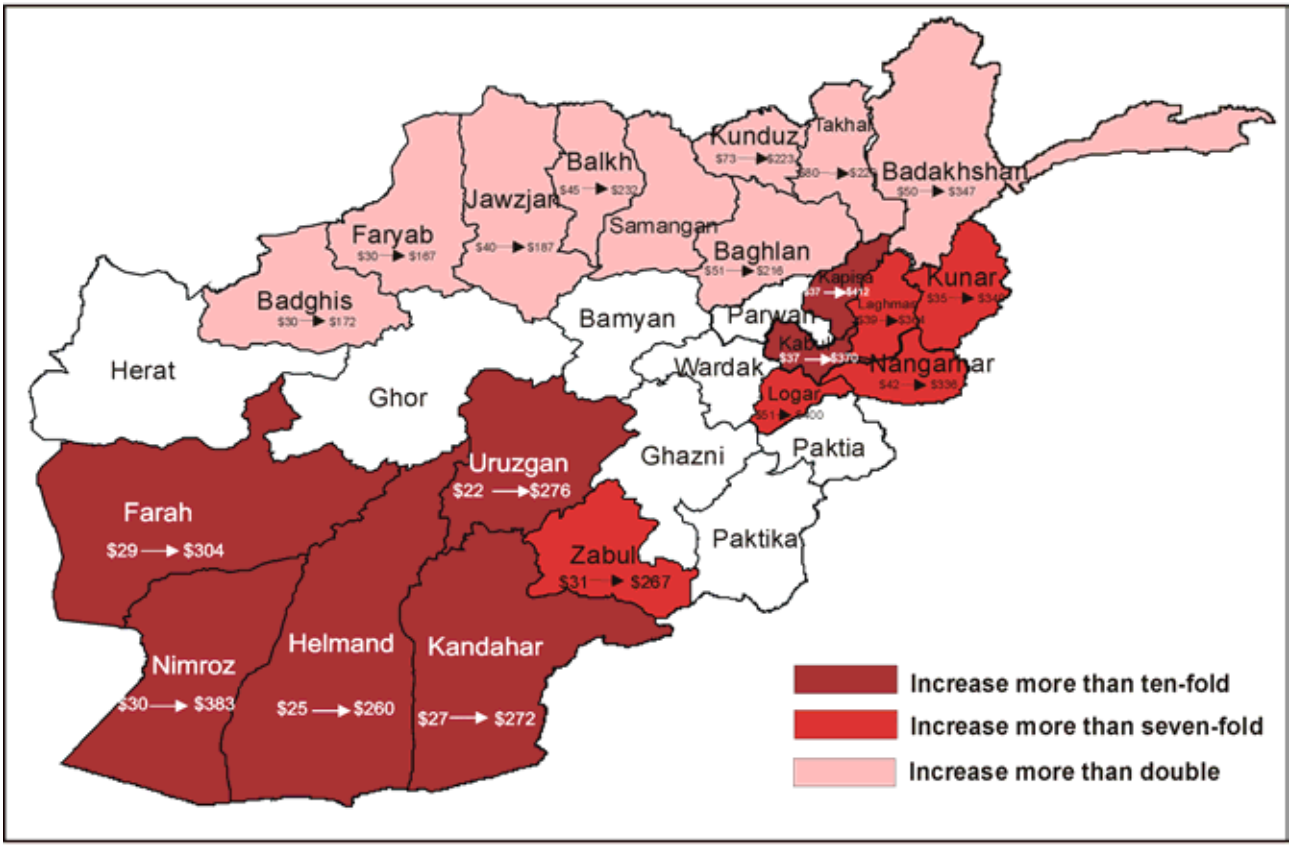
[l] UNDCP informants for opium prices also collected exchange rate data. They reported that in May 1998 the average black-market exchange rates were almost identical in Kandahar and Jalalabad (Afg33,443 and Afg35,000 for US$1, respectively), but twice as weak in Faizabad (Badakshan) (Afg70,000 for US$1). Similarly, in July 1998 the black-market exchange rates were Afg41,180 in Kandahar, 40,000 in Jalalabad but Afg79,000 in Faizabad.

[m] By December 2000, the northern Afghani traded at around Afg 72,000 while the Kabul Afghani fell to Afg79,500 in January 2001 following the implementation of the UN sanctions. (The Kabul Afghani had traded at around $73,000 in April 2000). It recovered slightly in subsequent months to about Afg75,000 prior to September 11 2001. (EIU, *Country Reports Afghanistan*, Feb. 2001-May 2002 and EIU *Afghanistan Country Profile* 2000 and 2001)

UNDCP survey data also show that while in the past a number of local price trends co-existed, reflecting the fragmentation of the opium markets, the 1999 bumper harvest led to an almost universal decline in prices in the year 2000 while the poppy ban led to a general increase of prices in 2001, including in those provinces and districts that were not affected by the ban. (See map 15) The strongest price increases took place in regions where the poppy ban was most effectively implemented (southern Afghanistan) while in the northern provinces the price increases were smallest.

Map 15. Change in average dry opium prices in 2001 at harvest time in Afghanistan compared to the same period in 2000

(exchange rates used for 2000: Afg 73,000: US$1, for 2001: Afg 65,000: US$1)

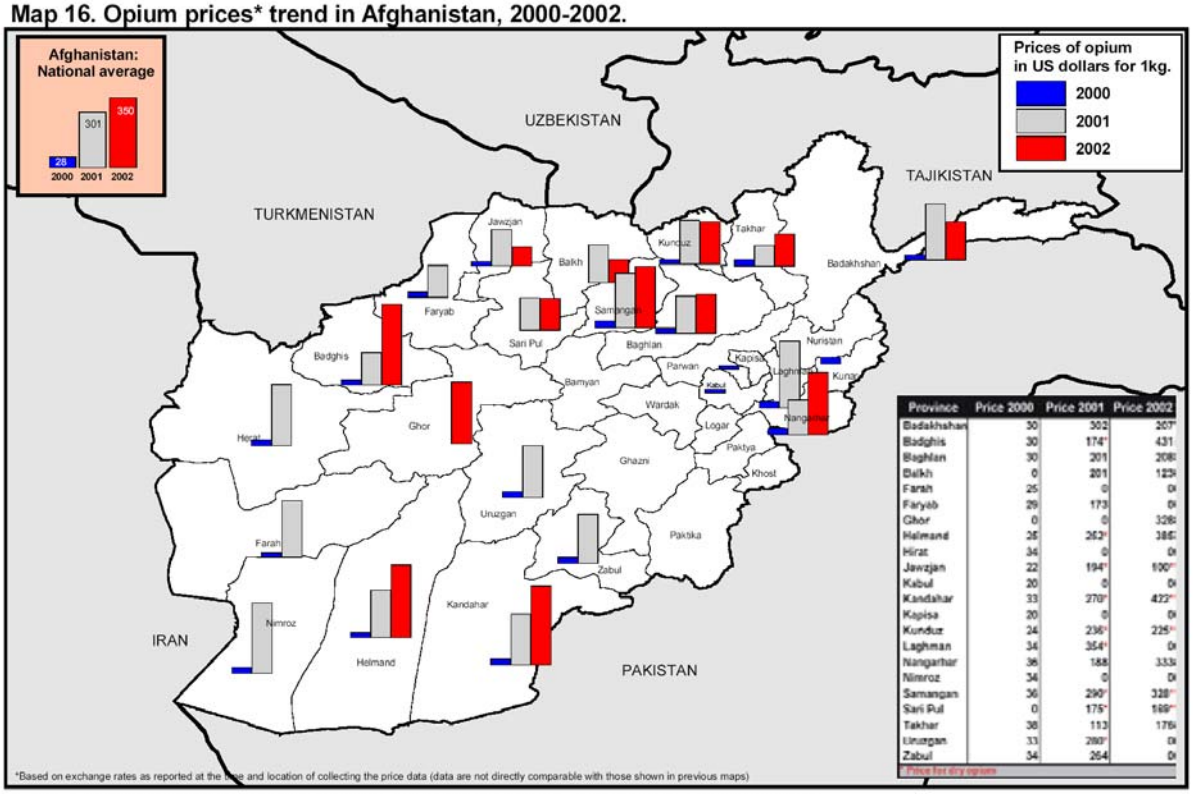


Sources: UNDCP/ICMP, *Afghanistan Opium Poppy Survey, 2000* and *2001* data.

In 2002 overall prices continued rising, but the pattern – as discussed above - was less uniform. Prices rose significantly in the south (Helmand and Kandahar) and in the east (Nangarhar). But in most parts of northern Afghanistan they showed a trend towards stabilization (Baghlan, Kunduz, Samagan and Sari Pul) or decline (Badakshan, Jawzjan, Balkh).

There were also some regional particularities. Rather high prices, for instance, were reported from the province of Badghis, bordering Turkmenistan (north-western Afghanistan) in 2002. They were due to good access to markets abroad (3 important opium markets exist along the border with Turkmenistan) and the fact that middlemen or traders were often not needed as farmers themselves and were therefore able to take their produce to neighbouring Turkmenistan where opium prices, in general, were higher than in Tajikistan or Pakistan. Low prices, on the other hand, were reported from Balkh province, bordering Uzbekistan and from the neighbouring province of Jawzjan, bordering Turkmenistan. Farmers in both provinces suffered from poor market access as the Uzbekistan border was heavily patrolled, and a number of local markets were closed down by the authorities. Also, in contrast to Badghis province, there seems to have been no access to the market in Turkmenistan. Thus, farmers reported that the bulk of their produce had to be shipped a long distance to the market centres of Takhar and Badakshan, bordering Tajikistan.[37] All of this indicates that controlling borders can help in keeping prices down, thus reducing incentives for farmers to expand opium production.

Map 16. Opium prices* trend in Afghanistan, 2000-2002.



Province	Price 2000	Price 2001	Price 2002
Badakhshan	30	302	207*
Badghis	30	174*	431
Baghlan	30	201	208
Balkh	0	201	123
Farah	25	0	0
Faryab	29	173	0
Ghor	0	0	328
Helmand	26	262*	386
Hirat	34	0	0
Jawzjan	22	194*	100*
Kabul	20	0	0
Kandahar	33	270*	422*
Kapisa	20	0	0
Kunduz	24	236*	225*
Laghman	34	354*	0
Nangarhar	36	188	333
Nimroz	34	0	0
Samangan	36	290*	328*
Sari Pul	0	175*	169*
Takhar	38	113	176
Uruzgan	33	280*	0
Zabul	34	264	0

* Price for dry opium

Sources: UNDCP/ICMP, *Afghanistan Opium Poppy Survey, 2000, 2001 and 2002* data.

1.7. Income derived from the opium economy

1.7.1. Income from opium production

The gross income derived from opium production can be calculated by multiplying total opium production by the opium farm-gate price. As part of its opium poppy surveys, which usually took place just a few weeks before the opium harvest, UNDCP has regularly collected opium farm-gate prices across the country. Prices at this time of the year are usually low as traders try to sell the previous year's stocks in order to have sufficient room for the forthcoming harvest. Calculations, based on these prices, reveal that in 1999, the year of Afghanistan's bumper harvest, the potential income for Afghan farmers from the sale of opium amounted to US $183 million[38]. In 2000, the income amounted to $91 million[39] and in 2001, overall income – despite a decline in production by more than 90% - still amounted to $56 million, reflecting a more than tenfold increase in opium prices between 2000 and 2001[40] as a result of the poppy ban. In contrast to previous years, the income in 2001 was concentrated in northern Afghanistan. Farmers in eastern and southern Afghanistan, by contrast, suffered a severe reduction in overall income.

Except for the year 2001, the gross income calculations are conservative estimates, representing the lower limit for farmers' income. They assume that all opium produced is sold immediately to traders at the harvest time when prices are usually at their lowest levels. This is, of course, not always the case. Most farmers tend to stock some of their opium and sell it gradually in subsequent months. In the case of a bumper harvest, such as 1999, the calculated figures are probably an over-estimate. Not all opium is sold in such a year. The surplus is saved and sold in subsequent years. Against this background, the calculation of an average annual income figure is probably more informative than any single year estimate. Over the 1994-2000 period, such average annual income from opium production amounted to US$ 95 million in Afghanistan, or $475 per farmer based on an UNDCP estimate of around 200,000 opium producing farmers in the country[n].

[n] This estimate was first published in UNDCP, *Afghanistan Opium Survey 1997*, p. 12. The 2002 Afghanistan Opium Survey found the average size of an opium field to be around 0.3 hectares. Given a total area under cultivation of 74,000 hectares, there could have been some 247,000 farmers if one assumed that each farmer had one field. But there is information that some of the opium poppy growing farmers have more than one field. Against this background an estimate of 200,000 farmers still seems to be reasonable.

Alternatively, taking the average annual opium prices reported from the main opium bazaars[o], the average annual income could have been almost twice as high, reaching almost US$ 180 million per annum over the 1994-2000 period. This estimate has to be seen as an upper limit for farmers' income. A majority of farmers, notably during years of below average harvests, do not have sufficient financial resources to wait until opium prices increase prior to the following year's harvest. Indeed, many farmers are indebted and have to make use of *salaam,* i.e. advance payments from opium traders against later delivery of opium, which usually reduces their potential income from opium sale by about half.[41] The actual amounts given as advance payments, however, usually do not exceed 5% of the overall annual sales of the opium traders.[42] Nonetheless, in 1998, almost 60% of opium traders, as revealed in interviews, provided such cash advances to farmers and more than 70% of farmers appear to have made use of this and other informal credit systems in 1998.[43] All of this indicates that an average annual price is probably higher than the price at which farmers actually sell their harvest.

Even if the $180 million p.a. mentioned above is probably an over-estimate for the opium related income of farmers, it still reflects the overall income from opium for the local economy in the poppy growing areas. It includes the gross income of the farmers as well as the profits made by the local shop-keepers who sell the opium to the opium traders. The average gross profit (mark-up) of local shop-keepers (excluding income from *salaam)* was found to be between $3 and $9 per kg in Nangarhar in 1998. Extrapolated to the country as a whole this could have meant profits of $8 to $24 million in 1998 or $9 to $27 million, on average, over the 1994-2000 period. If one includes income from *salaam* ($22 to $55 per kg), which is received on 5% of the total opium sales, total profits of the shop-keepers in the bazaars could have amounted to between $11 and $32 million in 1998 or to between $13 and $36 million, on average, over the 1994-2000 period. This would have left farmers with, on average, some $150 million p.a over the 1994-2000 period, or $750 per farmer[44] (gross income, i.e. income out of which the farmer had still to buy seeds, fertilizers, pesticides, hire labour etc.). Given an average income of around $1 per day or $360 per year, an opium poppy farmer could expect a gross income that was about twice the national average income of unskilled labour.

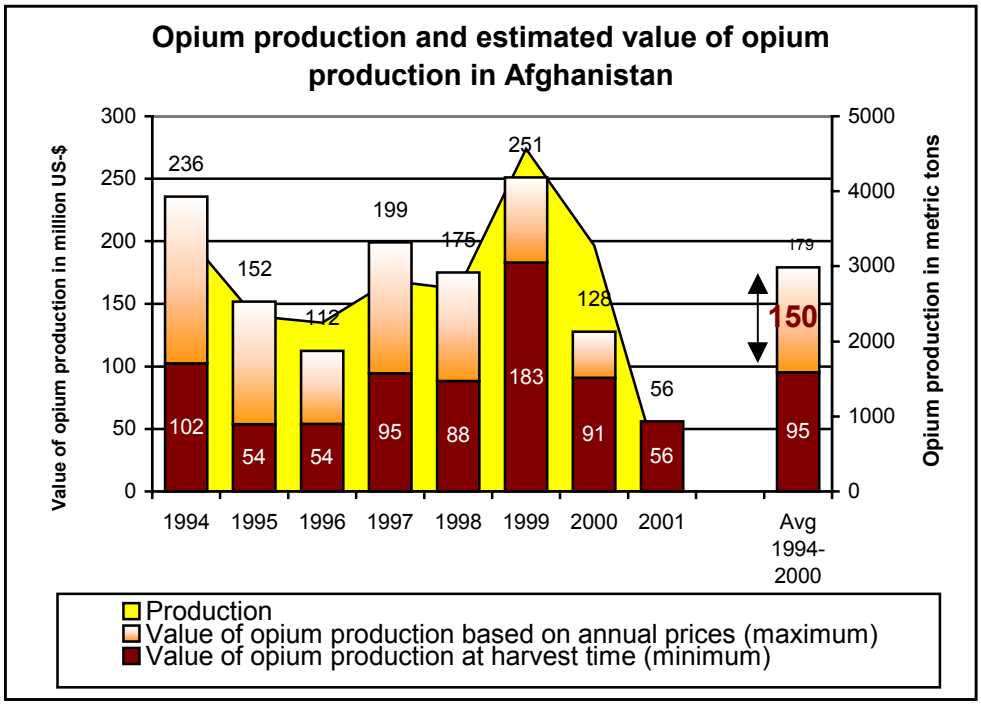


Figure 24
Sources: UNDCP/ICMP, Annual Opium Poppy Survey, 1994-2000 and UNDCP Field Office.

[o] In order to calculate the average annual price, all prices reported from various bazaars across in Afghanistan were used. As the number of bazaars, from which the prices were obtained differed between the years, resulting average price data have to be treated with caution. Some of the changes between the years may reflect changes in the specific locations from which the prices were collected. Against this background, the average price over several years may be a better indicator than the average price of a specific year.

Using the Asian Development Bank's GDP estimate of $6.9 billion for the late 1990s ($300 per capita and assuming a population of 23 million)[45] as a proxy for the country's GDP in 2002, the gross income of opium farmers would have been equivalent to about 2% of GDP. Using UNDP's estimate of a per capita GDP of $250 and a more conservative estimate of 21 million inhabitants, Afghanistan's GDP would have amounted to $5.3 billion (see Chapter 1.1.) and opium farmers' gross income would have been equivalent to about 3% of GDP.

Table 20: Value of opium production in Afghanistan

	1994	1995	1996	1997	1998	1999	2000	2001	Average 1994-2000
Opium production in tons	3,416	2,335	2,248	2,804	2,693	4,565	3,276	185	3,048
Farmgate price in US-$ per kg at harvest time	30.0	23	24	33.7	32.8	40.1	27.8	301.0	30
Value of opium production in million US-$ at harvest time	102	54	54	95	88	183	91	56	95
Average annual opium price in US-$ per kg reported from main bazaars	69	65	50	71	65	55	39	301	59
Value of opium production (maximum) in million US-$	236	152	112	199	175	251	128	56	179

Sources: UNDCP/ICMP, Annual Opium Poppy Survey, 1994-2001 and UNDCP Field Office.

This income structure changed dramatically in 2002. Opium prices increased about ten-fold between the year 2000 and 2002. Given a production of 3,422 tons of opium and an average opium price (weighted by production) of $350 per kilogram, gross income of Afghan farmers could have amounted to $1.2 billion or, on average, $6000 per farmer. Even allowing for a possible increase in the average income of unskilled labour to about $1.4 per day or $500 per year, the opium farmers' average income would have been equivalent to about 12 times the average income of unskilled labour. This created a very strong incentive for farmers to continue cultivating opium poppy. Using the Asian Development Bank's GDP estimate of $6.9 billion for the late 1990s ($300 per capita) as a proxy for the country's GDP in 2002, the income of opium farmers could have been equivalent to 17% of Afghanistan's GDP or 33% of the value-added of the (legal) agricultural sector.

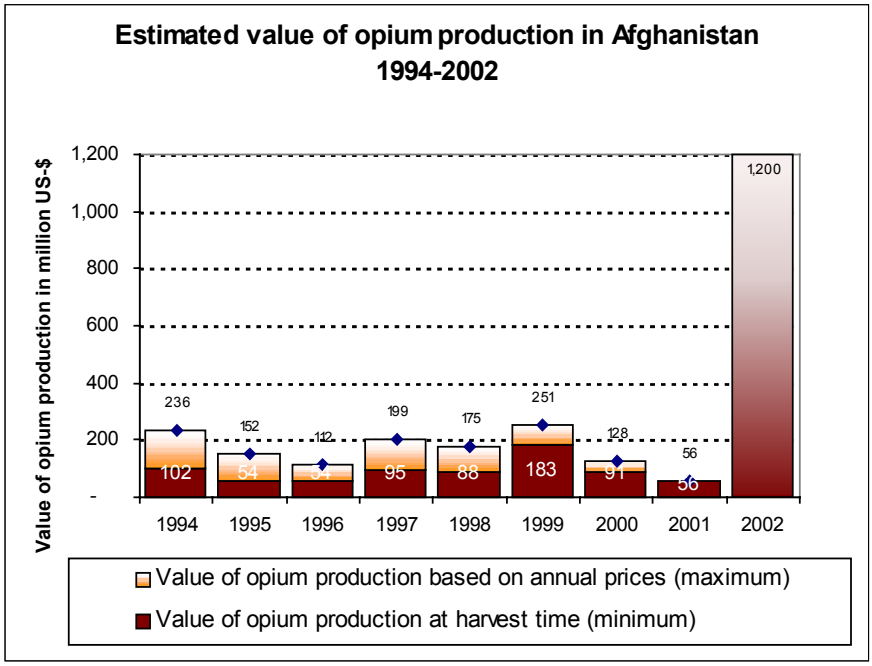


Figure 25
Sources: UNDCP/ICMP, *Afghanistan Opium Survey 2002* and previous years, and UNODC Field Office.

Given the highly skewed distribution of land-holdings in Afghanistan, it is clear, however, that an average gross income of $6000 does not provide much information on what a 'typical' opium farmer actually earned. As most farmers have below average land-holdings, they also have below average income. Using production-weighted prices skews the national average in favour of the main opium production areas – Helmand and Nangarhar. In other parts of the country, opium farmers actually earned less.

The $1.2 billion calculated as gross income for 2002 is a hypothetical figure because it assumes that all of the opium was sold at the prices of July/August. This was not the case. In Afghanistan's devastated economy, opium is the main form of saving in the opium producing areas of the country; farmers stock it and only sell it as and when they need to (see Chapter IV below). Given the high prices in 2002 and the announcement of the Government to implement a ban on opium poppy cultivation more vigorously in 2003, it can be assumed that farmers sold less of their opium immediately. This may also explain the rather surprising results that despite a good harvest, opium prices did not fall but remained high.[p] In other words, it can be assumed that most of the 'income' of Afghan opium farmers in 2002 was in kind (i.e. opium) but not in cash.

1.7.2. Income from trafficking

The next issue refers to the amount of money generated from trafficking by Afghan groups. This calculation is rather complex. It requires :

(i) information on the extent of the involvement of Afghan groups in international trafficking operations,
(ii) estimates of the opium transformed into morphine base and heroin, and
(iii) estimates of the amounts shipped to neighbouring countries.

It should be noted, at the outset, that the dominant role played by Afghan opiates in eastern and southern Africa, the countries of the Arabian Peninsula and in Europe is not reflected in data on the involvement of Afghan groups in international trafficking operations.[q] Large-scale trafficking by Afghan nationals is usually limited to the country's immediate neighbours.

In Iran, for instance, 3,768 Afghan nationals were in prison for drug-related crimes as of December 2000, accounting for 5% of all inmates in Iranian prisons for drug-related crimes (80,415), or 94% of all foreign inmates (3,988) for such crimes[46]. Going further to the west, the number of Afghan traffickers identified by the Turkish authorities amounted to 27 persons in 2002, equivalent to less than 1% of all people arrested for drug trafficking activities in Turkey in the year 2000 or 14% of foreign nationals arrested for drug trafficking [47]. Interpol studies have repeatedly shown that hardly any Afghans were involved in trafficking activities in the EU and EFTA countries. This trade appears to be dominated by Turkish groups (often ethnic Kurds) and by Albanians and Yugoslavs (including ethnic Albanians).[48] Similarly, Afghans are involved in shipping opiates to Tajikistan. However, hardly any reports exist that would suggest that the heroin, once arrived in Tajikistan, would be trafficked by Afghan groups to other Central Asian countries or the Russian Federation.

In short, Afghan groups, in general, do not appear to participate in lucrative international drug trafficking operations. The involvement of Afghan groups/individuals is basically limited to the opium production, the trade of opium within Afghanistan, the transformation of some of the opium into morphine and heroin, and to some extent, the trafficking of opiates (opium, morphine, heroin) to neighbouring countries (Iran, Pakistan, Tajikistan, Turkmenistan and Uzbekistan)

If one analyses the opiates seizures of neighbouring countries (Iran, Pakistan and Central Asia), as a proxy for the heroin/morphine manufacturing capacities of Afghanistan, it can be seen that over the 1994-99 period, on average, 42% of the seizures were in the form of opium (expressed in heroin equivalents)[r], 37% in the form of morphine and 21% in the form of heroin. Since 1999, however, heroin seizures have been on the rise, reflecting increasing levels of heroin manufacture within Afghanistan. Over the 2000-2001 period heroin seizures accounted for 38% of all opiates seizures in the region, morphine and opium seizures accounted for 31 % each.

[p] At the time of writing (December 2002), there is evidence that prices in Nangarhar and Kandahar continued rising and were at levels of around $450 per kilogram. This is apparently happening because traders are stockpiling opium in anticipation of stronger enforcement measures in the next growing season.

[q] This is confirmed by heroin trafficking analysts in Interpol.

[r] The usual 10:1 transformation ratio was applied for these calculations. However, given a higher morphine content of Afghan opium than in other countries and the existence of recipes which indicate a 7:1 or a 6:1 transformation ratio, one cannot exclude the possibility that, on average, less than 10 kg of opium are needed in Afghanistan to produce one kilogram of morphine or heroin.

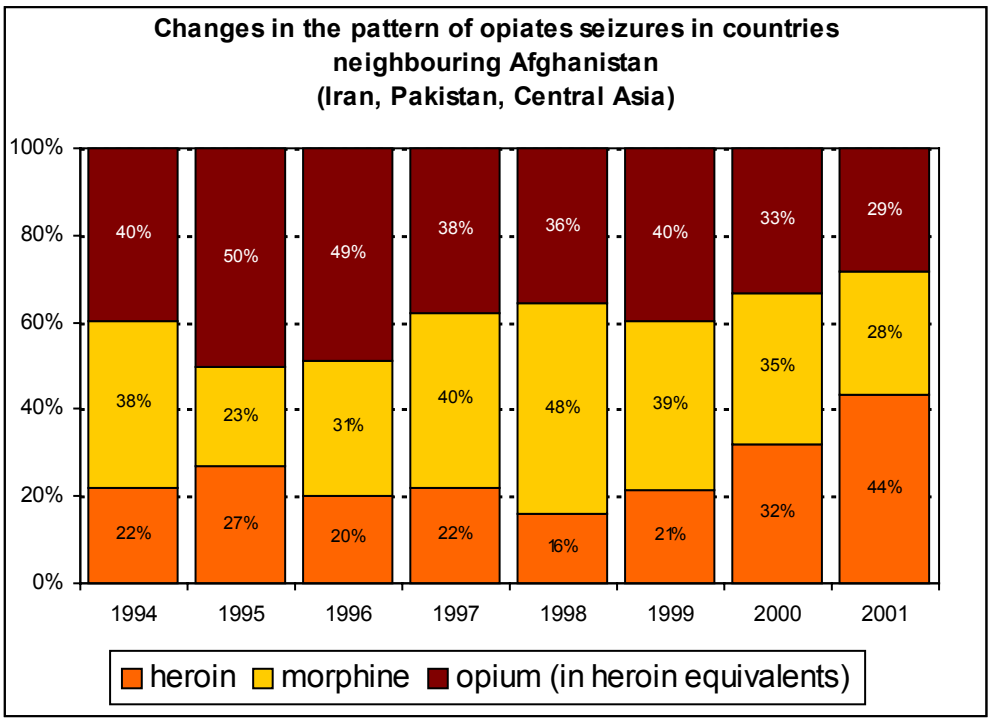


Figure 26
Note: a transformation ratio of 10:1 was used to transform opium into heroin equivalents, and a ratio of 1:1 was used to transform morphine into heroin equivalents.
Source: UNDCP, DELTA

The next issue concerns the identification of the countries which serve as immediate destinations of the opiates trafficked from Afghanistan. Again, seizure statistics can shed some light on these trafficking patterns.

As far as opium is concerned, the answer is clear. About 90% of opium seizures have regularly taken place in Iran in recent years, followed by Pakistan. This suggests that the bulk of opium, which was not further processed, is trafficked out of Afghanistan via Iran. One key question, nonetheless, is whether seizures are an accurate reflection of trafficking patterns in the region. Given very strong enforcement efforts by the Iranian authorities, there is indeed a certain systematic bias in favour of Iran, leading to a possible over-representation of the importance of Iran as an outlet of opium produced in Afghanistan. Also, some of the opium seized in Iran is actually trafficked via Pakistan to Iran. As opium prices in Iran – reflecting strong enforcement efforts - tend to be higher than in Pakistan or Tajikistan, the over-representation means that the calculated income for Afghan groups from opium trafficking is probably an over-estimate.

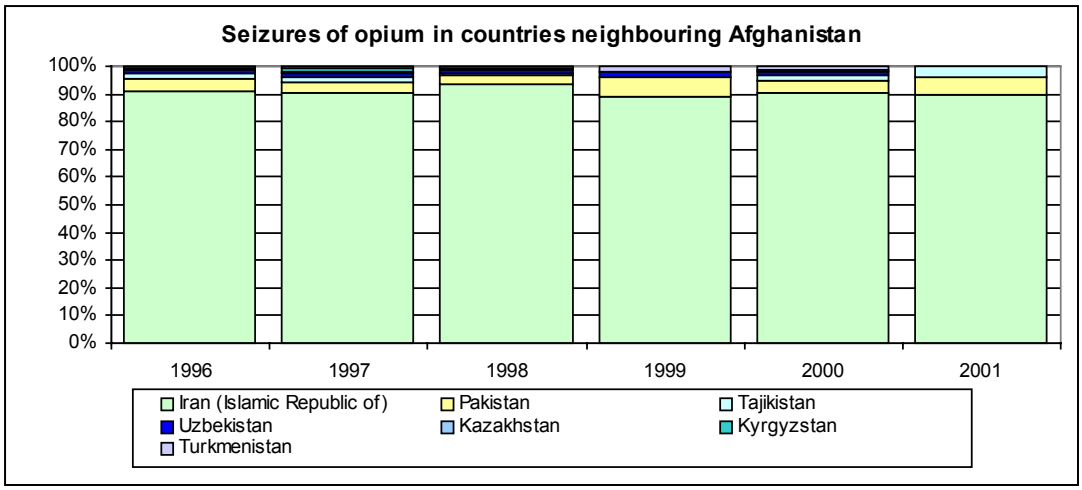


Figure 27
Source: UNDCP, *Global Illicit Drug Trends 2002* and previous years.

In the case of morphine base, trafficking in the region is also dominated by Iran. Close to 100% of morphine base in the region, in recent years, has been seized by the Iranian authorities. This, however, may be an over-estimate. Authorities in Pakistan in their reply to UNDCP's Annual Report Questionnaire did not distinguish between heroin and morphine seizures (until 2001). But, based on individual seizure cases, reported in 2000 by Interpol, the World Customs Organization and seizures cases that became known to UNDCP, one can assume that about 40% of 'heroin' seizures in Pakistan may actually be morphine seizures. Combining reported morphine seizures from Iran and the estimated morphine seizures from Pakistan, 15% of the overall morphine seizures in the region in 2000 were accounted for by seizures in Pakistan and 85% by Iran.[s]

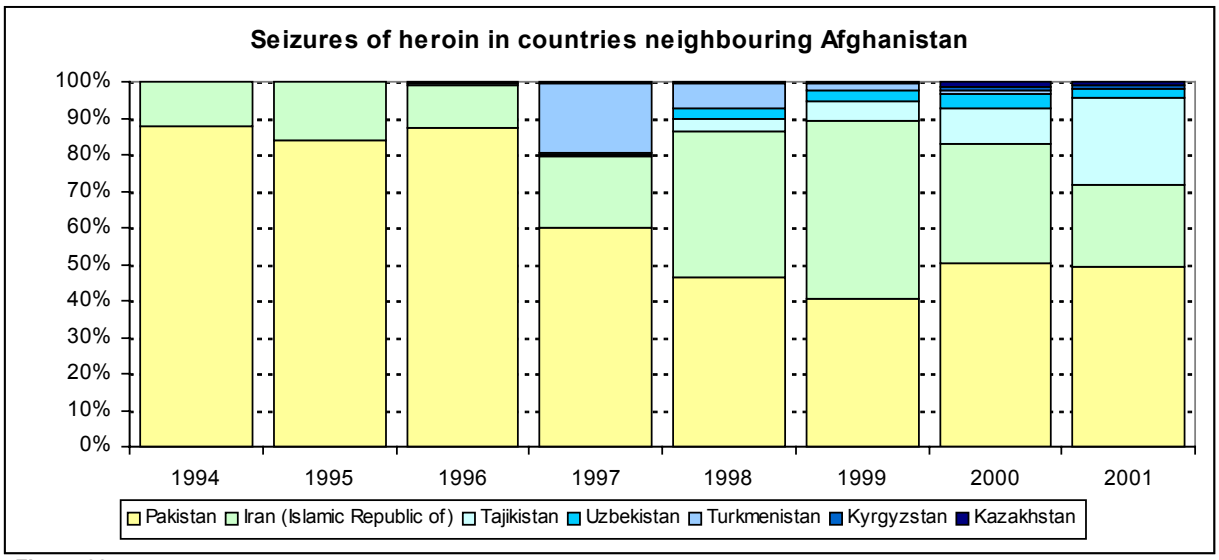


Figure 28
Source: UNDCP, *Global Illicit Drug Trends 2002* and previous years.

With regard to heroin seizures, the situation is even more complex. According to official statistics, the largest heroin seizures over the 1994-2001 period took place in Pakistan. Their share in regional seizures fell from levels around 85% over the 1994-96 period, to 40% in 1999, before recovering to around 50% in 2000 and 2001. However, one has to take into account that morphine seizures are included in heroin seizures reported by the Pakistani authorities. For the year 2000, as mentioned above, individual seizure data suggest that about 60% of

[s] Pakistan seized 9492 kg of heroin/morphine in 2000; 40% of this amount is equivalent to 3,797 kg of morphine. Iran's morphine seizures amounted to 20,764 kg. Together morphine seizures of the two countries amounted to 24,561 kg. Morphine seizures of other countries in the region were negligible. Thus Pakistan's morphine seizures in the region accounted for 15% and Iran's morphine seizures for 85%. (Source: UNDCP, *2002 Global Illicit Drug Trends*, p. 23.).

the reported 'heroin' seizures may actually have been true heroin seizures; this would reduce the Pakistan share in regional heroin seizures from 50% to 38% in that year and increase the shares of the other countries accordingly. The share of heroin seizures in Iran – disregarding Pakistan's likely over-representation in these data - rose from around 15% over the 1994-96 period to almost half in 1999 before falling back to about a quarter in 2000/2001. The strongest growth in trafficking took place in Central Asia. The share of the Central Asian countries' seizures rose from less than 1% over the 1994-96 period to close to 30% of regional heroin seizures by the year 2001, reflecting the increased use of the northern route via Tajikistan as well as improvements in controlling borders with Afghanistan.

Given such information, wholesale prices reported from neighbouring countries and assuming that the distribution of seizures basically reflects underlying trafficking patterns, a tentative estimate for the overall Afghan trafficking income for the year 2000 can be calculated (see table 21).

This estimate suggests that Afghan traffickers, including the manufacturers of morphine and heroin, may have earned some $850 million in the year 2000 by shipping Afghan opiates (from the 2000 opium harvest) to neighbouring countries. Deducting some $130 million, which the traffickers had to pay for the opium in the bazaars in 2000, their overall profits were still substantial (close to $720 million).[t]

Table 21: Estimate of gross income from trafficking Afghan opiates to neighbouring countries in 2000

	Opium	Morphine	Heroin	TOTAL
Afghan opium production in 2000 in tons	3,276			
Distribution	33%	35%	32%	
Available for sale* in tons	**1,081**	**115**	**105***	
Distribution in % (based on seizure patterns)				
Iran	90.2%	85%	40.9%	
Pakistan	4.5%	15%	37.7%	
Tajikistan	2.4%	-	12.5%	
Other Central Asia	2.9%	-	9.0%	
Distribution of production in tons				
Iran	975	97	43	
Pakistan	49	17	40	
Tajikistan	26	-	13	
Other Central Asia	31	-	9	
Wholesale prices				
Iran	$400	$ 1,600	$ 2,500	
Pakistan	$110	$ 1,074	$ 1,445	
Tajikistan	$170	-	$ 1,575	
Other Central Asia	$825	-	$ 6,375	
Value (in million US-$)**	**425**	**175**	**245**	**845**
less cost of opium (bought from bazaars) (in million US-$)				**-128**
Traffickers' profits (in million US-$)				**717**

* Calculation of heroin availability: 3276 / 10 *32%; calculation of morphine availability: 3276 / 10 *35%
** Calculation of opium value: 975,000 kg *$400+ 49,000 kg *$110 +26,000kg *$170+31,000kg *$825 = $425 million
Sources: UNDCP, DELTA and UNDCP, *Global Illicit Drug Trends 2002*.

[t] If traffickers had bought the opium directly from the farmers they could have increased their profits to $970 million.

The profits, in reality, could have been higher. The profits calculated above for heroin and morphine trafficking are conservative estimates. Results suggest that out of 1 kilogram of opium a gross income of $394 was generated while out of 1 kilogram of opium, transformed into heroin (0.1 kg of heroin), the gross income declined to $233. These are paradoxical results. They indicate that either the prices reported to UNDCP are biased in favour of high opium and low heroin prices (which could be the case if the latter reflected heroin at low purity levels in the countries neighbouring Afghanistan) or that the usual 10:1 opium to heroin transformation ratio is not appropriate for Afghanistan. There are indeed recipes that only require 7 kilograms of Afghan opium to produce 1 kilogram of morphine and thus 1 kilogram of brown heroin[49]. Similarly, research from the early 1990s in Pakistan suggested that in order to produce brown heroin, the usual ratio reported by clandestine laboratory operators was only 6 kilograms of opium for 1 kilogram heroin.[50] If the above table were re-calculated using a 7:1 ratio (and revising all other ratios accordingly), then total income from trafficking would amount to $1,059 million. Deducting the cost of opium for traffickers ($128 million) the net profits would amount to $931 million. As will be discussed in Chapter V which covers the profitability of heroin manufacture, efficient laboratories producing heroin at a purity level of around 60%[u], could do this with even less opium inputs (theoretically with as little as 4 kg). Applying such considerations, overall income from opiate trafficking out of Afghanistan to neighbouring countries could well have exceeded $1 billion in 2000 by a significant margin. (Profits of up to $1.7 billion could have been theoretically possible).

However, not all profits are made by Afghan traders. There have been reports of the involvement of traders from Pakistan, Iran and of some of the Central Asian countries in shipping opiates out of Afghanistan. In general, they are of the same ethnic origin as people living in Afghanistan (i.e. Pashtuns from Pakistan, Baluch from Iran or Pakistan, Tajiks from Tajikistan, etc.). Even more important, the average national prices of opiates in neighbouring countries, used in the calculation above, tend to be higher than the prices in their respective border regions with Afghanistan. As long as Afghan traders are only involved in shipping opiates across the border and not further, the overall profits for them may well be lower.

In short, any reasonable estimate of profits from trafficking opiates out of Afghanistan by Afghan traders, taking the various additional issues into consideration, will probably turn out to be close to $1 billion in 2000. There could be a higher income due to a higher laboratory efficiency but Afghan traders are likely to be forced to share some of the trafficking profits with traffickers from neighbouring countries.

Such income is still small compared to the funds generated in the consumer markets of Western Europe. In the UK alone expenditure on heroin in the late 1990s was estimated at 2.3 bn ($3.9bn) [51]. Extrapolating these UK data to Western Europe as a whole - the UK accounts for about 20% of West Europe's heroin users - the corresponding expenditure figures for Western Europe could be around $20 billion for heroin.

Nonetheless, 1 billion is substantial by Afghan standards. UNDP, in its 1993 rehabilitation plan, estimated Afghanistan's GDP to have amounted to just $1.72 billion in 1991/92. Taking this figure, the value-added of Afghan traders of $1 bn would have been equivalent to close to 60% of the country's GDP. Alternatively, using an estimate of the Asian Development Bank of $200 per inhabitant (estimate for the year 2001) and multiplying this with a population estimate of 23 million, the country's GDP would have been around $4.6 billion and the value-added of Afghan traders would have been equivalent to about 22% of GDP. Using the estimate published by UNDP in its 1997 Human Development Report of $250 per inhabitant (based on official data for 1981) and multiplying this with the highest available population estimate for the country of 26 million, as provided by the World Bank, Afghanistan's GDP could have reached $6.5 bn. (This is the highest theoretically possible estimate of GDP in Afghanistan for the year 2000). A value-added figure of around $1 billion out of the opiates trade would then be equivalent to about 15% of the country's GDP.

Statistics reported by the International Monetary Fund (IMF)[v] show that average annual legal exports of Afghanistan amounted to just $136 million p.a. over the 1990-99 period. Compared to these data opiates exports were more than seven times larger. Legal imports amounted to, on average, $505 million over the 1990-99 period, equivalent to about half of illegal opiates exports in 2000. These data also show that the (legal) trade deficit of $369 million p.a. in the 1990s (resulting from a level of imports three to four times greater than that of legal exports in the 1990s) could have been easily covered by receipts of trafficking in opiates.

[u] For comparison: average heroin purity identified by the UK customs of heroin arriving via Pakistan to the UK was around 64% in 2000; average heroin purity, as identified by the authorities in Turkey, was around 50% in 2000 (UNDCP, *Global Illicit Drug Trends 2002*, p. 34.).

[v] Data as reported from the 1980s to 1995 by the International Monetary Fund (IMF) and as of 1996 by the Economist Intelligence Unit, based on import/export statistics of Afghan trading partners reporting their trade statistics to the IMF.

Table 22: Legal international transactions of Afghanistan in million US-dollar														
Year	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Exports	552	512	395	236	235	286	91	180	24	26	128	144	139	111
Imports	1,404	996	900	822	936	634	426	740	142	50	623	558	476	468
Source: IMF, *International Financial Statistics*, various years.														

Another figure to put trafficking receipts into perspective is government expenditure. According to Afghanistan's budget for 2002/03 (fiscal year beginning March 21), the government's total expenditure is planned to amount to $460 million, out of which 20% is financed from domestic sources and the rest from from foreign assistance. Illegal opiates exports in 2000 could have been twice this amount. [52]

Nonetheless, the income from the opiates trade was still dwarfed by the funds generated out of the 'transit trade' with Pakistan. A World Bank Study estimated the contraband trade of Afghanistan with Pakistan to have been worth $2.5 bn in 1997[53], i.e. 2½ times illegal opiates exports. (For more information on the 'transit trade' see Chapter V).

It must be also highlighted that the bulk of the trafficking income was not used in a productive way. This is in contrast to the opium income of farmers who used it as a survival strategy. For many years in the 1990s, this kind of income went into the coffers of warlords who mainly used it for funding their private militias, and for the purchase of weapons that had to be imported. Thus the multiplier for the inflow of external funds, which otherwise could be important to create ripple effects for economic development, is extremely small.[w] The income which is actually going to be missed if opium production were to come to a halt is the income which went to the farmers (some $150 million, on average in the 1990s) or about 2% of GDP (based on an $6.5 bn estimate).

In 2002, the funds generated from drug trafficking by Afghan traders increased due to an increase of opiate prices in neighbouring countries, which more than offset the higher opium prices within Afghanistan. Based on the calculations shown below, Afghan traffickers earned some $1.3 billion in 2002 (2.5 billion in gross income less cost of 1.2 billion for purchasing the opium produced in Afghanistan). Traffickers income was thus almost twice as much as for the year 2000 ($0.7 billion).

The calculation of trafficking profits for 2002 was based on the assumption that Afghan traffickers purchased opium in Afghanistan and sold the opiates in neighbouring countries, either in the form of opium or as heroin. Seizure patterns reported from neighbouring countries were used as an indication of the distribution between opium and heroin sales and of where Afghan traders were selling their produce. As 2002 seizure data was not available at the time of writing, seizures reported in 2001 were used as a proxy. Given the rather strong similarity of opiate prices reported among Afghanistan's neighbours in 2002, the impact of possibly different trading patterns for the final 2002 results is almost negligible. Otherwise, more or less the same model was used for the 2002 estimates as for the 2000 estimates.

Nonetheless, there are some particularities with regard to the 2002 results. While the estimate for the year 2000 was likely to have been an under-estimate, and a more realistic estimate, as argued before, was probably around $1 billion, the actual profits for 2002 are less likely to exceed the calculated figure of $1.3 billion. The same arguments for *de-facto* higher profits, as discussed for the 2000 estimate, would also be valid for the 2002 estimate: the validity of a 10:1 opium to heroin ratio and possible reductions in heroin purity levels along the trafficking chain, thus increasing profits due to dilutions. There are, however, two other factors that possibly offset such potential under-estimation. No morphine prices for 2002 were available at the time of writing this report. By considering heroin and morphine together it was assumed that heroin and morphine trafficking generate the same profits which is not necessarily the case.[x] In addition, the calculation model assumes that whatever is produced in a year also leaves the country in the same year, or put differently, it assumes that the overall level of stocks

[w] In general, funds flowing into a domestic economy are amplified by the 'multiplier'. Some of the funds received are usually spent again, thus creating additional income for the groups of society receiving these funds. If farmers receive additional income (e.g. out of the sale of opium) and spend it on goods and services, the providers of these goods and services obtain additional income, which they again will use to increase their spending, and thus create again additional income, etc.. In each round of spending leakages exist, which will reduce the additional income that is generated. The 'multiplier' indicates by how much the initial inflow of funds creates additional income for the local economy. The overall multiplier can be regarded as the outcome of a geometric row that can be simply calculated as 1 divided by the leakage. The main 'leakages' are savings and imports. The average multiplier (M) in developing countries, based on 1999 World Bank data (World Bank, *2001 World Development Indicators*), was 2.45, reflecting an average savings ratio of 20% (s) and an average import ratio of 26% (q) (M = 1 / (1 - (1-s)*(1-q) = 1 / (1 – 0.8 * 0.74 = 2.45). In the case of trafficking funds going to warlords, the import ratio increases, however, strongly as funds are used to purchase weapons which usually have to be imported, thus leaving hardly any funds available for the multiplier to work.

[x] Income from trafficking morphine was assumed to be equivalent to income from trafficking heroin. If this method had been applied for the results of the year 2000, traffickers' gross income would have been some $90 million or about 10% higher.

of opiates remained unchanged between the beginning and the end of 2002. There are indications that this assumption was more or less valid for the year 2000 but may not have been valid for 2002. Opium prices, despite a bumper harvest, did not fall but remained high in 2002, suggesting that not all of the harvest was sold immediately. However, for the time being, there is no basis for making any reasonable assumption about the specific proportion of the opium produced in 2002 that would have remained in the country in 2002. Whatever percentage assumed not to have left the country, reduces the estimates of traffickers' profits proportionately.

It can be thus argued that the various factors leading to an over-estimate and an under-estimate are likely to offset one another, so that a figure of $1.3 billion may, after all, be a reasonable estimate of the order of magnitude of Afghan traffickers' income. Comparing these estimates with the GDP estimates of the Asian Development Bank ($6.9 billion, based on an estimate of $300 per capita), traffickers' income in 2002 may have been equivalent to about 19% of GDP.

Table 23: Seizure patterns of countries neighbouring Afghanistan (2001)

	heroin & morphine in kg	in %	opium in kg	in %
Iran (Islamic Republic of)	12,669	46.3%	81,061	83.9%
Pakistan	9,492	34.7%	8,867	9.2%
Central Asia, of which:		19.0%		6.9%
Tajikistan	4,239	15.5%	3,664	3.8%
Uzbekistan	467	1.7%	242	0.3%
Kyrgyzstan	171	0.6%	469	0.5%
Kazakhstan	137	0.5%	36	0.0%
Turkmenistan*	200	0.7%	2,300	2.4%
Neighbouring countries	27,374	100%	96,640	100%
Breakdown, based on heroin equivalents in kg	27,374		9,664	
Breakdown, based on heroin equivalents	74%		26%	

* Data for 2001 not available; data for 2000 used as a proxy.

Table 24: Estimate of the income from trafficking Afghan opiates to neighbouring countries in 2002

	Opium	Heroin & morphine	TOTAL
Afghan opium production in 2000 in tons	3,422		
Distribution	26%	74%	
Available for sale* in tons	890	253	
Distribution in % *(based on 2001 seizure patterns)*			
Iran	83.9%	46.3%	
Pakistan	9.2%	34.7%	
Tajikistan	3.8%	15.5%	
Other Central Asia	4.0%	3.5%	
Distribution of production in tons			
Iran	746	117	
Pakistan	82	88	
Tajikistan	34	39	
Other Central Asia	36	9	
Wholesale prices in 2002			
Iran	$1,690	$4,990	
Pakistan	$590	$4,113	
Tajikistan	$592	$4,541	
*Other Central Asia**	$825	$6,375	

Table 24: Estimate of the income from trafficking Afghan opiates to neighbouring countries in 2002			
	Opium	Heroin & morphine	TOTAL
*Value (in million US-$)***	**$1,359**	**$1,181**	**$2,540**
less cost of opium (bought from bazaars) (in million US-$)			**-$1,200**
Traffickers' profits (in million US-$)			**$1,340**

* Data for 2000/2001

** Calculation of heroin availability: 3422 / 10 *26%.

*** Calculation of opium value: 746,000 kg *$1690+ 82,000 kg *$590 +34,000kg *$592+36,000kg *$825 = $425 million

Source: UNDCP, DELTA.

1.8. Abuse

The international implications of Afghanistan's opium production on drug abuse in neighbouring countries will be dealt with in chapter VI of this book. This chapter will focus on the drug abuse situation within Afghanistan.

There appears to have been very little opiate abuse in Afghanistan in the past. In the early 1970s Kabul became a centre for the use of hashish as well as opiates by young people and travelers from Western Europe and North America. But with the outbreak of the civil war, the foreign drug users disappeared. Local Afghans used hashish, but there was almost no abuse of opiates. There is, for instance, little historical evidence of traditional opium use among the Pashtuns, which form the major ethnic group in Afghanistan, though some traditional consumption was reported from the Tajiks in Badakshan and the Turkomans.[54]

Afghan hashish has a reputation of being very potent in terms of THC content. Peer pressure to use hashish went so far that some Afghan drug users even reported that their Mujahideen commanders had actually introduced them to hashish use while fighting against the Soviets.[55]

Opium use in the past was largely confined to medical purposes, for complaints such as diarrhoea, body pains, and respiratory problems. The main medicinal purposes for which opium is still used in Afghanistan include flu, cough, headache, chest problems, respiratory problems and body pain. The use of opium for medical purposes often correlates with poor health infrastructure and poor access to modern medication, and is thus particularly widespread in rural areas. If used for medical purposes, opium is mostly eaten and several different paste-like opium preparations are available from local hakims (traditional healers). In addition, poppy pods are also boiled in water, and the resultant juice is drunk, notably as a medicine against coughs and colds, and this is even given to children.

Opium for non-medicinal purposes is mainly smoked, though it is also eaten often together with black tea. A few users dilute opium or opium residue in water before injecting; this is known as 'blackwater opium'.

There is no medicinal use of heroin in Afghanistan. Heroin is mainly smoked by the method known as 'chasing the dragon', where the heroin is burnt on tin foil and the fumes are inhaled through a tube. Injecting heroin is still the exception, but it seems to be spreading. There are indications – such as the finding of significant numbers of hypodermic needles - that injecting drug use has been increasing, notably among refugees returning from camps in Pakistan. Heroin abuse, in general, is on the rise, possibly a reflection of increasing heroin manufacture in Afghanistan over the last couple of years, as shown by the increasing number of heroin laboratories covered.

Abuse of opiates only emerged as a major problem in the 1990s though, based upon available data, the problem within Afghanistan is still comparatively small compared to the situation in several neighbouring countries.

The main reasons for the spread in the 1990s can be linked to

i) the prolonged human deprivation and suffering, leaving the Afghan population extremely vulnerable to a range of mental health problems, including depression, anxiety, insomnia and Post Traumatic Stress Disorder;

ii) the wide-spread use of opiates by the mujahedeen to treat war injuries, as opiates (opium,

morphine and heroin) were often the only 'medicine' available
iii) the breakdown of social norms and thus the reduction of cultural constraints to drug abuse as a consequence of the civil war
iv) the high vulnerability of people in refugee camps to drug abuse, and the continuation of their habit upon return to Afghanistan
v) the close to unlimited availability of drugs (opiates) within Afghanistan

When the Taliban took control of much of Afghanistan as of the mid 1990s, they had – originally - no problems with opium poppy cultivation and trade in opiates, but they were tough on drug use in Afghanistan. The use of all intoxicants is forbidden in the Koran (*haram*) and thus the use of all intoxicants was banned by the Taliban authorities under Sharia law. Frequent arrests and severe punishments scared many people into not taking drugs. In Gardez (province of Paktia), for instance, it was reported that hashish users were imprisoned for one week for a first offence, 20 days for a second offence and one month for a third offence. The imprisonment for a heroin user was six months. It was also reported that some of the arrested drug users were beaten with durra (leather straps) as well as being imprisoned. [56] Nonetheless, the use of prohibited drugs continued and was even rising as refugees returned to Afghanistan from Pakistan and Iran. The ever larger availability of opiates – and their low price - facilitated the use of these substances in Afghanistan.

Overall, drug use took place in a much more hidden, private and secretive manner than was the case before, leading in some instances to perverse results. Key informants also reported to UNDCP that some hashish users felt motivated to switch to heroin because the smell of heroin was much less pungent and noticeable than that of hashish. If they used heroin rather than hashish they felt that they were less likely to be traced, arrested and punished by the Taliban's Department for the Propagation of Virtue and the Suppression of Vice. Some users also shifted from hashish to opium following the eradication of cannabis plants in their district.[57] Another side-effect of the Taliban's harsh policy on drug use was that people with drug problems became very reluctant to seek help for fear of persecution and punishment. Moreover, there were hardly any functioning institutions to which people could turn for help.[58]

Inside Afghanistan, a number of reports reached UNDCP indicating substantial drug problems in several urban centres. There were reports of injecting heroin in Herat (western Afghanistan), Kandahar (eastern Afghanistan) and Kabul, as well as polydrug use in several locations across the country. In the first quarter of 1999[59], 50% of the problem drug users in Kabul's Mental Health Hospital were male heroin addicts.

In 2000, UNDCP undertook an assessment of the number of drug users in five rural districts of eastern Afghanistan: Hesarak (Nangarhar), Khak-E-Jabar (Kabul), Azro (Logar), Sayed Karam (Paktia) and Gardez (Paktia). The five districts covered a population of about 201,000 people, including 120,000 adults. These four provinces were chosen because they were the final destination of three-fourths of all refugees expected to return from Pakistan as well as the home of thousands of recent returnees and internally displaced persons. All five districts were severely affected by the war that had ravaged the country over the last two decades.

Two approaches were used to arrive at estimates of drug use in these five districts:
(a) estimates provided by key informants (100 persons) and
(b) estimates provided by drug users (99 persons) in the five districts.

Each target district was divided into four quadrants or sites. This gave a total of 20 sites. In each site, interviews were conducted with five key informants such as doctors, teachers, government officials or community leaders. The interviews included questions about the likely number of drug users at the site. The average figure of these estimates was used as key informants estimate (Estimate A). In addition, about five drug users per site were identified and asked to provide their estimates of the total number of drug users at the location. Again, the average figure of these estimates was taken as the drug users' estimates of the extent of drug use (Estimate B). The two sets of estimates were then used to establish a range while the average of the two sets of estimates has been used to arrive at an overall estimate of drug use in the five target districts. The detailed results are shown in Table 13.

The overall number of opium users in the five districts was equivalent to 0.5% of the adult population (range 0.4%-0.6%), and the number of heroin users was equivalent to 0.1% of the adult population. Given the rather high number of returned refugees in these provinces, the prevalence rates found in the five districts could be assumed to overstate Afghanistan's drug problem. However, against the background of a repressive environment at the time of the study and thus a certain reluctance by many drug users and informants to talk openly about drug abuse, estimates could well be under-estimates. Given these opposing biases, the results may be still a fair reflection of the overall drug abuse situation in eastern Afghanistan.

In any case, the prevalence rates found in this rapid assessment on the situation in eastern Afghanistan were already significant by international standards: global use of opiates for the late 1990s was estimated at 0.3% of the adult population and thus lower than opium use prevalence in eastern Afghanistan.

Prevalence of opiates use in eastern Afghanistan (0.5% opium, 0.1% heroin) as compared to estimates for neighbouring countries, however, are still rather small: Iran 1.7%-2.8%; Central Asia 0.9% (four-country average)[y], or 0.9% of opiates abuse in Pakistan (of which 0.6% chronic heroin abuse).[60] (For more detail on the drug abuse situation in countries neighbouring Afghanistan see chapter 6.4).

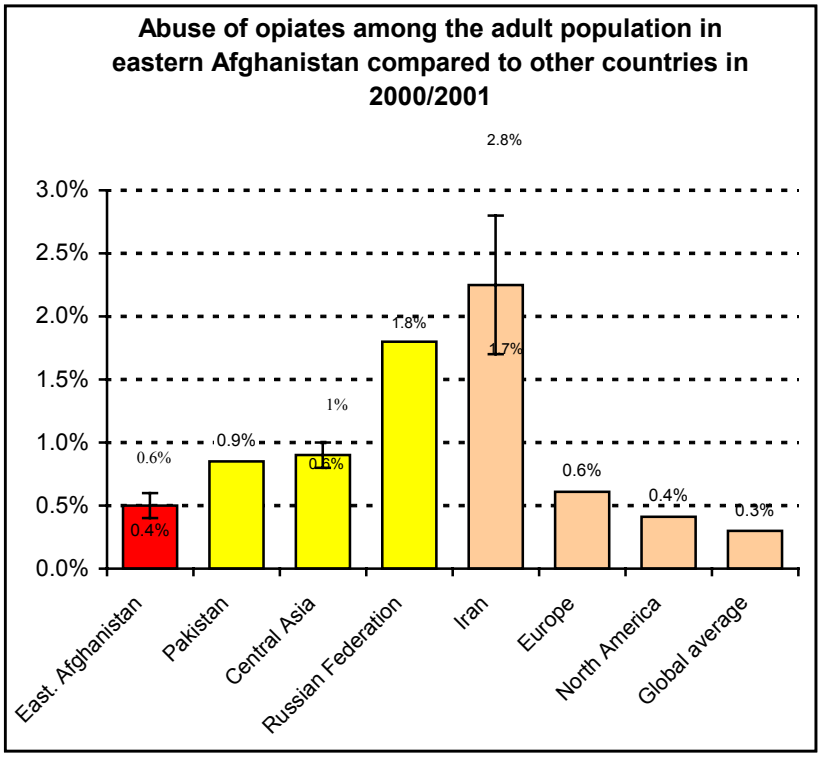


Figure 29
Sources: UNDCP, *Community Drug Profile #4 An Assessment of Problem Drug Use in Rural Afghanistan*, Feb. 2001, p. 11, UNDODCCP, *Global Illicit Drug Trends 2002*, UNODCCP, Drug Abuse in Pakistan*, Results from the year 2000 National Assessment Study*, UNODCCP, "Preliminary results of a Rapid Situation Assessment (RSA) on Drug Abuse in Central Asia".

If the prevalence rates for eastern Afghanistan are calculated on the basis of the total population (instead of the adult population), then the overall number of opium users in the five districts was equivalent to 0.3%; the number of heroin users was equivalent to 0.06% of the total population. Overall problem drug use in eastern Afghanistan affected close to 0.4% of the total population. For comparison, first results of a UNDCP sponsored rapid assessment study on the drug situation in Central Asia, conducted in 2001, show that in four central Asian states the comparable estimates for problem drug use (opiates and other drugs) amounted to, on average, 0.8% of the total population. This would be twice the rate found in eastern Afghanistan. Rates in Uzbekistan were found to be at levels similar to those in eastern Afghanistan (0.3%), but prevalence rates in Tajikistan (0.8%), Kazakhstan (1.2%) and Kyrgyzstan (1.8%) were significantly higher.

[y] Data refer to first results of a rapid assessment study conducted by UNDCP in Central Asian countries in 2001. So far, results are available from four countries: Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.

Table 25: Estimates of the extent of problem drug use in selected districts of eastern Afghanistan in 2000 (sorted according to opium use)

District	Province	Population est.	Hashish				Psychotropic substances				Opium				Heroin			
			Number of drugs users				Number of drugs users				Number of drugs users				Number of drugs users			
		Total	Est. A*	Est. B**	Average	in %	Est. A*	Est. B**	Average	in %	Est. A*	Est. B**	Average	in %	Est. A*	Est. B**	Average	in %
Hesarak	Nangarhar	37,000	1,441	1,754	1,598	4.3%	938	725	832	2.2%	158	199	179	0.48%	21	14	18	0.05%
Sayed Karam	Paktia	73,000	3,602	8,110	5,856	8.0%	885	605	745	1.0%	400	202	301	0.41%	111	61	86	0.12%
Azro	Logar	18,000	2,132	1,878	2,005	11.1%	425	307	366	2.0%	74	49	62	0.34%	16	12	14	0.08%
Gardez	Paktia	62,000	1,306	1,446	1,376	2.2%	307	74	191	0.3%	59	56	58	0.09%	16	10	13	0.02%
Khak-e-Jabar	Kabul	11,000	33	85	59	0.5%	1	1	1	0.0%	3	1	2	0.02%	0	0	0	-
Average for five districts		201,000	8,514	13,273	10,894	5.4%	2,556	1,712	2,134	1.1%	694	507	601	0.30%	164	97	131	0.06%
		Adults																
Average for five districts		120,000			10,894	**9.1%**			2,134	**1.8%**			601	**0.50%**			131	**0.11%**
Range for five districts		120,000	8,514	13,273		**7.1%-11.1%**	2,556	1,712		**1.4%-2.1%**	694	507		**0.4%-0.6%**	164	97		**0.08%-0.14%**

* Estimate A: Average number of estimated drug users as reported by key informants

**Estimate B: Average number of estimated drug users as reported by drug users

Source: UNDCP, *Community Drug Profile #4, An Assessment of Problem Drug Use in Rural Afghanistan: the GAI target districts*, February 2001

Higher prevalence rates, like in most other countries, have been reported for hashish use in eastern Afghanistan (5.4% of total population or 9.1% of the adult population) as well as for the misuse of psychotropic substances, which are bought - usually without prescription - from pharmacies as pharmaceutical drugs (1.1% of the total population or 1.8% of the adult population). They include mainly benzodiazepines (mostly *diazepam* and *lorazepam*) and, to a lesser extent, *methaqualone,* barbiturates *(phenobarbitone) and pentazocine*, a painkiller, often injected by heroin addicts as a substitute. In this context it may be also interesting to note that heroin adulterated with diazepam and phenobarbitone was identified to be typical for seizures that could be traced back to the Afghanistan/Pakistan border regions,[61] indirectly reflecting the availability of these substances in the region.

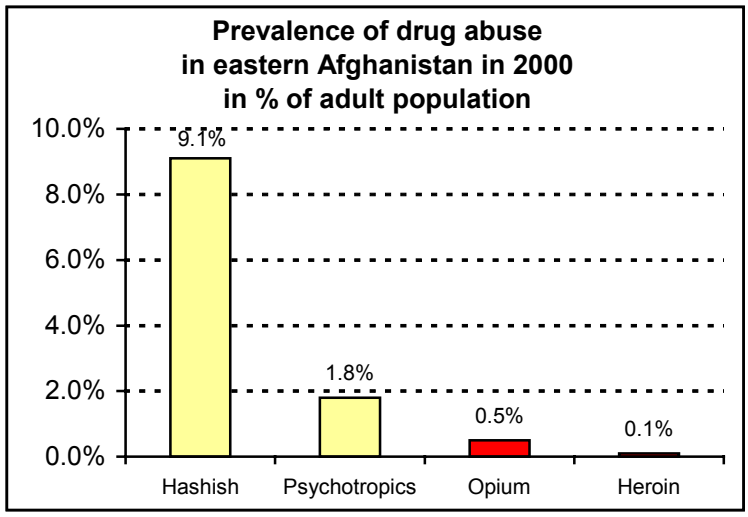


Figure 30
Source: UNDCP, *Community Drug Profile #4 An Assessment of Problem Drug Use in Rural Afghanistan*, Feb. 2001, p. 11.

The analysis of the district results provides some interesting additional insights, suggesting that there is a link between opium production and the abuse of opiates.

The highest level of opium use among the five districts was reported from the district of Hesarak (0.5% of the total population), located in Nangarhar. (This was the second largest opium producing province of Afghanistan until 2001). Hesarak had by far the highest opium production among the five districts investigated. In 2000, 541 hectares were cultivated with opium poppy in 76 villages out of a total of the district's 97 villages. This was sufficient to produce some 20 metric tons of opium in 2000, equivalent to ½ kg of opium per inhabitant, more than the national average ($^1/_8$ kg per inhabitant in 2000).

The second largest opium producing district among the five districts investigated was Azro (Logar province). Over 1 metric ton of opium was produced in Azro district on 46 hectares in 2000 (some 60 grams per inhabitant, about half the national average). Prevalence of opium use in Azro was equivalent to 0.3% of the total population, about the same as the five-district average.

The lowest rate of opium use was reported from Khak-e-Jabar district (0.02% of the total population) in Kabul province. It was also the only district where no heroin use was reported. No opium production took place in this district over the 1994-2000 period.

There was no poppy cultivation in the two districts located in Paktia province, Gardez and Sayed Karam. While the district of Gardez had very low levels of opium abuse (0.09% of the total population), the neighbouring district of Sayed Karam reported rather high levels (0.4%). This suggests that opium production is not the only determinant of the extent of opium abuse in Afghanistan.

Regarding heroin abuse, the Sayed Karam district (Paktia) reported the highest such prevalence rate across all five districts (0.12% of the total population). There have been no reports of any particular concentration of clandestine laboratories in the district which could explain the rather high levels of abuse. However, Sayed Karam district was strongly affected by the war, resulting not only in large-scale destruction but also in large numbers of refugees. Three quarters of all families saw themselves forced to leave the district over the last two

decades; 90% of these refugees, however, had returned to the district by the year 2000.[62] This high rate of returned refugees appears to be largely responsible for the rather high levels of abuse.

Overall key informants across the five districts expressed the opinion that most of the heroin users in eastern Afghanistan were refugees who had returned from Pakistan (and to a lesser extent from Iran) where they had started their heroin habit. This was basically also confirmed in interviews with drug addicts. In terms of the location of first heroin use, 7 out of 8 heroin users across the five districts reported that they first used heroin in Pakistan.

The same is not the case for opium: 60% of the opium users interviewed reported that they started using opium first in Afghanistan, 40% started it abroad, of which two thirds started it in Pakistan and one third in Iran. For all drugs, the ratios of first use were 61% in Afghanistan, 36% in Pakistan and 3% in Iran. [63]

The overall economic impact of drug abuse in Afghanistan – relatively low numbers of users compared to neighbouring countries and (until recently) low prices – has been rather modest so far, though in the context of extreme impoverishment and few job opportunities, any available income spent on drugs severely depletes already limited household finances. Given estimates of Afghanistan's population, ranging from 21 to 26 million people, applying the opium prevalence estimates of eastern Afghanistan for the country as a whole and assuming an average consumption of about 1 kg of opium per user and per year[z], total local consumption in 2000 may have ranged from 63 to 78 tons, equivalent to about 2% of total opium production in that year. In monetary terms, using the average opium prices reported from the bazaars ($39 per kg in 2000), overall domestic consumption of opium would have been worth $2.5-$3 million which – even for the country's small economy - is an almost negligible amount, equivalent to less than 0.1**%** of GDP[aa] Moreover, a significant proportion of the opiates is not purchased by opium addicts in the bazaars because they produce it themselves. Assuming again an average consumption of around 1 kg of opium per year and given an average yield of 36 kg opium per hectare in 2000 (which due to the drought was a below-average yield), 0.03 hectares of land, equivalent to 300 m^2 under poppy cultivation would have already been sufficient to cover a person's annual opium requirements. Many opium addicted refugees, even though poor, still have sufficient land at their disposal to be able to dedicate some 300 m^2 for poppy cultivation to produce sufficient opium for personal consumption. The overall economic burden for opiates users resulting from the purchases of opium for personal use could thus have been significantly less than $3 million. Given high levels of unemployment in the country, productivity losses due to drug abuse have not played much of a role either. There was still more than sufficient labour available in the country. In short, while the social aspect of drug abuse is important, the economic impact of drug abuse has not yet reached any critical orders of magnitude.

The economic impact could, however, become far more serious as refugees return to Afghanistan. According to UNHCR sources more than 1.3 million Afghan refugees were repatriated to Afghanistan over the March-June 2002 period, of which 1.2 million returned from Pakistan, 100,000 from Iran and 10,000 from Central Asia.[64] It is likely that a significant number of these refugees have a drug problem. Apart from less money available for essentials, there will be also less money available to take advantage of development opportunities. A number of cases have already been reported where refugee repatriation grants were simply used to buy drugs.

Afghanistan, like most other countries, has also been confronted with the problem of drug users committing crime to finance their habit. With refugees returning and with prices of opiates having risen tenfold in 2001 and having remained at the higher levels in 2002, it is likely that drug-related property crime will continue to increase for some time. In 2000, a kilogram of opium, i.e. the average annual requirement of an opium user, could be bought from the bazaars for around $39 per kg. Given reports of average wages of $1-$2 a day[65] an average Afghan could reckon with an income of $365-$730 a year (about $550, on average). Thus his opium using habit (estimated at around 1 kg per year) would have cost him about 7% of his salary, or less if he had direct access to opium production. By mid 2002, however, opium prices fluctuated at around $400 a kg, i.e. about three quarters of average annual legal income (and for some Afghans less than their total annual income). It is obvious that unless such an opium using person either gives up his habit or gains direct access to opium production, the only short-term "solution" for him is to commit theft and other illegal activities. If the higher prices are maintained, this should help to reduce the incidence rate, i.e. the number of new drug recruits entering the market, and thus drug related crime as well.

[z] Estimates in the literature of average opium consumption range from about 0.65 kg to 1.4 kg per year.

[aa] Assuming a GDP of $250 per capita (as reported by UNDP) and a population of 23 million people, Afghanistan's GDP would have amounted to some $5.8 bn in 2000. The amount of opium consumed in the country would have been equivalent to about 0.05% of GDP.

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PART 2: ORIGINS

Chapter II

HISTORICAL ROOTS OF THE OPIUM ECONOMY

2. Historical roots of the opium economy

The previous chapter described the different dimensions of the opium economy in Afghanistan. The present chapter provides the historical background for its emergence. Four different factors are basic to explaining the entrenchment and expansion of opium poppy cultivation in Afghanistan:

(i) the lack of effective central government for a prolonged period of time;
(ii) the degradation of agriculture and most economic infrastructure due to more than twenty years of war;
(iii) the acceptance of opium poppy cultivation as a livelihood strategy by many rural households; and
(iv) the consequent development of a thriving commodity trade in opium in rural markets.

The first two factors require a historical review which is presented in this chapter. The latter two factors deal with micro-level decision-making, in peasant households and rural markets, and are considered in the next three chapters.

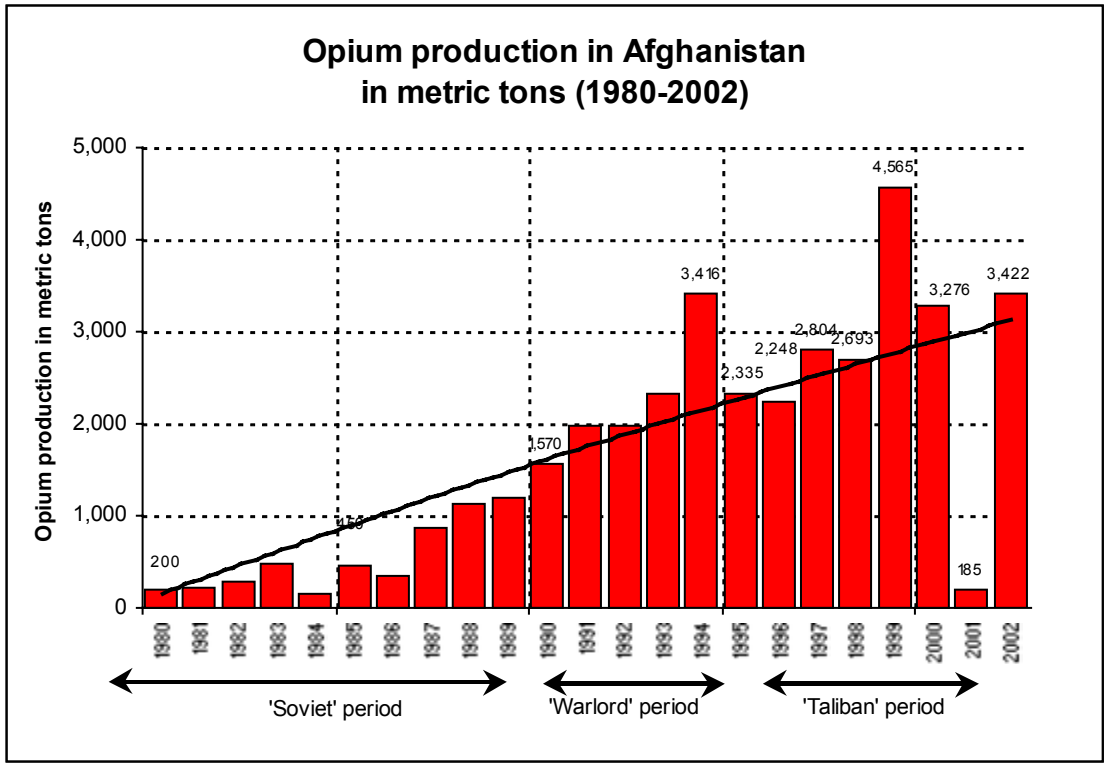

Figure 1
Source: UNODCCP, *Global Illicit Drug Trends 2001* and *2002* and UNODCCP, *Afghanistan Opium Survey 2002*.

There have been several explanations for Afghanistan's massive increase in opium production during the last two decades. Most of them are insufficient because they do not, by themselves, explain why one particular country, rather than any other, became the world's biggest opium producer in the short span of two decades. It has been argued, for instance, that production increased because climatic conditions for poppy cultivation are very favourable in Afghanistan. Opium poppy, however, can be cultivated in many countries of the world. In some of them, farmers can obtain opium yields equivalent to those in Afghanistan. The fact that farmers derive more income from illicit narcotic crops than from legitimate ones is not peculiar to Afghanistan but applies equally to many other countries in the world. Rural poverty is also not a sufficient explanation for opium cultivation in Afghanistan: many poor countries which could grow lucrative crops such as opium or coca do not, in fact, do so.

The explanation, therefore, must go deeper than such symptomatic descriptions. It can be found in a number of factors concerning the crises in the country's political system, civil society and economy. While twenty years of war may have been the crucible for distorting the economy and civil society, the conditions for it were more than two centuries in the making. An independent state was only created in Afghanistan in

the middle of the 18th century. The conditions which prevented it from being created earlier – the geo-strategic importance of the territory of Afghanistan – prevailed for more than two thousand years. Those same conditions recurred in the 19th and 20th centuries to ensure that the fledgling Afghan state could never consolidate. The principal result was the collapse of the state, first under foreign occupation in the 1980s and then in civil war during the 1990s. It was only in such conditions that whole sectors of the economy and civil society became perverted. In many parts of the country, cultivating opium became the only form of survival for rural communities. Commodity trade was also distorted because, apart from arms and contraband, the only other commodity worth trading was opium.

It should be noted, at the outset of this chapter, that the conditions which rendered the state and the government ineffective in Afghanistan do not prevail any longer. There is, today, a window of opportunity for nation-building and consolidation, created by the collective force of the international community superseding the particularistic interests of foreign powers. Following two decades of war and the demise of the Taliban regime in late 2001, a number of important steps have been taken towards nation-building. After several rounds of negotiation among various sections of Afghan society in Bonn (Germany) in December 2001, the parties agreed on a common Interim Administration. In June 2002 the Loya Jirga[a] (traditional grand assembly) was convened in Kabul and elected a president who heads the 'Transitional Authority' (TA), the new government of the country. The TA is mandated to run the country for 18 months until full-fledged elections will be held across the country. Afghanistan thus has, for the first time in its history, a central government which has a democratic basis and reflects the main ethnic groups of the country. This could well form the basis for the development of a truly pan-Afghan national identity in the future. The principal challenges of the TA are to establish the authority of the central government throughout the territory of the country, maintain peace, stability and security and – with the help of the international community – rebuild the devastated infrastructure. These objectives are not only important in themselves, but are also necessary conditions for dismantling the opium economy.

2.1. State formation

The geo-strategic importance of Afghanistan

…in the ancient world

Ever since ancient times, and well into the present, the territory now known as Afghanistan has been a strategic lynchpin: a battle-ground or buffer zone between three distinct geographical and cultural areas - the Iranian plateau to its west, the Indian sub-continent to its east, and Central Asia to its north. Today Afghanistan can still be seen as three distinct areas, at least in cultural, linguistic and ethnic terms, though not of course in political ones. The Hazaras, who inhabit the central parts of Afghanistan, look westward towards Iran; the Pashtuns and Baluchis of the east and the south look eastwards towards Pakistan and the Indian sub-continent; and the Tajiks, Turkmen and Uzbeks of the north look northwards towards Central Asia. This situation has been more than two millennia in the making. For nearly 2,500 years, these three neighbouring areas of Afghanistan were not only culturally differentiated, but politically distinct. This made Afghanistan, the buffer zone between them, ever more important strategically, and each competed with the others to secure political or military mastery over it. These circumstances, together with the ethnic mosaic left by centuries of invasion and migration, made it difficult for a viable, independent state to emerge in Afghanistan. When an independent state did emerge, during a brief window of opportunity in the late 18th century, the same combination of circumstances recurred in the 19th and 20th centuries and prevented that independent state from consolidating. Today there is another window of opportunity for the state to consolidate because the collective force of the international community has superseded the particularist interests of Afghanistan's neighbours.

[a] The Loya Jirga is based on an indirect system of representation. The system starts at the local and district level where *shuras* (councils) choose electors, who later cast ballots for Loya Jirga delegates. Each district chooses a predetermined number of electors based on population size, with the names of those chosen sent to one of eight regional observation centres. Once the submitted list of electors are verified, the electors travel to the regional centres to choose from amongst themselves a smaller number of Loya Jirga delegates. Thus by May a total of 98 district assemblies had taken place with 4618 delegates chosen in this first phase of the selection process. By the end of the selection process in June, 1450 delegates remained, including 399 which were chosen directly by the previously set up Loya Jirga commission with the aim of ensuring that all parts of Afghan society were represented. (Source: The Economist Intelligence Unit, Afghanistan, Country Report May 2002, p. 30.)

In the pre-historic world, probably as far back as 3,500 years ago, the Aryans passed through Afghanistan and went on to establish the ancient civilizations of Persia and India. The ancient religions of Zoroastrianism, stemming from the former civilization, and Buddhism, stemming from the latter, established themselves in Afghanistan. In the 4th century B.C., Alexander the Great conquered Afghanistan from Achaemenid Persia, and used it as a strategic base for his campaigns against Persia and India. Alexander's successors, a dynasty of Graeco-Bactrian kings, were only able to hold the territories he conquered in Afghanistan and the north-west frontier of the Indian subcontinent for a century after his death, and the areas were eventually divided between the Maurayan empire of India (which extended westward till the Indus and included the valley of Gandhara, as Peshawar was then called) and three empires established by nomads from the fringes of Persia: the Sakas and Parthians, who controlled Persia and southern Afghanistan, and the Kushans, who dominated Bactria (Afghanistan north of the Hindu Kush) as well as Transoxiana (the lands between the rivers Oxus, now Amu Darya, and Jaxartes, now Syr Darya). By the 3rd century AD, most of Afghanistan had come under the control of Sassanid Persia.

…in the medieval world

The medieval world saw the establishment of Islam in Afghanistan in the 7th century AD. The country again became a strategic base, this time for the spread of Islam into Central Asia and the Indian sub-continent. Muslim conquerors from the principalities of Ghazni and Ghor (both in present-day Afghanistan) created the Delhi Sultanate which dominated northern India from the 11th to the 15th centuries. Afghanistan was in the path of the Mongol invasions of India and Persia. Genghis Khan destroyed the great medieval city of Balkh, took Kabul and also destroyed Peshawar in the 13th century. At the end of the same century, the great Venetian traveller, Marco Polo, traversed the Silk Road which carried trade between Europe and China, and reported Balkh to be recovered from the Mongol invasions, and Badakshan producing, as it is still reputed to, fabulous gemstones[1]. One of Genghis Khan's successors, Tamerlane, again devastated Afghanistan *en route* to raiding India in the 14th century. In the same century, the great Arab traveller, Ibn Batuta, crossed Afghanistan on his way to India. He found Balkh in ruins, and noted that he was harassed by a "…Persian tribe called the Afghans" as he travelled from Kabul to the river Indus[2]. The Mongol invasions left permanent settlers – the Hazaras of Afghanistan.

…in modern times

The Mughal empire of India was established in the early 16th century by Zahir-ud-din Muhammad Babur, a descendant of Genghis Khan and Tamerlane, and a former ruler of Ferghana (in present day Uzbekistan). Babur made Kabul his first capital, and used Afghanistan as his springboard for conquering India[3]. The Mughals continued to use Afghanistan as a strategic pawn in their struggle with the Safawid empire of Persia. By the 17th century, western and southern Afghanistan were being ruled by the Safawids, eastern Afghanistan by the Mughals, and north-western Afghanistan by the Shaibanid Uzbek khanates of Transoxiana.

The first Afghan state in the 18th century

When, in the second half of the 18th century, these three empires began to decline, a window of opportunity appeared for the creation of the first Afghan empire. It was established by a former lieutenant of Nadir Shah of Persia, Ahmed Shah Abdali (also known as Ahmed Shah Durrani, 1747-1772). Ahmad Shah came from a tribe called the Abdalis, in the region around Herat. Together with one of their neighbouring tribes, and bitter rivals, the Ghilzais of Kandahar, the Abdalis form the core of what later came to be known as the Pashtuns in Afghanistan and the Pathans in Pakistan. Nadir Shah took Kabul and Peshawar, and became yet another conqueror to use Afghanistan as a strategic base to conquer India. The Mughal empire was in decline, and their capital, Delhi, fell to Nadir Shah in 1739. He went on to consolidate a formidable empire which covered Persia and Afghanistan, and extended northwards till the Jaxartes and eastwards till the Indus. When Nadir Shah was murdered in 1747, Ahmad Shah Abdali took the opportunity to establish control over Afghanistan. He adopted the title, Durr-i-Durran, 'Pearl of Pearls', and his dynasty thus came to be known as the Durrani dynasty. From 1747 to 1978, for all but a few years, the Durranis, or Abdalis, were the nominal, if not always real, rulers of Afghanistan.

Under Ahmad Shah Abdali, Afghanistan – or the Durrani empire as it was then called - covered a large geographical area. It is remembered in Afghan history as a period of great conquests. Ahmad Shah cobbled together a tribal empire covering Afghanistan, much of what is today Pakistan, and parts of north-

west India. His capital was Kandahar. He controlled territories till the Oxus in the north and Herat in the west. The declining Mughal empire ceded to him all the lands west of the Indus, as well as the province of Sind. He too used his base in Afghanistan to conquer northern India. His armies crossed the Indus and sacked Amritsar, the holy shrine of the Sikhs, who had established an empire in the plains of the Punjab as Mughal power contracted. He defeated a large central Indian confederacy and sacked Delhi in 1761. Unable to retain these far-flung dominions from Kandahar, he eventually left the central Punjab to the Sikhs, but kept the northern Punjab, from Peshawar to Lahore.

Shortly after Ahmed Shah's death in 1773, his empire disintegrated in wars of succession. The political scene was set by perpetually changing alliances and confusion - similar to what Afghanistan experienced in the 1990s. The limitations of agriculture in an inhospitable climate made the various groups willing recruits into invading armies or tribal confederations. The creation of an Afghan state was thus not sufficient, in itself, to create a pan-Afghan national identity. The diverse ethnic population remained loyal to several tribal identities or particularistic nationalities. Government was largely built on opportunism, paying off tribesmen and mercenaries with loot and holding out the prospects for more. This guaranteed the success of Afghan warlordism over the next two centuries.

The Great Game of the 19th century

The widow of opportunity within which the Afghan state had been created was closed in the 19th century. The Russian Tsarist empire expanded across the northern landmass of Asia and the British colonial empire consolidated in India. The Russian need to secure access to a warm water port which could be used throughout the year eventually came up against the British resolve to defend their empire in India and the security of their eastern trade routes. In a swathe of territory which ran from the Black Sea and the eastern Mediterranean to the Pacific, the British and the Russians played, in Rudyard Kipling's inimitable phrase, a 'Great Game' for power and influence. Central Asia, in the middle of this swathe of territory, became the strategic pressure point, and the Great Game was played out, among other places, in Afghanistan and Tibet. Afghanistan thus reverted to its traditional status of a buffer zone between competing powers. In the 19th century, however, it was two, instead of the traditional three, powers because one of them, Persia, lapsed from imperial glory and itself become a buffer zone between the British and the Russians.

The nature of the Great Game was for one power to pre-empt the other and secure political influence rather than outright annexation. Since Afghanistan was strategically important and a buffer zone, it became convenient to maintain it as a *de jure* sovereign state. The question was which of the two powers would secure the dominant position. In the event, from 1839 to 1919, it was the British who succeeded in keeping Afghanistan under their influence. They paid a considerable price, including, in the first Afghan War (1839-42), what has been called one of the worst disasters in British military history.[4] From this war, they learnt the dangers of trying to occupy Afghanistan and subdue it militarily. Their strategy thenceforth became one of trying to maintain a friendly ruler and warlords in Afghanistan. This objective was secured by means of paying out subsidies, securing defensible frontiers between British India and Afghanistan, and only resorting to military action when they felt that the defence of India was at stake. Because of this, the North-West frontier of their Indian empire loomed so large in the imperial imagination, [5] and, along with the Great Game, shaped the political consciousness of a generation of British imperial leaders.[6] The resort to military action, however, again became necessary towards the end of the 19th century. In the second Afghan War (1878-79), the pattern of the first war, a British military setback followed by an army of retribution which took Kabul, was repeated. The annexation of several western Afghan territories into British India followed. The frontier between British India and Afghanistan was delineated by the Durand Treaty of 1893, the so-called Durand Line. It was negotiated between Abdur Rahman, the Amir of Afghanistan between 1882 and 1901, and Sir Mortimer Durand.[7] The western Afghan territories remained in the British Indian province of the Punjab until 1901, when they were made into a separate province called the North-West Frontier Province. The province has retained this name, and substantially the same territory, in present-day Pakistan, into which it was incorporated following the end of British colonial rule in 1947.

The Durand frontier

The Durand Line has been a difficult frontier for over a century. Afghanistan, and its borderlands with Iran and Pakistan, contain one of the largest concentrations of tribal societies in the world. The Durand Line, since it still marks the border between Afghanistan and Pakistan, splits the Pashtuns, the largest ethnic

group in Afghanistan[b], and made up of many different tribes, into two countries. This division is reflected in verbal usage. In British India, the Pashtuns were known as Pathans; this usage continues in contemporary Pakistan. An incipient national movement of the Pashtuns, in terms of the aspiration for a united state called Pashtunistan, has sometimes become a contentious issue in relations between Pakistan and Afghanistan. If the people on either side of a border are of the same ethnic group or tribe, it becomes notoriously difficult to police that border. The degree of success in sealing the border would depend on the extent to which tribes on either side accept the national identity of the two nation states in question. This has certainly not been the case in Afghanistan, where a pan-Afghan identity was never cemented. It has also not been the case with all the Pathans of Pakistan, particularly the hill tribes among them[8]. The Durand line also passes through the territory of the Baluchis, tribes which are well known for refusing to accept the legitimacy of national frontiers that divide them[9].

Between 1839 and 1919, as noted above, Afghanistan remained in the British zone of influence, and every Afghan king received a British subsidy. The tribes were left to their own devices. Attempts by the monarchs to establish central authority over the whole country were sporadic and abortive. A weak central state and rampant warlordism ensured the long-term failure of any kind of modern development or nation-building. During the First World War, Afghanistan stayed within the British zone of influence, despite attempts by the Central Powers to pull it into their camp: a German-Turkish delegation actually visited Kabul in 1915. The expected Afghan revolt against British influence did materialise, but after the War. Before it did, Afghanistan's independence was recognised at the Paris Peace Conference in the spring of 1919. Czarist Russia, now re-constituted as the Soviet Union, was one of the first states to give formal recognition to the *de facto* independent Afghanistan. Despite this, the Great Game continued. British imperial planners still saw Afghanistan as crucial to the defence of India, and were even willing to consider extending the defensible frontier across the Oxus into Central Asia and the Caspian Sea, and north-east across the Suez Canal into Palestine, which they had acquired from the Ottoman Empire in 1917.[10]

The inter-war years

The defeat of the Central Powers and the consequent dissolution of the Ottoman empire created an enormous problem for the British empire in the east. The Ottoman Sultan was also the *Caliph* or *Khalifa*, the spiritual and temporal leader of all the Sunni Muslims in the world. As Turkey reconstituted itself as a republic, the Ottoman Sultan was removed from power. The holy places of Islam, in Mecca and Jerusalem, had hitherto been under the suzerainty of a Muslim state – the Ottoman empire. They now fell into the zone of influence of a non-Muslim state – the British empire. A Pan-Islamic movement, in support of the sanctity of the Khalifa and the Muslim holy places, began to grow in the Middle East and British India, which alone had about 70 million Muslims. It merged with Indian nationalism, which also began to grow rapidly in the aftermath of the War. Hindus and Muslims combined in a powerful wave of nationalism that came to be known as the *Khilafat* (in support of the *Khalifa*) Movement.[11] It shook the resolve of the British *Raj* in India, which began to negotiate devolution of power to Indian nationalism soon after. It had its effect in Afghanistan as well, and in the summer of 1919, there was a rebellion against British influence in the country. This is sometimes known as the third Afghan War. The British suppressed it militarily, but this time with their air force[12], which proved to be a cheaper and more effective solution for an empire stretched to the limit after four years of world war.

In the Treaty of Rawalpindi, which followed the armistice at the end of 1919, the Afghan state regained some of the autonomy it had ceded to the British in the 19th century: the British subsidy ended, the Durand frontier between Afghanistan and British India was confirmed, and Afghanistan's independence was recognized. In confirmation of recovering control of its foreign relations, Afghanistan signed agreements with the Soviet Union, Turkey and Iran. The ruler, Amir Amanullah (1919-29), began an extensive programme of modernization. The first Afghan Constitution was promulgated in 1923. The whole administrative system was re-organized and new courts with secular codes of law were established. A powerful drive against traditional customs, for instance the use of the veil, resulted in a backlash. Tribal uprisings in the east allowed a group of rebels led by a Tajik from the north, Habibullah Kalakani, better known as Bacha Saqao ('son of a water-carrier'), to take Kabul in 1929. He was the first non-Pashtun to rule Kabul since 1747, but he lasted less than a year. The Pashtun tribes rallied under Nadir Shah, another Abdali, took Kabul,

[b]The *Pashtuns/Pathans* are generally regarded as synonymous with *Afghans*. Though this is not quite correct, the usage has occurred because a Pashtun tribe, the Abdalis, controlled the state in Afghanistan for the better part of two centuries. It also occurs because in contemporary Pakistan, the *Pathans* are frequently called *Afghans*. In contemporary Afghanistan, the Pushtuns are the biggest ethnic group, constituting nearly half of the total population of the country.

executed Bacha Saqao and drove his Tajik followers out. Nadir Shah was elected Amir of Aghanistan, and began a programme of conciliation and cautious reform. A new Constitution was promulgated in 1931. The foreign policy of Afghanistan was based on trying to steer a cautious course between the USSR and the British Empire. In 1933, Nadir Shah was assassinated in a blood feud. His son, Zahir Shah, became Amir and ruled the country till he was removed by a coup in 1973.

During the inter-war years, the Pashtunistan issue embroiled Afghanistan in the national movement of the Indian sub-continent. In the protracted encounter between the British *Raj* and Indian nationalism, the national movement split, and British India was partitioned into India and Pakistan in 1947. Compelled by geography, religion and politics, the North-West Frontier Province became a part of Pakistan: this was decided by a referendum organized by the *Raj*. Following the referendum, the individual *jirgas* of the tribes stated unequivocally that they wanted "exactly the same relations to subsist between them and Pakistan as had existed between them and the British government".[13] The Pashtunistan issue, however, remained salient after 1947 because it now found resonance in Afghanistan, on the other side of the Durand line. Afghanistan was not willing to accept the Durand line as a valid frontier: the British had imposed it in 1893, and with their departure in 1947, it lost its legitimacy for the Afghans. In the vote on the admission of the newly independent state of Pakistan to the United Nations, the only dissent came from Afghanistan. The Durand frontier, however, was vital for Pakistan. If its legitimacy were questioned, Pakistan would face the prospect of loosing much of the territory of its North-West Frontier Province, either to Afghanistan or to a new state of Pashtunistan. Such a prospect became intolerable because another Muslim majority area, Kashmir, went to India in the partition of the sub-continent in 1947. Kashmir caused the first war between India and Pakistan and has been disputed ever since.

Afghanistan during the Cold War: the 1950s to the 1970s

The Pashtun/Pathan issue soured relations between Pakistan and Afghanistan for the next thirty years. The problem was exacerbated in 1953 when Daoud Muhammad Khan, a cousin of King Zahir Shah, came to power in a bloodless coup. Without actually endorsing an independent state of Pashtunistan, Daoud Muhammad Khan espoused the idea of Pathan independence.[14] If realised, this would have meant the dismemberment of Pakistan. Relations between the two countries deteriorated to the point of a formal closure of the borders in 1961. Eastern Afghanistan was, and still is, almost entirely dependent on trade and exchange with Pakistan. Economic necessity brought Afghanistan closer to the Soviet Union. The departure of the British was thus quickly followed by an outcome that they had sought to prevent for over a century. For the United States, which could have redressed the balance, Central Asia became a sideshow in the new Great Game, now called the Cold War. American policy concentrated on containing Soviet power in Asia by means of supporting a tier of southern states: Turkey, Iran and Pakistan. Even though the United States did provide considerable aid to Afghanistan ($ 533 million in economic aid from 1955 to 1978), the Soviet Union provided a lot more ($ 1.27 billion in economic and approximately $ 1.25 billion in military aid over the same period)[15], and secured greater leverage over the country.[c] From the 1960s onwards, Afghanistan came ever closer into the Soviet Union's economic and political orbit.

There was still no real autonomy for the Afghan state. If not constrained by external geopolitical realities, it continued to be hamstrung by its own internal tensions. The traditional troika of the *khan* (feudal lord), *malik* (tribal chieftain) and *mullah* (Muslim priest) controlled the countryside quite effectively, had no need for a central government, and objected strenuously and violently whenever the central government made any attempt at reform or change. Kabul was an island, distinct and separated from the countryside. It was inhabited by the Abdali rulers and a small political class which lived off the loaves and fish of power. After the mid-1960s, the pace of political change became more rapid and the gap between Kabul and the countryside continued to widen. Daoud Muhammad Khan was pushed to the sidelines and the King, Zahir Shah, introduced limited democratic reforms in 1964. In the same year, the country's first university was established in Kabul. Soviet influence grew steadily. Much of the officer corps of the Afghan army was trained in Moscow. A new political party, the People's Democratic Party of Afghanistan (PDPA), espoused a pro-Moscow political line. It split into two factions, the *Khalq* ('Masses') and the *Parcham* ('Banner'). It has been argued by some observers that the two factions each owed allegiance to a different branch of the Soviet espionage apparatus: the *Khalk* to the GRU and the *Parcham* to the KGB.[16] Their political strategies

[c] John Griffith, who traversed Alexander the Great's route to Afghanistan in 1957, noted, on another visit in 1966, "the absolute strangling grip the Russians were getting on the Afghan economy, and the futility of western efforts insofar as concerned aid. The Americans would give the grain, the Russians would build the silos to store it in, and they would end up getting all the credit." Cited in Schofield, *op.cit*., p.266.

followed from this, the *Khalq* concentrating on building support in the Afghan armed forces and the *Parcham* on cementing the political loyalties of teachers and intellectuals.

In 1973, Daoud Muhammad Khan returned to power in another peaceful coup. Zahir Shah accepted exile in Rome, and Afghanistan became a Republic. The leaders of both the *Khalq*, Nur Muhammad Taraki and Hafizullah Amin, and the *Parcham*, Babrak Karmal, initially supported the 'Red Prince', as Daoud was known because of his close ties to the Soviet Union in the 1950s. The PDPA leadership thought Daoud had both the stature and commitment to mordernize Afghanistan. But Doaud, once firmly established in power, dropped the PDPA from his government, distanced himself from Moscow, and tried to position Afghanistan's foreign policy with the Non-Aligned movement.[d] In 1978, the *Khalq* faction of the PDPA hit back in yet another coup. Daoud and his family were shot. Nur Muhammad Taraki became head of the Revolutionary Council of the Democratic Republic of Afghanistan. The *Parcham* leader, Babrak Karmal was initially made deputy prime minister, but then politically neutralized by being sent off as Afghan Ambassador to Czechoslovakia.

Soviet occupation

More than two centuries of virtually unbroken Abdali rule in Kabul ended in 1978. Taraki was also a Pashtun, but from the Ghilzai tribe, who were the traditional rivals of the Abdalis. Two of Afghanistan's timeless problems, its ethnic/tribal mosaic and fissiparous regions, now prevented, yet again, the creation of a viable pan-Afghan identity and state. Much as the King Amanullah had tried to do in the 1920s, Takaki tried to ram through a programme of rapid mordernization, this time with considerable brutality and a socialist slant: redistribution of land, literacy campaigns for women, abolition of the bride-price, public support for Marxist doctrine. In an incident typical of the astonishing lack of sensitivity to the traditional religious fabric of the country, one government minister apparently offered public prayers for the souls of Marx and Lenin.[17] The response was similar to that which greeted Amanullah's reforms half a century earlier: revolt in the countryside. It began in Herat – the traditional homeland of the now dispossessed Abdali tribes - in the spring of 1979. It spread rapidly to other parts of the country, particularly when mullahs began to exhort the population to choose between the Communist Manifesto and the Koran. In Kabul, a split developed between Taraki and his deputy prime minister, Hafizullah Amin. Taraki apparently secured Soviet support for his position, but Amin acted quickly and had Taraki assassinated. Amin assumed power but was apparently not favoured by the Soviet Union. In December 1979, Soviet forces entered Afghanistan. Amin was killed and Babrak Karmal, the leader of the *Parcham* faction, was installed in power.[18]

The war of national liberation in the 1980s and civil war in the 1990s

For the next twenty years, the Afghan state was almost entirely eclipsed. The 1980s were a decade of Soviet occupation, the 1990s of civil war[19]. The international situation changed completely in the early 1990s following the collapse of the Soviet Union and the end of the Cold War. Afghanistan had been a strategic lynchpin in two bipolar conflicts for nearly two centuries: the Great Game and the Cold War. After 1990, it remained a strategic lynchpin, but the players changed. The Soviet Union collapsed, the United States lost interest, and Afghanistan's regional neighbours - from Pakistan, Iran and the new Central Asian states to Saudi Arabia - now began to back their proxies in the new struggle for the mastery of Afghanistan. In the resulting civil war, which spanned the 1990s, state failure was still manifest. Warlordism and particularistic nationalism, the perennial problems of the country, continued to be part cause and part consequence of the failure of a pan-Afghan state and identity. It was precisely in these two decades that an opium economy became firmly established in the country. It flourished in conditions of war and anarchy. It then became part of a vicious circle, contributing to the perpetuation of war and anarchy. The next section of this chapter tries to explain how the opium economy became entrenched in Afghanistan in the 1980s and 1990s.

2.2. Opium and the war economy

In contrast to India, Iran and other parts of Asia, opium poppy was not really a 'traditional crop' in Afghanistan. It was not cultivated in most parts of the country until the 1990s. Unlike many other countries in the region, Afghanistan did not have much of an 'opium culture'. Thus, opium consumption, until recently,

[d] A movement which began in the mid-1950s, lead by Egypt, India, Indonesia and Yugoslavia, which sought a foreign policy alternative to alliance with either the Soviet Union or the United States.

remained relatively low. Only in a few parts of Afghanistan, such as in the province of Badakshan in the north of the country, could one speak of something like an 'opium tradition'; but even this does not appear to date back much longer than the 18th century.[20]

It was only in the late 20th century, notably in its last two decades, that Afghanistan emerged as an important opium producer. Afghan authorities reported opium production in the early 20th century though it was then still very modest. In the 1920s and 1930s, Afghanistan participated in the meetings of the Permanent Central Opium Board[e] under the auspices of the League of Nations. At the Second Opium Conference of 1924, Afghanistan reported poppy cultivation in the provinces of Herat (western Afghanistan), Badakshan (northern Afghanistan) and Jalalabad (eastern Afghanistan). The amounts produced, however, were still very small compared to other reporting countries or the amounts produced in Afghanistan in the 1990s. Opium production was essentially confined to just three provinces, while in 2000 opium production was reported from 22 out of 28 provinces. No production was reported, at that time, from the southern provinces of Helmand and Kandahar, which in the late 1990s and in 2000 accounted for more than half of Afghanistan's total opium production. In 1932, the first year for which quantitative estimates of production were provided, Afghanistan produced 75 tons of opium. China, in comparison, produced about 6,000 tons in the same year[21]. The area under cultivation in 1932 was reported to be less than 4,000 hectares. For comparison, 92,000 hectares were under cultivation in 1999, 82,000 ha in 2000 and even in 2001, the year of the Taliban ban, some 7,600 hectares were cultivated producing 185 tons of opium, more than twice the amounts reported back in 1932.

In 1945, Afghanistan prohibited opium production, but some smuggling through India continued.[22] Nonetheless, production had fallen to 12 tons by 1956[23], and another law to prohibit production was promulgated in 1957. Subsequent reports indicated, however, that the country was unable to enforce the ban. Thus, during the 1961 Plenipotentiary Conference for the adoption of the Single Convention on Narcotic Drugs, Afghanistan was listed among the countries "…in which narcotics constitute a serious problem".[24] The problem continued to worsen. The report of the International Narcotics Control Board in 1970 noted that while opium production was forbidden by the Afghan Government, the outflow of opium into adjoining regions indicated that the ban was not being enforced.[25] In 1971, the view was expressed at the Commission on Narcotic Drugs that the attitude of the government of Afghanistan was perhaps too passive[26] in response to Afghanistan's recognition that illicit opium production was increasingly taking place and its stated inability to achieve a significant suppression of production. As early as 1972 the Board listed Afghanistan among those countries which presented the strongest immediate challenge in terms of control of illicit production and traffic. Turkey abolished opium production in 1972, and it was already clear that Afghanistan could become an alternative source of supply.[27] The same year the Board sent representatives to Kabul to review the situation and concluded that the capacity of the country to effectively implement drug control policies was limited. The most acute problem was found to be in Badakhshan. Representatives of the United Nations Food and Agriculture Organisation were also part of the delegation with a view to initiating projects for crop substitution and community development.[28]

The 1970s witnessed basic changes in the illicit opium market. Between 1972 and the early 1980s three main sources of opium production, Iran, Pakistan and Turkey, were enforcing bans or severe drug control laws, creating an opening for other sources of opium in South-West Asia.[29] In Afghanistan, meanwhile, the PDPA Government lost control of the countryside after resistance to Soviet occupation began in 1979-80. Most of the opium producing areas thus slipped out of the control of the government.

The rural economy deteriorated as a result of the fighting (food production fell by half to two thirds) and this meant that growing urban populations were more and more dependent on government assistance.[30] Both sides of the war relied on imports of arms and cash, which resulted in a rapid monetization of the economy.[31] There were indications that the *mujahideen* were using the production and sale of opium to finance some weapons needs. An increasingly structured and formalized economic system grew from this nascent "drugs for arms trade." Opium was one of the only commodities which could generate enough income for large scale arms purchases. In parallel, there was a shift in agricultural livelihood strategies as the collateral damage from years of intense fighting destroyed other income generating activities. Shrinking sources of illicit opium for the international market - Iran effectively prohibited poppy cultivation after the 1979

[e] The predecessor of the International Narcotics Control Board (INCB).

revolution[32] - made Afghanistan into an alternative source of supply. The trend became clear in the 1980s: internal factors were leading to an upswing in Afghan opium production while external factors were opening major markets, ensuring the economic viability of opium production.

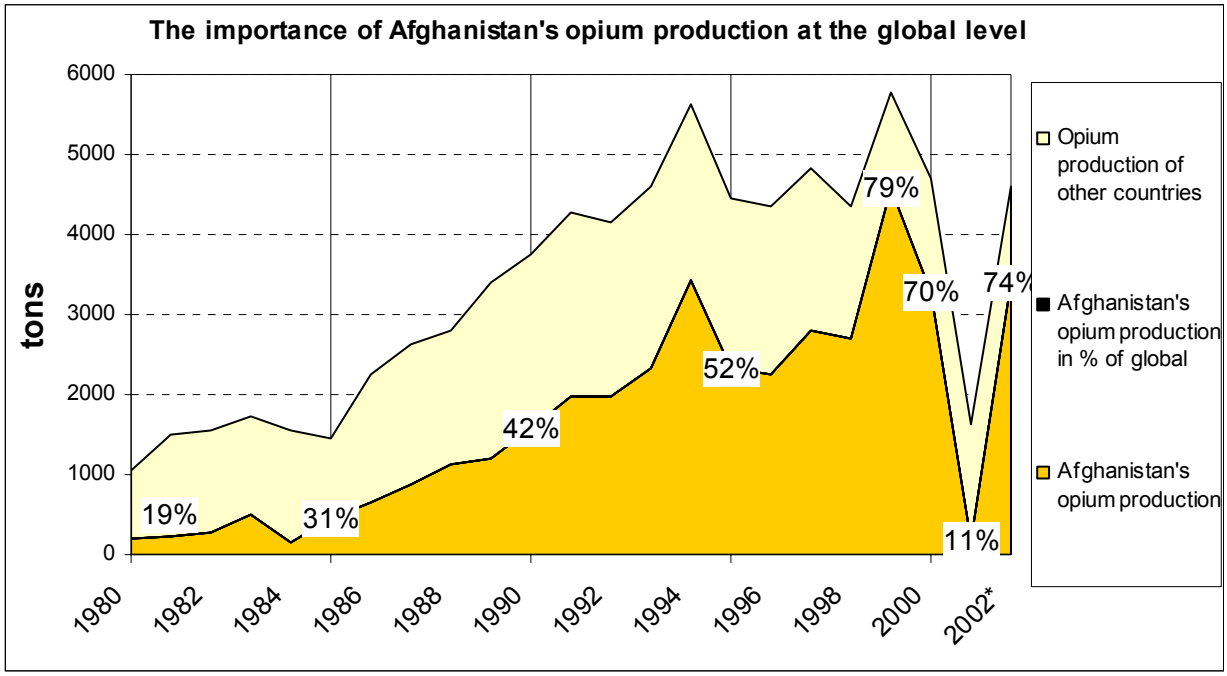

Figure 2
Source: UNODCCP, *Global Illicit Drug Trends 2001 and 2002* and UNODCCP, *Afghanistan Opium Survey 2002*.

Afghanistan's increasingly dominant role in global opium production is essentially a story of the last two decades. It started with the war in 1979 which, from a war of liberation against foreign occupation, changed its character to a civil war among various mujahedeen factions in the 1990s. From the middle of 1990s, it changed again, becoming a military conflict between the Taliban (mostly Pashtuns) and a coalition of various ethnic minorities in the north of the country.

Opium production in Afghanistan grew at an average rate of 15% per annum over the 1980-2000 period, almost twice as fast as the global opium production growth rate of 8%. While Afghanistan produced about 19% of world opium in 1980, this proportion grew to 52% by 1995, the year prior to the Taliban take-over, and rose to 79% by 1999.

By the late 1980s, the almost total breakdown of the central government in Afghanistan resulted in a weakening of social and legal constraints on the cultivation of opium poppy. Those involved in the cultivation, harvesting and production of opium, including both peasants and landless labourers, had been involved in it for at least a decade. They had developed and expanded know-how and technical expertise and were using established markets, infrastructure and trading systems. The harvesting of opium poppy, although labour intensive, had proven to be a sustainable alternative in the prevailing circumstances. Opium itself is a durable commodity and commands higher prices than other agricultural products. Because fresh opium can be retained and stocked by farmers and sold later as dry opium, the product itself gave farmers crucial collateral to use for access to credit and investment. Moreover, the stocks of dry opium play an important role in the overall price structure of the crop, enabling farmers to hedge against both oversupply and under-production. Though a large part of the transport infrastructure had been destroyed by the fighting, the various factions had a direct interest in maintaining what was necessary for the opium trade - giving opium a market of increasingly viability while markets for other crops continued to deteriorate. The production of opium had thus reached a critical mass. It was firmly in existence, providing funding for various activities. The increasing monetization of the economy necessitated by the war had created incentives for cash based activities. Among these, the cultivation of opium emerged as one of the most lucrative for a large sector of the population.[33]

Though the Soviet occupation triggered the development of an opium economy, the withdrawal of the Soviet forces, the dissolution of the Soviet Union and the end of the Cold War, meant that the opium economy became even more entrenched in Afghanistan's domestic economy. The average annual growth rate for the production of opium in Afghanistan was 14% between 1979 and 1989, but it accelerated to 19% between 1989 and 1994.

Opium production accelerated after the Soviet withdrawal for two reasons. First, it provided a viable source of income for warring factions. Secondly, it had proven itself to be a viable crop for cultivation and rural livelihood and, in contrast to the destroyed licit agricultural sector, had developed systems and infrastructure which actually functioned. After the Soviet withdrawal and through the mid 1990s, sources of external support and patronage of the various fighting factions lessened.[34] This forced factions which were still fighting to devise new sources of financing. Opium was the first and best option available.

As war raged in Afghanistan, opium became an important method of generating income and thereby, almost intrinsically, developed further the systems of investment and growth which had begun in the 1980s. In parallel, food prices rose by factors of five or ten and the government financed its growing budget deficits by printing money.[35] People lost faith in the currency and opium increasingly became a means of saving and exchange.

It should also be noted that the expansion of Afghan opium production over the 1980s and 1990s occurred in tandem with a general degradation of practically all social and economic indicators. While official statistics provided by the regime in Kabul to the United Nations only showed a fall of the country's gross domestic product (GDP) by 16% over the 1980-1990 period (with the agricultural sector falling by 29% over the same period)[36], the actual declines were probably higher. There was considerable destruction in the country following the Soviet withdrawal in the years from 1990 to 1992. According to another set of statistics, used by the International Centre for Humanitarian Reporting, the gross national product (GNP) per capita fell from an already very low level of $222 in 1984 to $164 in 1991[37], a decline by more than a quarter in seven years and – compared with published UNDP figures – the third lowest GNP per capita figure in the world after Mozambique and Ethiopia[38] . (Mozambique and Ethiopia also had severe civil wars in 1991). If one takes the 1981 GDP per capita ($250)[f] as a basis for comparison, the decline in per capita figures amounted to more than a third over the decade. But the decline of Afghanistan's total GDP could have been even larger because many people fled the country or were killed. Taking estimates into consideration that about 9% of the population were killed between 1978 and 1989 and a third fled the country[39], the decline of overall GDP amounted to almost 60% over the 1981-1991 period. According to yet another set of statistics, GDP was estimated by UNDP - as part of its Rehabilitation Action Plan of 1993 -, to have amounted to Af124.7 bn or $1.72 bn in 1991/92 compared to Af117 bn in 1978/79[40] or $2.6 bn, i.e. a decline by some 50% based on nominal US-dollar figures. If the calculation is based on constant US-dollars (i.e. taking inflation into account), the real decline was again close to 60%.

In the rural areas, where about 85% of the population lived before the war, and with agriculture accounting for 68% of all employment in the country (estimates for 1998),[41] the situation was not much better. Between 1979 and 1989 regular agricultural production was severely disrupted. Between half and two thirds of all villages were bombed. The amount of live-stock fell by 70%[42] Between a quarter and one third of the country's irrigation systems were destroyed.[43] About one third of all farms were abandoned. The reduction in fertilizer availability and affordability lowered crop yields further; in some areas fertilizer use declined by 90 percent.[44] Thus, by 1988 total food production had declined to around 45% of the level prevailing before the Soviet invasion in 1979.[45] The country had to import 500,000 tons of wheat annually from the Soviet Union. [46] This went hand in hand with a severe depopulation in the rural parts of the country: a third of the population fled the country between 1978 and 1989 and 11 percent became internal refugees, migrating to the urban centres.[47]

All of this also had an impact on foreign trade. Both legal exports and imports, as shown in IMF data, fell over the 1980-1995 period by 94%. The parallel increase in opium production in Afghanistan meant that the two time series, exports and opium production, showed a very strong negative correlation (R = -0.93), suggesting that the more the overall economic situation in the country deteriorated, the more farmers opted – as a strategy for survival - for growing opium poppy.

[f] According to UNDP's Human Development Report 1997, the gross domestic product (GDP) per capita of Afghanistan was $250 in 1981. As in most low income countries, such as Afghanistan, GNP and GDP figures tend to be of similar magni1000tudes, it seems justifiable to use GDP data as a proxy for GNP and vice versa.

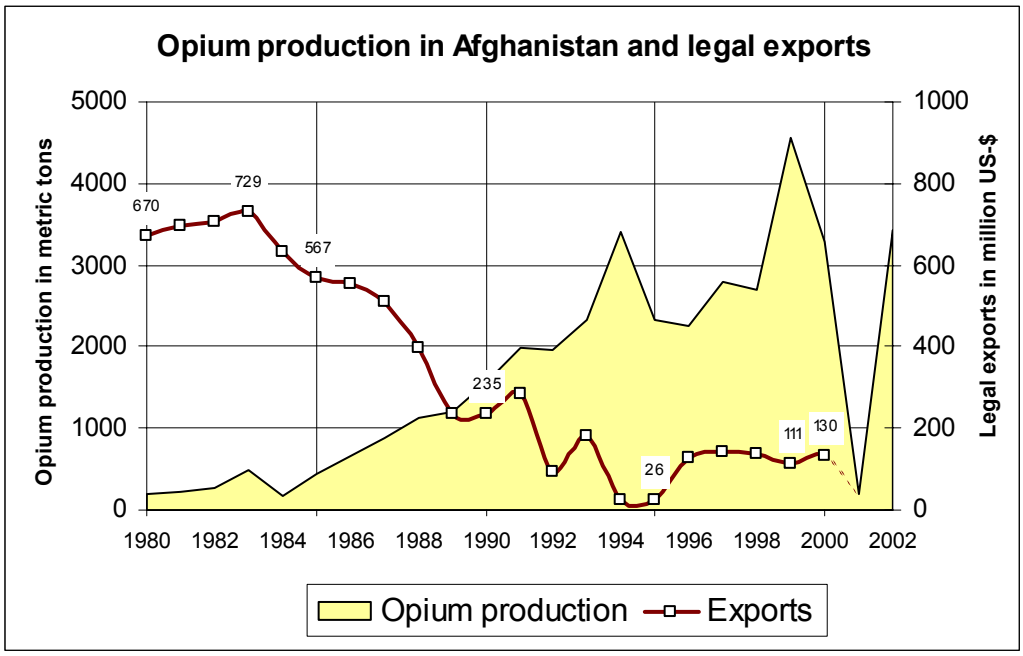

Figure 3
Sources: IMF, *International Financial Statistics Yearbook 1998*; Economist Intelligence Unit, *Afghanistan Report May 1991 and May 1992*; UNODCCCP, *Global Illicit Drug Trends 2002* and UNODCCP, *Afghanistan Opium Survey 2002*

Through the early 1990s the civil war continued and all economic activity was increasingly subordinated to supporting the power struggles between the various factions. A large industry had arisen to provide the infrastructure - transport, communications, arms, and protection - which the warring factions needed to retain their zones of influence. This was one component of the new war economy which grew up in Afghanistan; the other two components were a transit trade linking the region and the opium trade**.** The trade in contraband originates in the Afghan Transit Trade Agreement (ATTA) under which goods can be imported duty-free in sealed containers into Pakistan, for onward transmission to land-locked Afghanistan. This trade gradually developed in a reverse direction from the 1980s, with goods originating in the Persian Gulf and transiting Afghanistan. It is thus known as the transit trade. The infrastructure of the trade began to be used for drugs and arms, and came firmly under Taliban control after 1996, when they consolidated their hold over practically all the country's roads, cities, airports and customs posts[48].

By 1994 the Taliban emerged as a major contender in the struggle for Afghanistan. They were supported, *inter alia*, by the powerful transport enterprises of Pakistan and Afghanistan, which did not want to continue paying tolls to an ever increasing number of warlords, which had brought domestic trade within Afghanistan almost to a standstill. The Taliban movement grew out of some segments of the Afghan diaspora of the 1980s. The emigration or destruction of the elites and the collapse of the state created a vacuum. Education was also a factor. No education was available to young Pashtun refugees, who concentrated in the border provinces of Pakistan and Afghanistan. A network of *madrassas* (Islamic academies) dominated by *ulema* (Muslim priests) were established to supply the education. Drawn from the conservative Deobandi tradition (a movement which began in 19th century India to combat modern and secular traditions in Islam[49]) these *madrassas* and *ulema* were supported by foreign aid from countries which sought to bolster anti-Soviet movements in the country. The social capital created in the *madrassas* banded together to create the Taliban movement, whose objective was to resist warlordism and corruption.[50] The Taliban first took the city of Kandahar and established themselves in the southern provinces. They seized Kabul in 1996. The war continued but was increasingly concentrated in some of the northern provinces. Other parts of Afghanistan, albeit under the control of a highly repressive regime, enjoyed at least a sort of peace.

The first years of the Taliban regime were thus not only characterized by a poor human rights record, but also by a moderate economic recovery in areas of the country that had become free of military conflict. The country's industrial sector was largely destroyed in the battles of the 1980s and the 1990s, but

agricultural production, notably wheat production increased after having fallen throughout the 1980s and early 1990s (see Figure 4). Livestock herds rose in numbers, taking advantage of widely available unutilized grazing lands, and horticultural production also grew based on restoration and expansion of orchards and vineyards.[51]

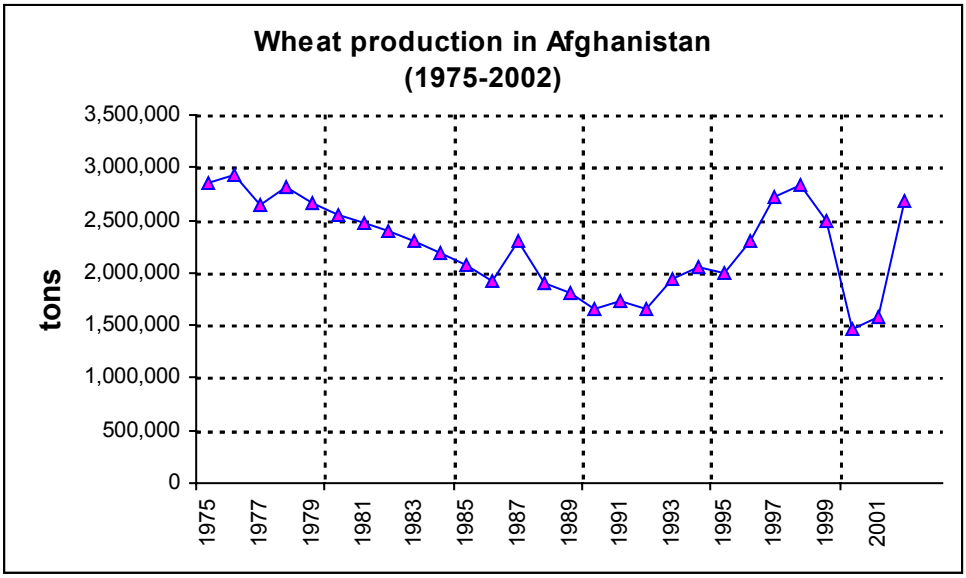

Figure 4
Source: FAO.

In parallel, trade resumed. Exports and imports also improved, though legal exports as of 1999 were still 83% less than in 1980. The removal of barriers to trade and restoration of a certain degree of order also facilitated the growth of all kinds of unofficial economic activities, notably long-distance trade, the uncontrolled exploitation of natural resources – timber, germs, marble, granite etc. (which resulted in extensive deforestation and environmental degradation) and the opium industry.

Thus, the economic recovery in the mid 1990s did not entail a reduction in opium production. Between 1996, when the Taliban took control of most of Afghanistan, and the year 1999, opium production doubled in the country, equivalent to an average annual growth rate of 27%, almost twice Afghanistan's long-term growth rate of opium production over the 1980-2000 period. While the Taliban originally had planned to prohibit opium production, they gave up on this plan once in power, and restricted the drug prohibition to cannabis only. The acceptance of the agricultural tax, known as *ushr* (usually 10%) and the *zakat* (usually 20%) by the mullahs and the local authorities was interpreted by the farmers and itinerant workers as an implicit support for the cultivation of opium poppy.[52] In addition, the Taliban also received taxes from the opium traders. There are also indications that some of the local Taliban commanders and mullahs were personally involved in the opium trade. Even more important, a number of warlords, who were already involved in the opium trade, surrendered to the Taliban in exchange for the promise to continue with their lucrative opium business. Both the Taliban and various groups fighting against them ("Northern Alliance") benefited from opium poppy cultivation and trade. However, as most of the opium producing areas were under Taliban control, the largest profits out of opium were also reaped by the Taliban.

The international isolation of the Taliban regime over its violations of human rights, support of terrorism and increasing opium production led to the Security Council imposing sanctions on Afghanistan in October 1999.[53] A month earlier, in September, the Taliban had tried to prevent such sanctions by issuing a decree ordering all poppy farmers to reduce their cultivation area by one third. A subsequent UNDCP survey, undertaken in 2000, indicated that the actual reduction achieved by the decree was only 10%. Total opium production fell by 28% in 2000 but this was mainly due to the added effects of a severe drought. Nonetheless, the 2000 opium harvest was still the third highest opium harvest in Afghanistan's history. The value of the entire crop of fresh opium, though only roughly half the value of a year earlier, was US$91 million. Assuming that the traditional 10% (*ushr*) and 20% (*zakat*) taxes on opium production were collected by the Taliban, tax income from farmers amounted to some $27 million.[54] Afghanistan's share in global illicit opium production was 70% in that year.

Following ever stronger criticism from the international community for the Taliban inability to control poppy cultivation in the country (as well as for human rights violations and support for terrorism) and the threat of even stronger UN sanctions, which would have jeopardized Afghanistan's lucrative transit trade, the Taliban supreme leader issued a decree (27 July 2000) imposing a total ban on opium poppy cultivation on the Islamic Emirate of Afghanistan. Fear of greater international isolation and UN advocacy to take steps to reduce opium production also played role. There was also speculation that some of the traders, backing the regime, may have pushed this decision in anticipation of rising prices and thus an increase in the value of their opium stocks. Early reports from 2001 indicated that the ban was being enforced vigilantly.[55] A comprehensive UNDCP ground survey confirmed that overall opium production in 2001 fell by 94% in Afghanistan, back to the level of the early 1980s**.** Remaining opium production was basically concentrated in areas not controlled by the Taliban. Though the Taliban successfully implemented the ban, they had not offered any alternatives to the farmers. This caused extreme hardship to a significant number of farmers in a year in which Afghanistan was experiencing a severe drought and thus very poor yields for other crops. Overall crop production was more than halved and livestock herds were heavily depleted, erasing the gains made since the mid 1990s. The ban in combination with the ongoing drought meant that malnutrition worsened and cases of starvation deaths were reported. [56]

The massive re-planting of opium poppy following the demise of the Taliban regime showed that the Taliban ban was not sustainable once the regime had disappeared. The Interim Administration issued a new ban on opium poppy cultivation on 17 January, 2002. By that time, however, farmers had already sown their fields. UNDCP's opium poppy survey found that in 2002, 74,000 hectares were under poppy cultivation, producing 3,400 tons of opium, i.e. about the same level as in the year 2000.

Box 1: Chronology Afghanistan – Recent Events

1994:	Taliban emerge as a political (mainly Pashtun) force in south-eastern Afghanistan; they prohibit consumption of drugs but do not prevent production or trade in opiates. Production of hashish, by contrast, is forbidden.
1996:	Taliban take control of most of Afghanistan.
1996 to 1999:	Afghan opium production doubles.
1999:	Bumper harvest (90,583 ha., opium production of 4,565 mt.). Under increasing international pressure, Taliban ordered a reduction of cultivation by one third.
2000:	Actual cultivation reduction achieved in 2000 was only about 10%. Opium production, however, reduced by about 30% to 3,276 mt., because of drought. Cultivation continued to be concentrated in south, Helmand (52%) province and east, Nangarhar province (24%).
27 July 2000	Taliban decree imposing a total ban on opium poppy cultivation, but not on trade. Issued prior to the planting season in October.
2001 harvest	185 tons of opium (91% decline in cultivation; 94% decline in production of opium); 83% of cultivation took place in Badakshan (north), which was not under Taliban control. Area under cultivation in Badakashan more than tripled. Second largest producing province was Samangan (north; 8% of total) which was also not fully under Taliban control. Helmand province ceased to produce; area in Nangarhar fell to 3% of total.
Oct. 2001	Start of the international campaign against terrorism, led by the USA, in Afghanistan;
22 Dec. 2001	Interim Government under Hamid Karzai sworn in.
17 Jan. 2002	Interim Government imposes a new ban on cultivation opium poppy; however, farmers had already sown their fields.
Feb. 2002	UNODCP Pre-assessment identifies widespread cultivation of in Afghanistan.
3 April 2002	Interim Government issues decree on eradication of opium poppy, offering compensation of initially $250 per jerib ($1250 per ha.); later increased to $300 per jerib ($1750 per ha).
8 April 2002	Eradication campaign begins.
June 2002	The Transitional Authority (TA), under Hamid Karzai, takes office for 18 months till general election.
April-August 2002	UNODCP 2002 Afghanistan Opium Survey (published in October), conducted over the April-August period finds 74,000 ha under cultivation, producing some 3400 tons of opium.
Late Aug. 2002.	The Transitional Authority (TA) issues a new ban of opium poppy cultivation, processing and trafficking.

ENDNOTES

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[3] *Babur-nama: Memoirs of Zahir-ud-din Muhammad Babur* (Translated by A.S. Beveridge, 2 vol.s, London, 1922).
[4] *cf*. the early account by Sir John William Kaye, *The History of the War in Afghanistan*, (2 vol.s, London, 1851), *passim,* and a later one by Philip Mason, *A Matter of Honour: An Account of the Indian Army, its Officers and Men* (Harmondsworth, 1976), pp.219-225.
[5] Victoria Schofield, *Every Rock, Every Hill: A Plain Tale of the North-West Frontier and Afghanistan* (London 1987)*, passim*.
[6] Michael Howard, *The Continental Commitment* (Harmondsworth, 1974), pp.14-15, and Peter Hopkirk, *The Great Game* (Oxford, 1990), *passim*.
[7] For an account of the negotiations, see Schofield, *op.cit.,* pp. 60-63,105-108.
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[13] Schofield, *op.cit*., p. 247.
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[15] Barnett R. Rubin, *The Fragmentation of Afghanistan: State formation and Collapse in the International System* (2nd Edition, New Haven and London, 2002), p. 20.
[16] Anthony Arnold, *Afghanistan's Two-Party Communism: Parcham and Khalq* (Hoover Institution Press, Stanford, 1983).
[17] Chris Bowers "A Brief History of Afghanistan", in Edward Girardet and Jonathan Walter (eds) , *Essential Field Guides to humanitarian and conflict zones: Afghanistan* (International Centre for Humanitarian Reporting / CROSSLINES Global Report, Geneva 1998) p. 98.
[18] These events remain controversial and it will be some time before a comprehensive historical picture can be assembled. They are detailed in Rubin, *op.cit*., pp. 107-121, and summarized in Schofield, *op.cit*., pp. 277-292, and Bowers, *op.cit*., pp. 100-101.
[19] For a detailed treatment of Afghanistan in this period, see Rubin, *op.cit*., pp. 107-280.
[20] UNDCP, *Global Illicit Drug Trends 2001*, p. 30.
[21] League of Nations, Permanent Central Opium Board, Pre-War Production and Distribution of Narcotics Drugs and their Raw Materials, Geneva, 1944;O.C./Confidentiel/18 (3); Statistiques relatives Opium brut (1926-1937).;C.124.M.113.1940.XI. (O.C.1781.(1)), Annual Reports of Governments on the Traffic in Opium and other dangerous Drugs for the Year 1938;CCP Rapports aux conseils pour 1947.
[22] "Opium Production Throughout the World*",* United Nations*, Bulletin on Narcotics*, Vol. I, No.1, October 1949, p. 12.
[23] As in endnote 26 above.
[24] United Nations, *Bulletin on Narcotics*, Vol. XIV, No.1, January - March 1962, p. 41.
[25] *Report of the International Narcotics Control Board, 1970* (E/INCB/9); also see summary in United Nations, *Bulletin on Narcotics*, Vol. XXIII, No. 3, July - September 1971, p. 33.
[26] E/5082, E/CN.7/544, Commission on Narcotic Drugs, Report of the Twenty-Fourth Session, para 344; also see summary in United Nations, *Bulletin on Narcotics*, Vol X1V, No. 1, January - March 1972.
[27] *Report of the International Narcotics Control Board, 1972* (E/INCB/17) paras 63 - 70; see also summary in United Nations, *Bulletin on Narcotics*, Vol XXV, No. 2, April-June 1973.
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[32] UNDCP, *World Drug Report 2000*, *op.cit*., p. 142.
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[41] *Afghanistan Rehabilitation Strategy*, Volume IV, p. 51.
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[43] *Ibid.*, pp. 78-87.
[44] *ibid*., p. 41.
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[46] *Afghanistan Rehabilitation Strategy*, Volume IV, p. 41.
[47] Sliwinski, *op.cit.,* p. 53.
[48] For a detailed analysis of the transit trade, see Rubin, "The Political Economy of War and Peace in Afghanistan", *op.cit*. pp. 1793-95.
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[50] Rubin, "The Political Economy of War and Peace in Afghanistan"*op. cit*., pp. 1794,1797, and W. Maley, *Fundamentalism Reborn? Afghanistan and the Taleban*, New York, St. Martins Press, 1998.
[51] World Bank, *Brief overview of Afghanistan's Economy*, October 2001, p. 2.
[52] UNDCP, *Afghanistan Strategic Study #5*, November 1999, p. 4.
[53] S/RES/1267 (1999), 15 October 1999; the sanctions were to come into effect from 14 November.
[54] This follows the analysis in Rubin, "The Political Economy of War and Peace in Afghanistan", *op. cit*., p. 1796, which uses UNDCP data for the 1999 opium crop.
[55] UNDCP, *2001 Opium Poppy Pre-Assessment Survey*, February 2001.
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Chapter III

POVERTY, DEVASTATION AND FARMERS' MOTIVATIONS

3. Poverty, devastation and farmers' motivations

This chapter tries to explain why Afghan farmers got involved in opium production. The previous chapter laid out the macro-level conditions that allowed an opium economy to develop in Afghanistan: the long term failure of the state as an institution and the degradation of agriculture and most economic infrastructure because of more than twenty years of war. All of this facilitated the expansion of opium poppy cultivation. The final decision to plant opium poppy and expand its cultivation, however, was still with the farmers. This chapter tries to explore the micro-level factors that played a key role in the expansion of opium poppy cultivation. These factors are related to profitability, know-how and employment opportunities, the role of opium as a cash-crop and as a source of credit[a]. The first two issues will be dealt with in this chapter, the latter two in the following one.

3.1. An expensive crop produced with cheap labour (women and children)

The first, and most obvious reason for the expansion of opium poppy was its higher profitability compared to other crops. Farmers are known to have reacted to price signals, some of these instances are listed below. They all suggest that profitability considerations play an important role in the decision to plant opium poppy.

- In 1995, a decline in opium prices and thus a decline of gross income per hectare by 30% led to a reduction in the area under poppy cultivation by some 25% from 1994 to 1995.
- The most significant annual increase (about 40%) of the area under poppy cultivation in the 1990s occurred in 1999. In the same year, gross income from opium poppy per hectare had increased by about 20% and was some 40% more than average annual gross income over the 1994-98 period.
- In 2000, opium prices fell by 30% (and gross income per hectare fell by as much as 45% as a result of the drought), and the area under cultivation declined by 9%.
- In 2001, overall cultivation declined by more than 90% as a consequence of the Taliban ban. However, in the areas not affected by the ban, the land used for poppy cultivation tripled while gross income per hectare from poppy cultivation rose seven-fold as a result of far higher opium prices.
- In 2002 estimates show that average gross income per hectare under poppy cultivation was twice as high as in 2001 (mainly reflecting better yields as a consequence of the use of irrigated land) and about 15 times higher than in 2000. At the same time, estimates suggest that the area under cultivation have increased about 10-fold in 2002 as compared to 2001.

Farmers cultivating opium poppy found that the agronomic advantages of opium poppy cultivation could be profitably exploited. As the poppy crop in some parts of the country (e.g. Azra district in Logar Province, eastern Afghanistan), can be harvested several weeks earlier than wheat, it is possible to sow maize and thus obtain a grain crop, rather than just a fodder crop for livestock if they had planted wheat. By cultivating poppy, farmers thus achieved a double crop, raising overall profitability[1]. Other advantages cited by farmers were that opium poppy is a more reliable and weather resistant crop, with the added advantages of being easy to store, easy to transport and easy to sell, indirectly affecting the crop's profitability.[2]

There is also an important accounting issue which affected profitability calculations and created a bias in favour of opium poppy. Research in the late 1990s found that in calculating profits, seed, fertiliser, and hired labour were usually included as costs by the farmers.[3] Farmers, however, did not include the cost of family labour, despite its crucial role in the cultivation and harvesting of opium poppy and related activities[b].

The zero value put on family labour cost reflects the fact that there were almost no alternative income earning opportunities for women following the Taliban take-over in the second half of the 1990s. Speaking in economic terms, female labour (wives and daughters) can be regarded as fixed costs for the farmers (having

[a] D. Mansfield, "Alternative development: the modern thrust of supply-side policy" UN *Bulletin on Narcotics*, Vol. LI, Nos. 1 &2, 1999, pp. 19-44. Chapters 3, 4 and 5 build on the work of David Mansfield, who, when he worked for UNDCP, did much of the research published in the Strategic Studies, referenced in the end-notes below.

[b] In UNDCP field work in eastern and northern Afghanistan, both women and children were seen actively involved in opium poppy cultivation in 1999 and subsequent years. This, however, was not the case in southern Afghanistan were women were rarely seen working outside the confines of the home due to the conservatism of the tribes in the area. Nonetheless, women there also contributed actively to the success of the harvest. Three good quality meals and tea are a standard part of the payment of itinerant harvesters. This is entirely in the hands of women and a major task given the size of the hired workforce at harvest time. (See UNDCP, *Afghanistan, Strategic Study #5, An Analysis of the Process of Expansion of Opium Poppy to New Districts in Afghanistan*, November 1999, p. 14.

to supply them livelihood). Like other fixed assets, their costs hardly increase or fall in line with their utilization. (More work on the field will only translate into a slightly higher food cost, at most). Female labour constituted a fixed cost because it was not redeployable for uses other than work within the household.

This had implications for the relative profitablity of opium poppy vis a vis other crops. Opium poppy is a highly labour intensive crop. Estimates suggest that approximately 350 person days are required to cultivate one hectare of opium poppy compared to 135 person days per hectare for black cumin and 41 person days per hectare for wheat. Opium harvesting alone requires some 200 person days per hectare.[4] In other words, the labour intensity of the cultivation of one hectare of opium poppy is 2 to 3 times greater than for black cumin and 8 to 9 times greater than for wheat.

Given the high labour intensity of opium production, the zero-cost put on family labour shifts the overall profitability calculations in favour of opium poppy. The average holding of a poppy farmer was calculated to amount to 0.5 ha (data for 1999), requiring, in total, 175 person days of work in a year. Except for the harvest time, when 100 person days, on average, are needed for 0.5 ha over a rather short period of time (some two weeks), the rest of the work (75 person days for 0.5 ha in a year) can be easily managed by one person dedicating one fifth of his or her overall work-time to poppy cultivation (sowing, weeding etc.). With 100 person days required over a two week period, a total of 7 persons a day, on average, have to work on the field to harvest 0.5 ha under poppy cultivation. Given the fact that family participation plays an important role, the requirement for external help for 0.5 hectares is probably limited to about 3 persons on average, equivalent to 42 person days over the harvest period. This means that hired labour is likely to account for just about a quarter of total work (42 person days / 175 person days). Thus three quarters of the total work done by family members remains unaccounted for in profitability calculations.

This would only change if income earning employment opportunities for family members, notably women, were to be created in the opium poppy growing zones. Then female labour would not automatically be 'free' thus reducing – *ceteris paribus* - the profit margins of opium production in Afghanistan.

The development of opium profitability over the 1999-2002 period and its main determinants will be analysed below and contrasted with gross income derived from legal crops. This analysis, partially based on qualitative research undertaken by UNDCP in Afghanistan in the late 1990s, is intended to provide some insight into the decision making process of Afghan farmers to plant opium poppy.

3.1.1. High profitability in 1999

Based on the results of UNDCP's 1999 Opium Poppy Survey and the prices for fresh opium, weighted by production, a farmer could earn a gross income of, on average, about $2000 per hectare in 1999[c], some 20 per cent more than in 1998.

Based on average (unweighted) dry opium prices, a farmer could earn a gross income of $2700 per hectare in 1999 [d]. About a fifth of this amount was paid to itinerant labourers as wages[e]. Other costs were more or less negligible. Given the average land holding in a poppy growing village of 1.6 hectares per household, of which 0.2 hectares (or 1 jerib) were under opium poppy cultivation in 1999, the average opium income per household in a poppy growing village was around $430 in 1999[f]. Actual income of poppy growing farmers was still higher, simply because not all farmers were producing opium. Based on UNDCP estimates of around 200,000 opium producing farmers[g] about 40% of the 487,000 households in poppy growing areas were producing opium. The average area under cultivation per poppy farmer was thus 0.5 hectares and the average income from

[c] This is the result of a production of 4565 tons on 90583 ha (after eradication), equivalent to an average yield of 50.3 kg per hectare and an average price (weighted by production) of $40 per kg opium.

[d] This is the result of a yield of 50.3 kg per ha and an unweighted average price of dry opium of $53.4, equivalent to $2,688 per hectare.

e Research done in Afghanistan in 1999 in Helmand province, Afghanistan's largest opium producing province, showed that itinerant harvesters typically received one fifth to one quarter of the total opium yield. In the years before, they typically received one sixth to one fifth. (UNDCP, *Afghanistan Strategic Study 34, Access to Labour: The Role of Opium in the Livelihood Strategies of itinerant Harvesters Working in Helmand Province, Afghanistan*, June 1999, p. 19.)

[f] Calculation: $2688*0.8* 0.2=$430.

[g] NDCP, *Opium Poppy Survey 1997*, p. 12.

opium poppy was $1075 per opium producing farmer in 1999**.** According to other estimates, the figure could have been even higher[h].

Whatever the precise figure, the net profits were substantial as compared to other crops. Interviews undertaken by UNDCP researchers in 13 districts across the country, revealed that opium poppy was, on average, almost four times more profitable than legal crops in 1999, reflecting *inter alia* the fact that the bulk of the legal crop was wheat, which, throughout the 1990s, had significantly lower returns than opium poppy. High opium prices and thus a high profitability of opium poppy played a key role in the expansion of poppy cultivation in 1999. The area under opium poppy cultivation rose by more than 40% in 1999 as compared to a year earlier, the highest such increase in any single year over the previous two decades. The high profitability in 1999 in both absolute and relative terms, resulted from two factors:

- Opium prices were relatively high, at around $60 per kilogram in southern Afghanistan and close to $100 in eastern Afghanistan over the September 1998 – February 1999 period, compared to prices of, on average, less than $40 in southern Afghanistan or $70 in eastern Afghanistan a year earlier, thus favouring the decision to sow poppy in late 1998 for the 1999 harvest.

- At the same time, there were price declines for all kinds of licit agricultural products. Prices for cucumber, for instance, declined by 70% during the 1998 season; prices of onions dropped over the same period, by some 65%. Pakistani traders dumping surplus agricultural products on the Afghan market were blamed for the low prices. Strong price declines were also reported for timber and other forest products.[5] Wheat prices fell as well by, on average, some 10% in 1999.[6]

In addition, otherwise attractive crops such as black cumin, which requires three years before providing a return, were heavily damaged due to heavy hail and rain in 1998. Farmers pointed out that this was another reason to switch to opium poppy, which – in their eyes - constituted a 'lower risk' annual crop.

Farmers, notably returning refugees, also blamed the high cost of building materials and the lack of outside support for the reconstruction of their houses, as one of the key reasons why they decided to opt for opium poppy.[7]

Another reason was traditional rivalry and peer pressure. Traditional competition for socio-economic standing between peers, particularly among cousins - which in Pashtun culture is known as *tarboorwali* – prompted several respondents to experiment with opium poppy cultivation.[8]

Finally, respondents used social-religious arguments. Almost half of the 9000 Afghan pilgrims who make the pilgrimage *Haj* to Mecca, which every Muslim is enjoined to do, were from Helmand, Afghanistan's largest opium poppy producing province in the late 1990s.[9] Profits from opium poppy cultivation were judged by farmers as the only possibility to acquire the funds necessary.

3.1.2. Decline of profitability in 2000

In 2000, UNDCP undertook, an evaluation of its Alternative Development Pilot Project, which was implemented between 1997 and 2000 in three target districts (Ghorak, Khakrez and Maiwand) of Kandahar province in southern Afghanistan.

Data provided in the annual poppy survey showed that the gross income from poppy cultivation fell to about $1100 per hectare in 2000, a decline by 45% compared to a year earlier ($2000 per hectare in 1999), due to lower yields per hectare as a consequence of the drought, and lower opium prices after the 1999 bumper harvest.[i]

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[h] Based on a FAO/WFP estimate, which put the number of opium growing farmers at just 80,000, only one out of six farmers in the poppy growing areas would have been producing opium. This would have raised average area under cultivation to 1.2 hectares and average opium income per opium farmer to about $2,580 in 1999.The FAO/WFP figure, however, is possibly an underestimate of the total number of poppy producing farmers, as the main purpose of the FAO/WFP Food Supply Assessment Mission, conducted in May 2001, was not to identify this number but the number of farmers at economic risk as a result of the Taliban opium poppy ban. (FAO/WFP Food Supply Assessment Mission to Afghanistan, May 2001, quoted in UNDCP*, Global Illicit Drug Trends 2002*, p. 41).

[i] The precise figure calculated was $1071 per hectare, reflecting an average annual yield of 39.9 kg/ha and an average opium price of $26.9 kg. (See UNDCP, *Alternative Development Report #1, On-Farm Income Opportunities in Maiwand, Khakrez and Ghorak*, October 2000, p. 6.)

The evaluation found that the use of better seeds, fertilizers, pesticides, better cultivation techniques and other kinds of assistance provided by UNDCP as part of its Alternative Development Project in the three districts, were able to increase the yield of licit crops substantially. The project found that the traditional ways of cultivating agricultural products in Afghanistan were often not very efficient, leaving much room for improvement. Thus, the yield of maize was raised per hectare by 125%, wheat by 95%, white cumin by 86%, beans by 67%, onions by 60% and black cumin by 50%. The yields of fruits were raised substantially as well (apples 39%, apricots 63%, almonds 64%, grapes 100%, pomegranate 140%). In addition, prices of the crops, which had plummeted in 1998, recovered again in 1999. Prices of onions, for instance, which had fallen by 64% in 1998 tripled in 1999. The price of wheat, which had fallen by 10% in 1998, increased by a quarter.

As a consequence, a number of legal crops showed higher returns than opium poppy. While the gross income of opium poppy reached some $1100 in 2000, gross income from almonds was has high as $14,800 per hectare, gross income from grapes reached $6000, from black cumin $4800, various fruits (apples, apricots, pomegranates) between $4300 and $4600, and onions $3600 per hectare. Income from wheat, beans and maize improved considerably but remained below income from opium poppy.

Table 1: Profitability of legal crops versus opium poppy in three target districts of UNDCP's alternative development project Kandahar province, Afghanistan, in 2000

	Area	Yield: ton / ha		Price	Gross income in US-$			Income per hectare in US-$	
	in ha	before inter-vention	after inter-vention	US$ / ton	before inter-vention	after inter-vention	Change	before inter-vention	after inter-vention
Winter crop									
Wheat	1,216.0	1.8	3.5	240	525,120	1,021,440	95%	432	840
Black Cumin	120.0	0.9	1.35	3539	382,212	573,318	50%	3,185	4,778
White cumin	120.0	0.7	1.3	1000	84,000	156,000	86%	700	1,300
Onion	48.0	15.0	24.0	148	106,560	170,496	60%	2,220	3,552
Summer crop									
Maize	2,266.0	2.0	4.5	138	625,554	1,407,186	125%	276	621
Bean	920.0	1.35	2.25	296	367,632	612,720	67%	400	666
Orchards									
Grape	29.6	10	20	300	88,800	177,600	100%	3,000	6,000
Pome-granate	20.3	7.5	18	246	37,453	89,888	140%	1,845	4,428
Apple	6.0	18	25	185	19,980	27,750	39%	3,330	4,625
Almond	2.6	11	18	823	23,537	38,516	64%	9,053	14,814
Apricot	2.5	8	13	329	6,580	10,692	62%	2,632	4,277
INCOME FROM LEGAL CROPS	4,751				2,267,428	4,285,606	89%	477	902

	Area *in ha*	Yield: ton / ha	Price US-$ / ton	Gross income in US-$	Income per hectare in US-$
INCOME FROM OPIUM POPPY	1,889	0.0301	26,228	1,492,651	790

Sources: UNDCP, *Alternative Development Report #1, On-Farm Income Opportunities in Maiwand, Khakrez and Ghorak, October 2000,* and UNDCP, *Afghanistan Annual Opium Poppy Survey 2000.*

As a result of all of the alternative development interventions, the average yield of legal crops could be raised by some 90%. The overall gross income from the cultivation of legal crops thus increased to $902 per hectare, and exceeded income for opium poppy ($790 per hectare in the three target districts).

Parallel to higher income from legal crops, the area under poppy cultivation in the three target districts declined by 50% in 2000, a significantly higher reduction than the overall decline of 9% reported for Afghanistan as a whole. Without improved yields, the gross income from opium poppy per hectare would still have been 66% higher than the income from legal crops in the target districts.

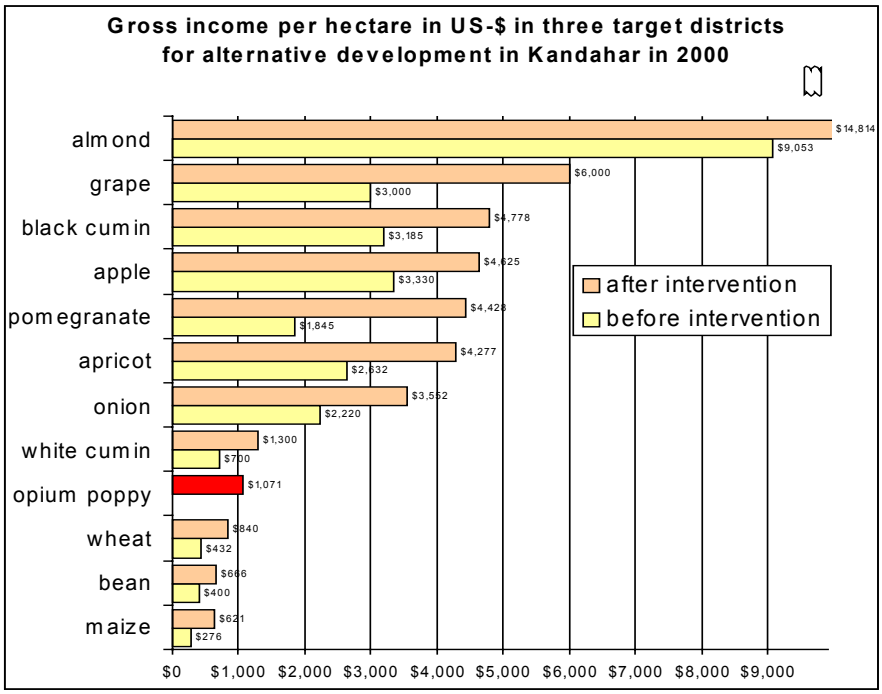

Figure 1
Source: UNDCP, *Afghanistan – Alternative Development Report #1, On-Farm Income Opportunities in Maiwand, Khakrez and Ghorak*, October 2000.

The data also show that for Afghanistan as a whole the improvements reported from the three districts in Kandahar would not have been sufficient to make legal crops more profitable than opium poppy (see Figure 2). The national average gross income from opium poppy was $1071 in 2000, thus still above the gross income from legal crops in the three target districts of Kandahar province ($902). The lower returns reflect the fact that most of the legal crops in the three districts (and the same would probably be true if such projects were extended to other districts) were wheat as the main winter crop and maize as the main summer crop. Although both staple crops have lower returns than opium poppy, the gap - over a four year period – was, following alternative development interventions, reduced to less than 20% in 2000.

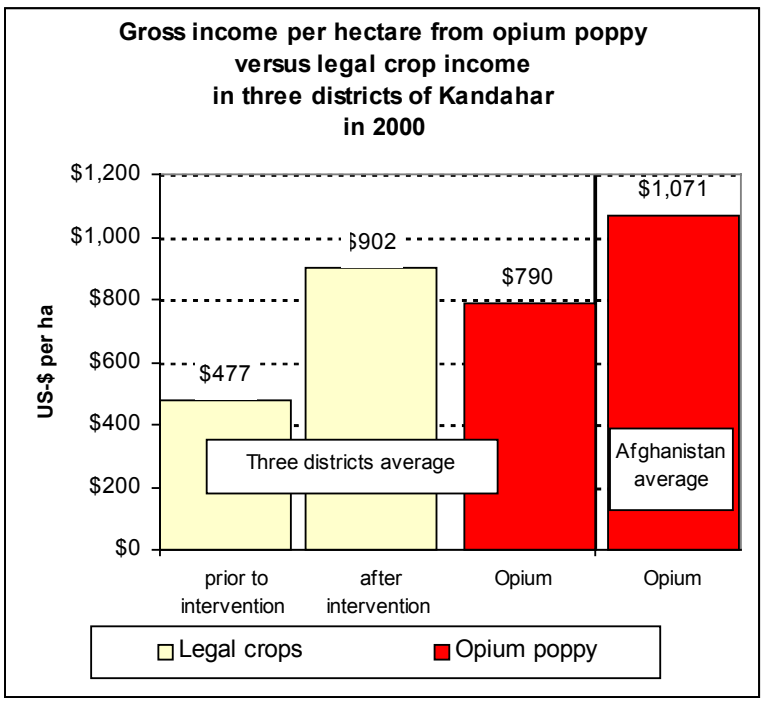

Figure 2
Sources: UNDCP, Afghanistan, *Alternative Development Report #1, On-Farm Income Opportunities in Maiwand, Khakrez and Ghorak*, October 2000 and UNDCP, *Afghanistan Annual Opium Poppy Survey 2000*.

3.1.3. Enormous profitability in 2001 and 2002

Given the massive rise of opium prices in 2001 (a result of the poppy ban) profitability of opium production increased dramatically in that year. Despite falling yields (a consequence of the drought and the prohibition of poppy cultivation which affected primarily the irrigated land of southern and eastern Afghanistan), average gross income per hectare rose from about $1100 in 2000 to $7400 in 2001, a seven-fold increase in just one year.

Such profits acted as a major incentive for farmers across Afghanistan to resume opium planting once the Taliban regime collapsed by the end of 2001. While legal crops had a realistic chance to compete with opium poppy at prices reported in the year 2000, this was no longer the case in 2001 once modern production techniques were introduced.

The situation became even worse in 2002. Based on an average yield of 46 kg of opium per hectare and an average price of $350 per kg of opium (weighted by production)[10], calculations of the likely gross income from poppy cultivation suggest that a hectare yielded, on average, some $16,100 in 2002 ($17,980 in Nangarhar, $17,330 in Helmand and $7450 in Badakshan: $6620 on rain-fed land and $8900 on irrigated land[j]. Gross income thus doubled in 2002 as compared to 2001 and was more than ten times higher than the average annual gross income over the 1994-2000 period (close to $1500 per hectare).

The increase in gross income from poppy cultivation in 2002 was mainly due to higher yields, which increased by more than 80% in 2002, reflecting the shift back to cultivation on irrigated land. Opium poppy prices rose by 10% as compared to a year earlier. At these gross income levels no other crop which could be planted on a large scale would be competitive *vis á vis* opium poppy in Afghanistan.

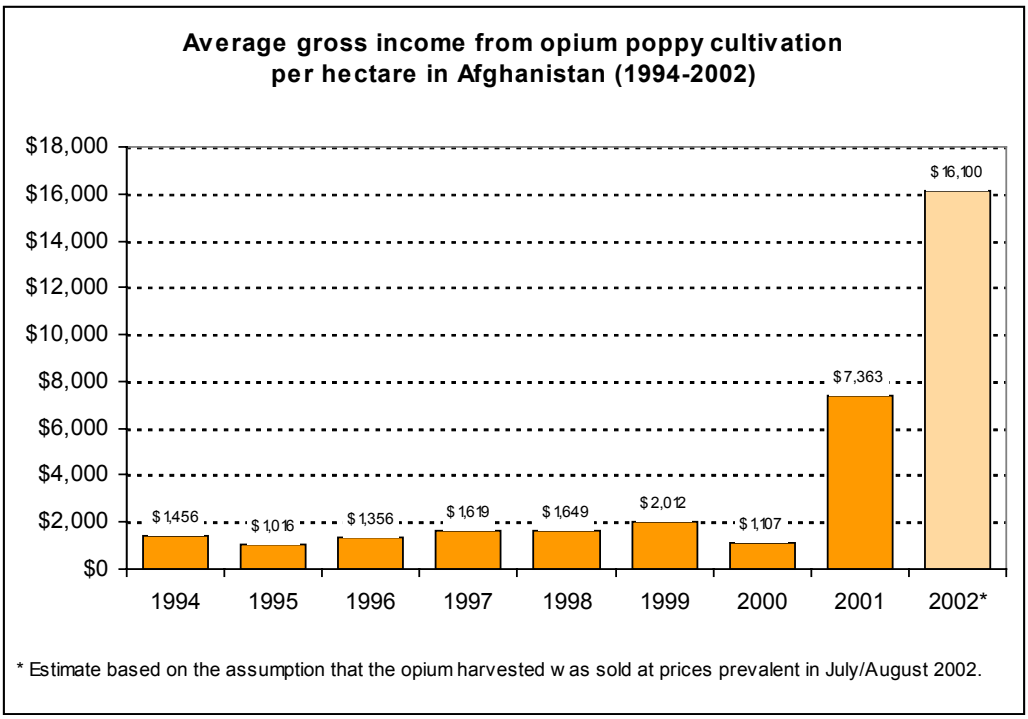

Figure 3
Source: UNDCP, *Afghanistan Opium Survey 2002* and previous years.

A reduction of poppy cultivation – in a scenario of such high profits - can only be achieved with a strategy that has two elements: (a) rigorous implementation of the ban on opium poppy cultivation across the country and (b) the creation of a security belt around Afghanistan, in close co-operation with the Afghan authorities, in order to reduce the outflow of opiates from Afghanistan, thus lowering the demand for opiates within the country. Once

[j] Nangarhar province: $333 * 54 kg/ha = gross income of $17,982 per ha; Helmand province: $385 * 45 kg/ha = gross income of $17,325 per ha; Badakshan province: $207 * 36 kg/ha = gross income of $7,452 per ha, including on rain-fed land: $207 * 32 kg/ha = gross income of $6624 per ha; irrigated land: $207 * 43 kg/ha = gross income of $,8901 per hectare).

demand is reduced, prices will fall automatically, reducing the economic incentives for farmers to opt for poppy cultivation. Alternative development is necessary to reduce the negative consequences and enable sustainable development in Afghanistan when farmers cease planting opium poppy. But alternative development efforts alone, though important for Afghanistan's medium and long-term future, cannot provide sufficiently strong incentives for farmers to give up planting poppy. Profitability of opium poppy is simply too high, at least for the time being.

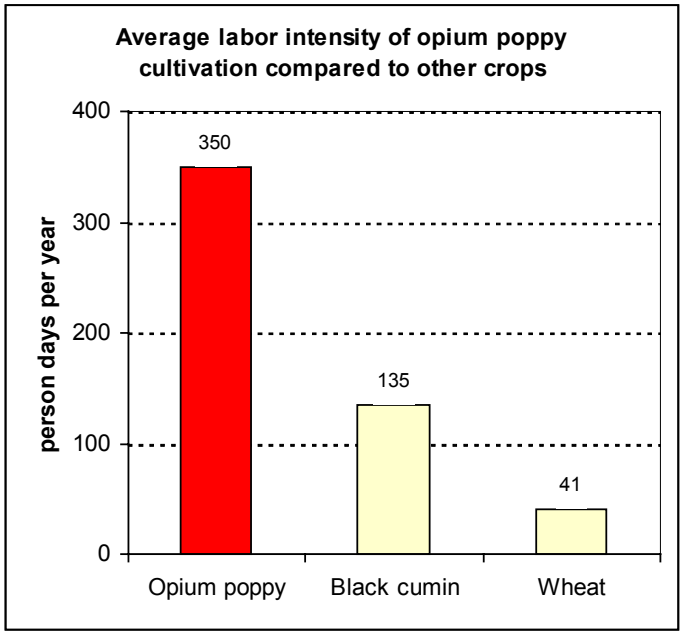

Figure 4
Source: UNDCP, Afghanistan, Strategic Study #4, June 1999.

3.2. Diffusion of know-how by itinerant workers

High profits were a key reason, but not the only one to explain the expansion of poppy cultivation in the 1990s. Know-how was also important. In opium cultivation know-how is needed for obtaining the appropriate seeds, for sowing, for the identifying the best time to harvest, for lancing and collection of opium as well as for selling it. The identification of mature opium poppy capsules and the proper incising of the capsule requires experience if the maximum yield is to be obtained. Lancing opium capsules prior to full maturation, for instance, will significantly affect the final yield. The depth of the incision also affects the final yield significantly. If the incision is too deep the skin of the capsule will be cut and the latex will oxidise in the capsule; if the incision is too shallow, the flow of the latex will be constrained.[11]

Opium poppy has been grown in some locations of Afghanistan for many decades, but its spread across the country has been a phenomenon of the 1990s. How has the necessary know-how spread? Research undertaken by UNDCP in the late 1990s found typical patterns for the spread in which ethnic and family links, commercial trade links and, in particular, the labour market played an important role in the establishment of poppy cultivation in new areas.

Opium poppy is a highly labour intensive crop. The overall labour intensity of the cultivation of one hectare of opium poppy was found to be two to three times larger than the labour intensity for black cumin and eight to nine times larger than the labour intensity for the cultivation of one hectare of wheat. About 350 person days are required for 1 hectare under poppy cultivation of which 200 person days are required at harvest time, usually a period of two to three weeks.

Cultivation of opium poppy during the year does not constitute much of a problem. Even in a bumper crop year (1999) it requires the work of less than 90,000 persons[k], but the situation becomes critical at harvest time. One can assume that about 14 people a day over a two week period (200 person days) are required to harvest one hectare of opium poppy. In 1999, the peak year of Afghanistan's opium production, some 91,000 hectares of opium poppy were harvested. This requires a force of almost 1.28 million people[l], up from 750,000 people in 1995 (calculated on the basis of the labour requirements for the harvesting of 53,800 hectares cultivated in that year).

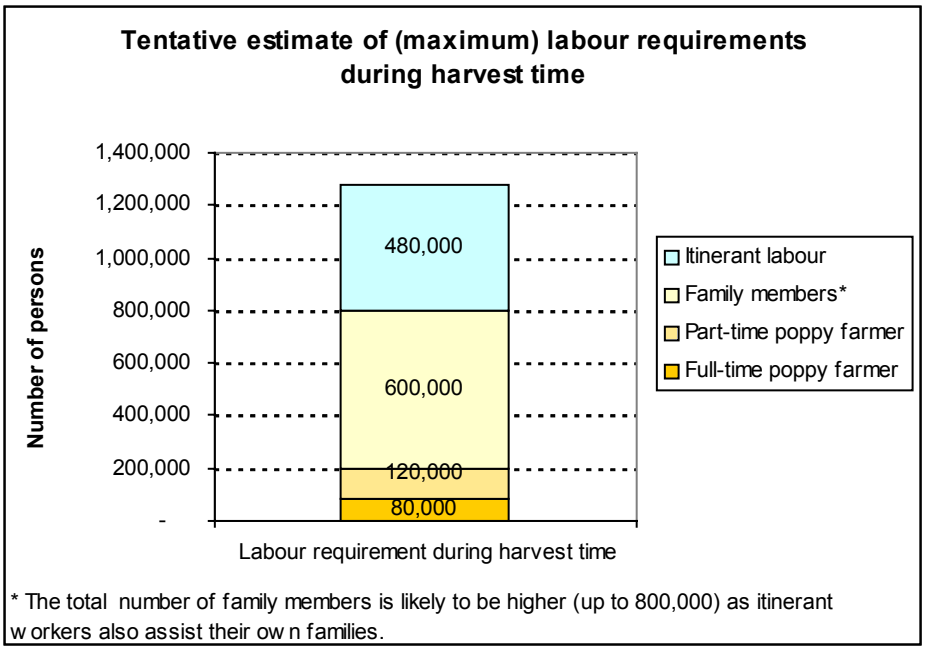

Figure 5
Sources: UNDCP, *Afghanistan Annual Opium Poppy Surveys* 1997 and 1999, UNDCP, *Afghanistan Strategic Study #4*, June 1999 and FAO/WFP Food Supply Assessment Mission, May 2001.

These estimates could be considered as 'maximum estimates' because not all harvests take place at the same time. This provides labour with some flexibility to shift between districts and provinces, reducing the actual number of people needed for any total number of person days required for harvesting the opium (8.2 million person days in 1999 = 91,000 ha *200 person days per hectare). On the other hand, farmers with less than 0.07 hectares (1 ha /14 persons = 700 m^2) under poppy cultivation are less than fully employed during the opium poppy harvest. Research in some districts of eastern Afghanistan showed that 40% of the farmers producing opium poppy had only 0.05 hectares or less under poppy cultivation in 2000[m]. Similarly, family members, notably women, usually do not work full-time on the fields at harvest times as they also have household duties. All of this means that labour resources do not all work at full capacity for opium harvesting. This increases the overall number of persons needed for any total number of person days required for the poppy harvest (calculated on the basis of full-time work). Given these opposing biases in the calculations, the overall 'estimate' of 1.28 million persons for 1999 probably does not deviate too much from the actual number of people involved in the opium harvest.

UNDCP estimates the number of opium poppy farmers in the late 1990s to have been around 200,000, suggesting that a farmer needed, on average assistance from another five persons during harvest time in 1999. If FAO's estimate of around 80,000 professional opium poppy farmers is used, a large-scale opium farmer would have needed the assistance of around 15 additional persons during harvest time.

[k] (91,000 ha *350/360) (Source: UNODCCP, *Afghanistan Opium Survey 2002*, October 2002.)

[l] This is a maximum estimate. The actual number of people at harvest time is probably lower as there are staggered harvests enabling itinerant workers to travel from village to village. Moreover, if the duration of the harvest is extended to three weeks (21 days), the requirements would fall from almost 1.28 million persons to 0.91 million persons in 1999.

[m] The districts (provinces) were Azra (Logar), Tagab (Kapisa), Sarobi (Kabul), K.Jab'r (Kabul), M.Agha (Logar): Source: UNDCP, *Afghanistan Strategic Study #8*, December 1998, p. 53.

Labour is therefore a key input to opium production. Farmers would not be able to cope with the workload on their own. UNDCP research in the late 1990s found that availability of labour was actually one of the key factors for determining the extent of poppy cultivation. In other words, availability of labour was a major limiting factor with regard to the expansion of poppy cultivation. In many parts of Afghanistan, farmers initially tried to restrict the amount of hectares devoted to poppy to the size that they could handle with family and extended family labour. Another strategy adopted by farmers was to grow two different varities of opium poppy: *spingule* (white flower) and *surgule* (pink flower). The difference in the maturation rates of the two varieties allowed households a 20 day period in which to harvest the *spingule* before beginning the harvest of the *surgule*.[12]

With the expansion of opium poppy in the main opium producing areas, the use of different poppy varieties and of the family as a pool of labour was not enough. A demand for itinerant labour at harvest time emerged. UNDCP research conducted in Kandahar and Nagarhar (districts of Ghorak, Khakrez, Maiwand and Shinwar) found that 70% of the farmers required itinerant labour.[13] FAO estimated that the total number of itinerant workers amounted to about 480,000 persons in the first years of the 21st century, about 6 persons for each full-time poppy farmer.[14]

Itinerant labourers were, in general, paid in kind, usually one sixth to one fifth of the harvest. In the bumper harvest of 1999, labour shortages meant that itinerant workers could reckon with one fifth to one quarter of the opium harvest.[15] They subsequently sold this opium in bazaars *en route*.

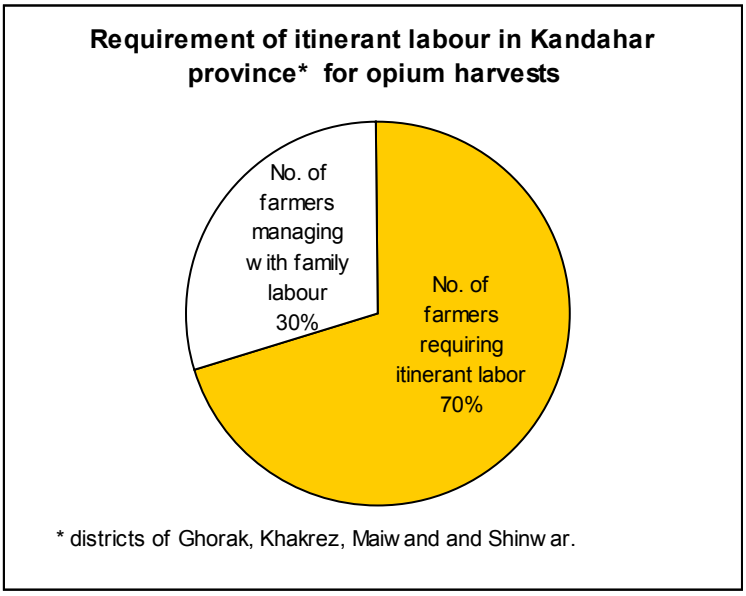

Figure 6
Source: UNDCP, Afghanistan, *Strategic Study #4, Access to Labour: The Role of Opium in the Livelihood Strategies of Itinerant Harvesters Working in Helmand Province, Afghanistan*, June 1999. p. 15.

The increasing need for itinerant opium harvesters contributed to the rapid spread of opium poppy cultivation in the late 1990s. Itinerant labourers often originated from adjacent districts, though there were also itinerant labourers from other provinces. The spread of poppy cultivation largely followed the pattern of itinerant labour. Poppy cultivation usually expanded to adjacent districts, but pockets of cultivation in distant provinces, usually the homes of itinerant workers, were also found (also see Chapter 1.5).

Only a minority of the itinerant labourers interviewed in Helmand province in 1999 were landless (one third) while a majority (two thirds) actually had landholding[16], though these holdings were sometimes insufficient to satisfy their subsistence requirements. Landholdings among the itinerant harvesters interviewed ranged from less than one sixth of a hectare to four hectares. The average was four fifths of a hectare. The landholding of the itinerant workers were thus, on average, half the size of the average landholdings of farmers (1.6 ha per household in 1999) in the poppy growing regions of Afghanistan. These findings showed that itinerant workers could make use of their acquired know-how on their own land.

Having gained experience with various aspects of opium poppy cultivation and having established the necessary contacts to sell the opium, the same itinerant labourers, once back in their village, began to experiment with opium production themselves. In the initial year, cultivation would have been undertaken on an experimental basis because of uncertainty about the crop's final profitability. In subsequent years, however, an ever larger proportion of land was dedicated to poppy cultivation with the main limiting factor having been access to labour at harvest time. The small plots of opium poppy also exposed other families to the crop, thus contributing to the spread of poppy cultivation in the locality.[17] The existence of an agricultural tax (*ushr)* levied on opium by the mullas and local authorities, farmers assumed as an implicit support for poppy cultivation. Many better-off farmers then started growing opium as well.[18]

In the absence of other employment opportunities, opium poppy cultivation also represented a viable coping strategy for refugees on their return to Afghanistan[n]. Some refugees actually had worked as itinerant labourers on poppy farms in Pakistan, while others crossed the border to Afghanistan and worked there on poppy fields, before returning to the refugee camps after the harvest season. Having thus gained experience in poppy cultivation, the refugees, on their 'official' return to Afghanistan and their home villages, transformed their know-how into practice.

To sum up the discussion so far, it can be concluded that access to labour and to know-how are two key factors in opium production. Both were widely available in the 1990s, contributing to the spread of poppy cultivation across Afghanistan. The know-how required for poppy cultivation is now widely diffused across the country, and any future policy intervention must take this into account.

The situation, however, is different with regard to access to labour. Availability of labour is critical to opium production at harvest time. Thus one major aim of policy interventions could be to reduce the level of available labour during harvest time. Labour intensive public works (reconstruction of roads, irrigation systems, internationally financed projects to improve the storage and preservation of perishable crops. etc), for instance, should be timed to take place during opium harvest time. Even if such public works do not absorb all the labour surplus, labour costs would rise, reducing, *ceteris paribus*, the profit margins for poppy farmers.

Care, however, would have to be taken to prevent other groups from filling possible labour shortages. In 1998, there were reports, for instance, of Afghans in refugee camps in Pakistan leaving for a couple of weeks to participate in the poppy harvest as itinerant workers before returning to the camps. There were also reports indicating that large numbers of students were found among itinerant workers and that whole colleges in Afghanistan (as well as in neighbouring border regions of Pakistan) *de-facto* stopped functioning during harvest time.

Opium poppy harvesting usually begins in early April in low altitude areas and continues to the end of May and early June in medium altitude areas. The bulk of opium poppy is planted in low and medium altitude areas (Helmand, Nangarhar etc.). It is over the April-May period that labour intensive public work programs and concentration of exams would have the greatest impact. There is also harvesting of opium poppy beginning in early July (e.g. Badakshan) which can continue until late September in high altitude areas (e.g. Zebak). However, production in these areas is limited and thus labour, at least for the time being, would not really constitute the main limiting factor.

[n] Another UNDCP study found that the return of refugees and displaced population and the expansion of poppy cultivation did not have a general direct correlation. The survey could not discern distinct differences between the relative inclination of recently returned families and longer established families to adopt opium poppy cultivation as a livelihood option . Nonetheless, in some districts the the influx of refugees co-incided with the start of opium poppy cultivation. (See UNDCP, *Afghanistan, Strategic Study #8, The Role of Opium as a livelihood Strategy for Returnees,* December 2000, p. 13, p. 16 and p. 24.).

ENDNOTES

[1] UNDCP, *Afghanistan, Strategic Study #8, The Role of Opium as a Livelihood Strategy for Returnees*, December 2000, p. 26
[2] *ibid*., p. 30.
[3] UNDCP, Afghanistan, *Strategic Study #1, An Analysis of the Process of Expansion of Opium Poppy Cultivation to New Districts in Afghanistan,* June 1998, p. 12.
[4] UNDCP, Afghanistan Strategy Study #4, *Access to Labour: the Role of Opium in the Livelihood Strategies of Itinerant harvesters Working in Helmand Province,* June 1999, p.2.
[5] UNDCP, *Afghanistan, Strategic Study #5 An Analysis of the Process of Expansion of Opium Poppy to New Districts in Afghanistan*, November 1999, p. 14.
[6] UNDCP, Opium Poppy Survey data, 1998 and 1999.
[7] UNDCP, *Afghanistan, Strategic Study #5 An Analysis of the Process of Expansion of Opium Poppy to New Districts in Afghanistan*, November 1999, p. 14.
[8] *ibid*., p. 16.
[9] *ibid*., p. 14.
[10] UNODCCP, *Afghanistan Opium Survey 2002*, October 2002.
[11] UNDCP, *Afghanistan Strategy Study #4*, *Access to Labour: the Role of Opium in the Livelihood Strategies of Itinerant harvesters Working in Helmand Province,* June 1999, p. 15.
[12] UNDCP, *Afghanistan, Strategic Study #1, An Analysis of the Process of Expansion of Opium Poppy Cultivation to New Districts in Afghanistan*, June 1998, p. 10.
[13] UNDCP, *Afghanistan Strategy Study #4*, *Access to Labour: the Role of Opium in the Livelihood Strategies of Itinerant harvesters Working in Helmand Province,* June 1999, p. 7.
[14] FAO/WFP Food Supply Assessment Mission conducted in May 2001 in Afghanistan, quoted in UNDCP, *Global Illicit Drug Trends 2002*, p. 41.
[15] UNDCP, *Afghanistan Strategic Study #4*, *Access to Labour: the Role of Opium in the Livelihood Strategies of itinerant Harvesters Working in Helmand Province*, Afghanistan, p. 19.
[16] *ibid*.
[17] UNDCP, *Afghanistan Strategic Study #1, An Analysis of he Process of Expansion of Opium Poppy Cultivation to New Districts in Afghanistan*, June 1998, p. 2.
[18] UNDCP, *Afghanistan Strategic Study #5* An Analysis of the Process of Expansion of Opium Poppy to New Districts in Afghanistan, November 1999, p. 4.

Chapter IV

BAZAARS, FINANCE AND NARCO-USURERS

4. Bazaars, finance and narco-usurers

The use of opium as a source of credit is closely linked to the lack of a functioning financial system. Opium traders usually offered credit to opium farmers and thus began to play the additional role of money lenders. Given the resulting domination of the informal financial system by opium traders, farmers' access to credit became limited to those who were able to provide future opium harvests as collateral. This chapter analyses how these money lending operations were organised; their profitability; and how opium became an integral part of the financial system in the opium poppy growing regions.

4.1. Opium as a source of credit

In contrast to most other crops grown by Afghan farmers, which are cultivated to meet subsistence requirements, opium poppy emerged as the country's main cash crop. Consumer goods such as clothes and household equipment as well as construction work are usually paid out of opium income. However, the role of opium goes further. Reliable institutions to deposit funds in Afghanistan have been in short supply over the last decade, notably since the Taliban came to power and prohibited the charging of interest. No formal banks existed for people to deposit their savings[a]. Savings were thus either invested in businesses of relatives and/or handed over to money traders/lenders who would invest the savings and then share the profit or loss with the investors.[1] These possibilities are rather risky forms of saving for ordinary citizens. Informal saving groups exist, often promoted or set-up by NGOs, but their role is limited. Thus in poppy growing areas, people usually turned to opium as the typical form of household saving. Opium is, in general, non-perishable (can be easily stored for 8 years or more), and in general it has had a more stable value than the Afghan currency. Opium can immediately be converted to cash, either to meet an emergency need, or to arbitrage against favourable market prices. Over the mid 2000 to mid 2002 period, holders of opium could gain considerable windfall profits as a result of the ten-fold increase in opium prices (expressed in the US$).

From an economic point of view, the role of opium as a source of credit has been even more important. UNDCP fieldwork conducted in Nangarhar and Kandahar provinces in the late 1990s, which will be discussed in more detail below[b], revealed that loans were an integral part of household livelihood strategies. In many cases, opium represented the only form of credit available, given the absence of a functioning formal credit system in the country. Afghanistan's formal financial sector was already very weak by the late 1970s, but it suffered damage on an unprecedented scale in the 1990s, notably after the Taliban had taken control over Afghanistan and implemented a narrow interpretation of Islamic banking. This led to the *de-facto* bankruptcy of the banking system and provided the country's impetus for the emergence of opium as the main source of credit in many rural areas in the 1990s. A brief review of the evolution of Afghanistan's financial sector and its crisis is found in Box 1.

Box 1. The evolution of the banking sector in Afghanistan

Afghanistan's first modern banks were established in the 1930s. The first bank was *the Banke Millie Afghan,* also known as Afghan National Bank, founded in 1933. It was a basically private bank (with some state holding) operating under a government monopoly concession (*sherkat*). In addition to its commercial operations it was also given the right to issue the Afghan currency and introduced paper money in 1939. In order to circumvent the Koranic prohibition against the charging of interest, it developed a system of so-called 'money tickets'. The bank granted interest free loans, but borrowers were obliged to pay for a stamp that had to be attached to each repayment receipt, thereby giving the bank a fee income instead of an interest income. It opened overseas branch offices in Karachi, Hamburg, Berlin, London and New York, thus helping Afghan entrepreneurs to develop international trade relations.

[a] Prior to the Taliban take-over, more than half of the country's private deposits were held by Da Afghanistan Bank, the country's central bank. (Source: IPC, *Afghanistan, The Scope for Promoting Micro, Small and Medium Sized Enterprises in the Private Sector by Establishing a Microfinance Bank*, March 2002, p. 33 and p. 47.)

[b] The discussion of opium as a source of credit will draw heavily on the results of UNDCP field work in Afghanistan on the subject in 1998, contained in UNDCP, *Afghanistan, Strategic Study #4, The Role of Opium as a Source of informal Credit,* January 1999

In 1939, the Afghan government set up the *Da Afghanistan Bank.* It took over all of the central bank's functions from Banke Millie and held Afghanistan's foreign reserves. In addition, it became the country's leading commercial bank, holding most of the country's private deposits. A few specialised banks were founded in the 1950s and some more in the 1970s*.

In the mid 1970s, prior to the communist take-over, the banking sector was nationalised (1975/76). The interest rates were fixed, typically earning between 9% and 11% and thus less than the inflation rate. Little incentive was thus created to place money into Afghan banks (At the time, loans in the informal money bazaars started at 24% p.a.).

Following the communist coup d'etat in 1978 the formal banking sector deteriorated further. Interest rates set by the central bank remained below inflation. As a result savings were often not channelled into the banking sector and companies faced credit rationing throughout the 1980s. Large-scale nationalized enterprises were, *de-facto*, given priority in the process. Most of these enterprises were subsequently destroyed in the war. Hardly any money was left for small and medium sized companies or for the credit requirements of individuals. Banking operations and thus decision making were centralised in Kabul. This meant that provincial areas were largely ignored. In addition, security issues became a concern and were another factor behind low levels of deposit-taking and lending operations in the provinces.

The 1990s, finally, were a time of complete chaos. Except for the central bank, all of the others failed in the war-ravaged economic environment of the 1990s. The Taliban made lending practically impossible by insisting on a narrow-minded interpretation of Islamic banking, dismissing qualified staff, including all female staff, while lacking the experience to operate the banks themselves. The overall staff employed by Afghan banks declined by four fifths during the Taliban era to just 700 persons. The management staff of the country's banks were replaced by Taliban. Most of them were graduates of the madrasas, the rural Islamic academies, and some of them were mullahs. In general, most had no background or experience in economics, commerce or finance. When they left following the demise of the Taliban regime, the banks had been plundered on a vast scale with almost no assets left. Before the Taliban left Kabul they also took with them the entire stock of Afghanistan's remaining foreign reserves, consisting of $6 million in U.S. dollar bills and $1 million in Pakistani rupees. One private Islamic bank emerged temporarily during the Taliban era, which mainly served to receive capital from foreign countries to support the militia. But it subsequently disappeared again, leaving nothing but a name plate behind.

Afghanistan's formal financial system today consists of the central bank, the *Da Afghanistan Bank,* which (on paper) also functions as a commercial bank, another two universal commercial banks and four sectoral lending institutions. Although all of them are 100% state-owned, they, as of early 2002, were little more than empty shells and hardly operational.

*) Pashtany Tejaraty Bank (commercial bank for foreign trade), founded in 1954; Construction & Mortgage Bank, founded in 1955, Agricultural Development Bank, founded in 1959; Industrial Development Bank, founded in 1973 and Export Promotion Bank (specialised for export-oriented SMEs), founded in 1978.

(Source: IPC, Afghanistan: the Scope for Promoting Micro-Small and Medium Sized Enterprises in the Private Sector by Establishing a Microfinance Bank, March 2002.)

Assessments of the situation with regard to the availability of micro-financing undertaken in 2002, confirmed that the situation remained extremely difficult. The collapse of the formal financial sector in the 1990s contributed to the overall lack of investment in the country**.** Lack of funds was one of the main constraints to economic growth across Afghanistan[2]. Re-investment[c] of profits was not sufficient to cover investment requirements, and the informal credit system that had developed over the last two decades could not fulfil this role. Indeed, 74% of businesses interviewed in Kabul in February 2002 (N = 204 micro- and small-scale enterprises) cited lack of funds as a major obstacle to business development and growth. About the same percentage of businesses also cited the country's lack of a functioning monetary policy[d], concomitant high

[c] Almost half of all respondents reported that they regularly reinvested less than 10% of their profits in the business; one third re-invested between 1 and 25% of the profits while just 5% of the mirco-enterprises interviewed reinvested more than 25% of their profits in the business. (Source: IPC, *Afghanistan, The Scope for Promoting Micro, Small and Medium Sized Enterprises in the Private Sector by Establishing a Microfinance Bank*, March 2002, p. 30.

[d] In fact, the country was faced with a situation in which at least three different Afghan currencies have been in cirulation in the country in 2002: the official Afghani issued by the central bank in Kabul, an Afghani issued by the Northern Alliance and a third one issued by Mr. Dostum in the territories under his control.

inflation and the volatility of the local currency as major problems. For comparison, political instability was considered by 45% as a major problem, followed by poor infrastructure, crime and corruption. Lack of qualified personnel was seen by 3% as a major obstacle,[3] even though - according to a UNICEF survey conducted in 2000 – the literacy rate in Afghanistan was extremely low: 53% among men (age 15 and above) and 6% among females[4]. This highlights the fact that the extreme scarcity of funds made most of the other serious problems appear as secondary.

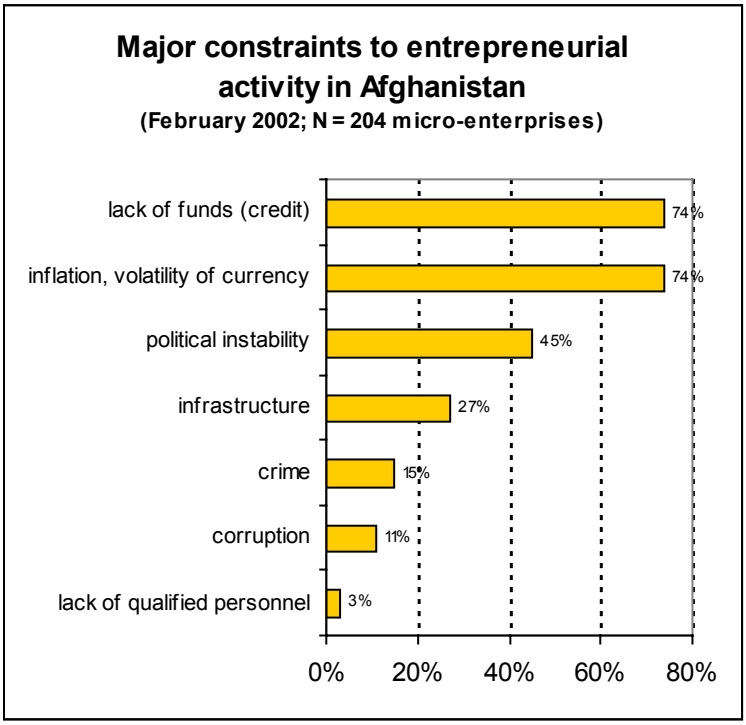

Figure 1
Source: IPC, *Afghanistan, The Scope for Promoting Micro, Small and Medium Sized Enterprises in the Private Sector by Establishing a Microfinance Bank*, March 2002, p. 29.

A *Baseline Survey* conducted by UNDCP in February/March 1998 in various opium poppy growing districts across Afghanistan found that 85% of the households interviewed (N=600) needed and obtained loans during the previous twelve months. A more in-depth study, though more limited in terms of number of households interviewed (N=108), conducted in June-July 1998 in four target districts of UNDCP's Poppy Crop Reduction Project in Nangarhar province (Ghorak, Khakrez, Maiwand and Shinwar), found that 95% of those interviewed claimed that they had obtained loans during the previous twelve months.

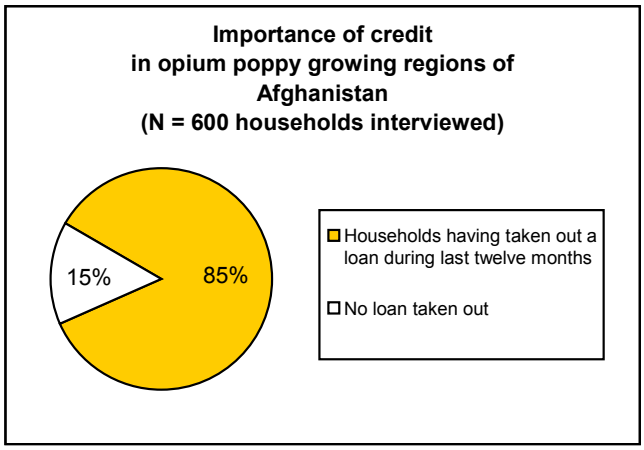

Figure 2
UNDCP, *Afghanistan Baseline Survey*, 1998

The need for loans is a reflection of significant income inequality among farmers in Afghanistan, a result of heavily skewed land distribution. Investigations in five districts of eastern Afghanistan (Azra, Tagab, Sarobi, K.Jab'r and M.Agha) in the Logar, Kapisa and Kabul provinces found, for instance, that 15% of the famers had only 0.3 hectare or less, 50% had 0.5 hectares or less and 85% of the farmers had 1 hectare or less at their disposal for cultivation.[5] Across Afghanistan the average size of land under cultivation was 2 hectares in the poppy growing regions in 2000.[6] Such differences in landholdings have a major impact on the distribution of income in a basically agricultural society. They help to explain why even people in the relatively rich poppy growing areas of Afghanistan were still so dependent on loans.

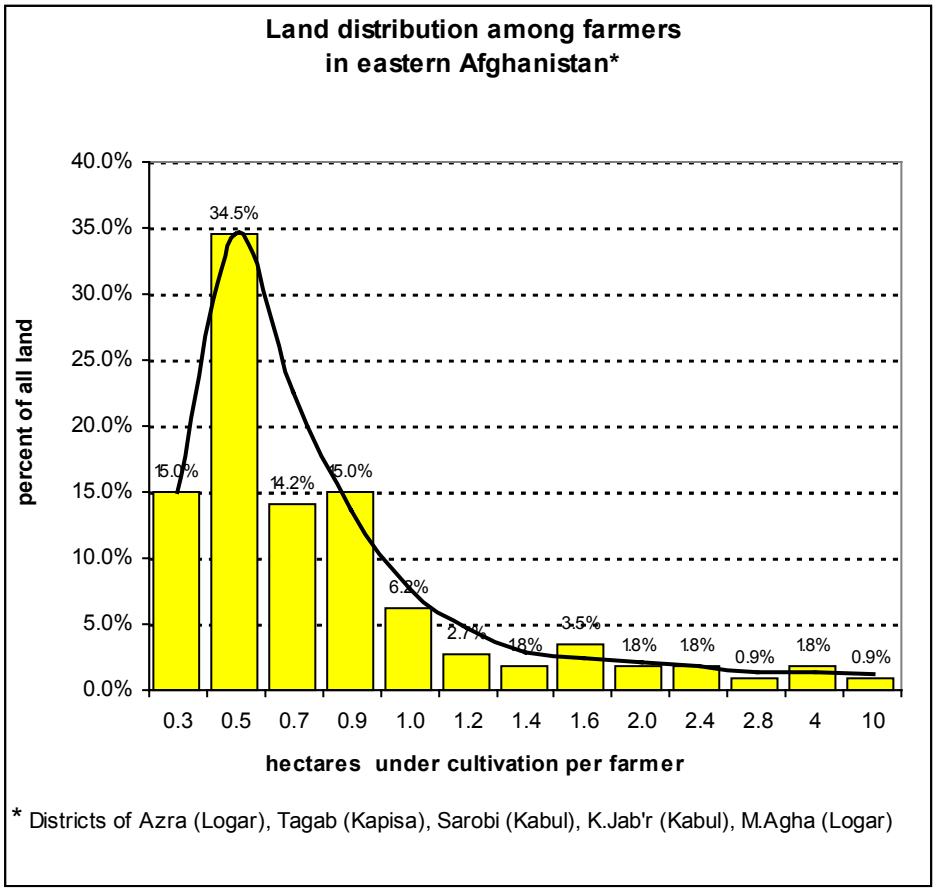

Figure 3
Source: UNDCP, Afghanistan, Strategic Study #8, December 2000, p. 52.

A socio-economic survey conducted by the UN agency Habitat in Helmand, Afghanistan's largest opium producing province, in April 2000 found that only about one third of the loans (in terms of number of loans) was for production and investment needs; over two thirds of the loans were taken out to cover basic needs, such as food, clothing, medical costs and marriages.[7]

About three quarters of all loans in rural, poppy growing areas are provided by shop-keepers and traders; the rest are provided by family members and friends.[8] The study of micro-enterprises in Kabul (February 2002) referred to earlier found that the origin of the loans in urban areas was quite different. Only one in four of the micro-enterprises turned to money lenders. Urban money lenders usually operate within the structures of the bazaar. Roughly 13% borrowed from "other sources" indicating that a certain percentage of the financing probably came from illegal sources, including arms and drug trafficking. A small number received finance from NGOs (3%). About 25% reported that they had never obtained credit from external sources.[9] This is a higher percentage than found in the rural opium poppy growing districts (15%)[10], indirectly confirming the link between the availability of opium and access to credit. Similarly, in the opium poppy growing areas just a quarter of all loans came from family members, while micro-enterprises in Kabul (which did not have access to opium as a source of credit) had to rely far more on familiy members: 43% of their loans came from family members.

The 1998 Baseline Survey revealed that demand for credit in the opium poppy growing areas was often seasonal: 72% of respondents obtained their loans between mid September and mid March. In other words, prior to the 1999 record opium harvest and the price hike in 2001, for the bulk of households' income from the opium harvest (taking place in April) was sufficient to keep farmers going up to September. In the subsequent months of *Maizan* and *Aqrab*, i.e. the mid September to mid-November period, cultivation of the winter crop began and households required loans for the purchase of agricultural inputs, such as seeds, fertilizers and power. In addition, this period is frequently used for marriage ceremonies, which require significant amounts of money. Thus 30% of all respondents reported that they obtained their initial loan in these two months. A further 42% took out a loan during the months of *Jadee*, *Dalwa* and *Hood,* representing the period from 20 November to 19 February. During this period, a number of households reported that they experienced food shortages and obtained the loans to purchase wheat, as well as fertilisers and other agricultural inputs, for the following year's opium poppy harvest.

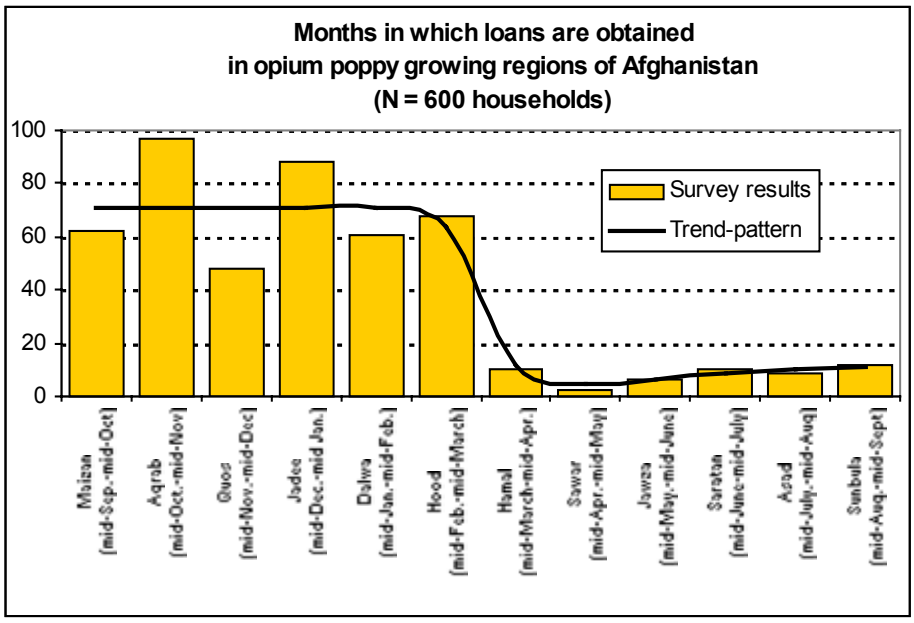

Figure 4
Source: UNDCP, *Afghanistan Baseline Survey*, 1998

4.2. Credit available to opium farmers

The main types of informal credit available to farmers were

- the advance sale of a fixed amount of agricultural production (usually opium), known as *salaam;*
- the delayed payment for commodities from shopkeepers or traders, and
- interest free loans from immediate or extended family members

4.2.1. Salaam (advance payments)

By far the most common form of credit were advances on a fixed amount of expected future agricultural production *(salaam)*. In four opium producing districts (Ghorak, Khakrez, Maiwand and Shinwar), located in Nangarhar and Kandahar, close to 80% of all loans taken out by farmers were such advances. This form of credit was traditionally given for wheat. Over the last two decades it evolved to include other cash crops, such as black cumin and opium poppy. In the late 1990s, in several districts of Afghanistan opium was *de-facto* the only crop eligible for such advance payments. UNDCP interviews in poppy growing districts showed that almost three quarters of all salaam arrangements were based on opium. Advance sales based on the future opium poppy crop accounted for about 60% of all loans taken out.

The importance of *salaam* was also confirmed in a study conducted in 1998 on the opium trade. The study interviewed 38 opium traders in Nangarhar, Kandahar and Helmand in June 1998. Over 60% of the traders provided cash advances to farmers on their future opium production.[11]

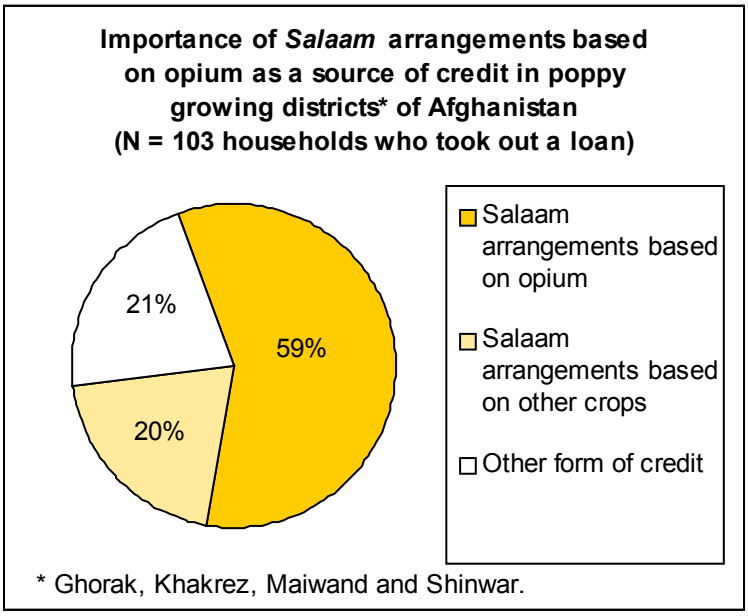

Figure 5
Source: UNDCP, Afghanistan Strategic Study #3, The Role of Opium as a Source of Informal Credit, 1999, p. 9.

While *salaam* based on opium is very common in Afghanistan, the actual amounts lent still seem to be limited. The same study of Afghan opium traders found that only about 5% of the total trade in opium was done through *salaam* payments in 1998 because traders were cautious about the advances they offered. Only one trader, who was reported to be one of the largest opium traders in Musa Qala (Helmand province), provided advance payments on approximately 15% of his total trade. Based on the estimate of the total opium trade at bazaar level of $175 million in 1998, the funds channelled through the *salaam* system can be estimated to be about US$9 million in 1998.

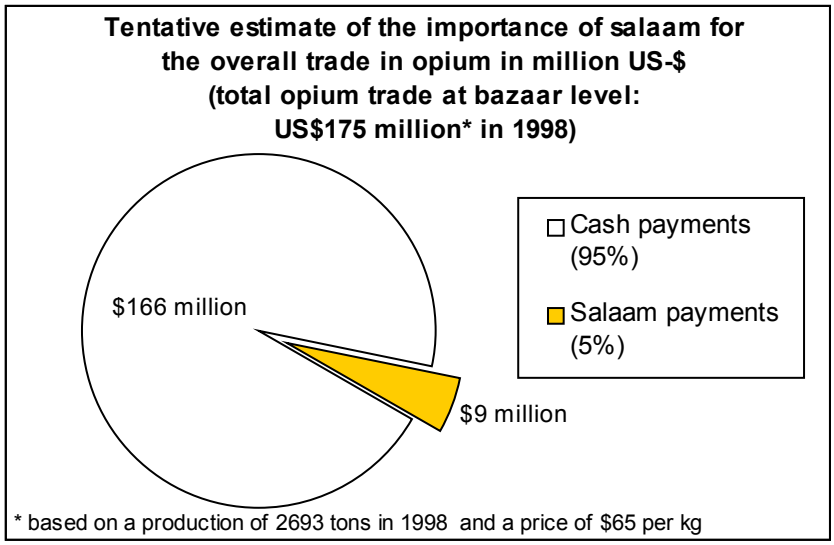

Figure 6
Sources: UNDCP, *Afghanistan - The Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders*, October 1998, p. 14, UNDCP, *1998 Afghanistan Annual Poppy Survey,* UNDCP, DELTA.

Given estimates of some 200,000 farmers of which 85% or 170,000 used some type of loan, with 60% of the latter having used *salaam* on opium, the average *salaam* loan to a farmer on opium appears to have been just $90 in 1998. The average amounts could have been even smaller as s*alaam* arrangements are not only

entered into by opium poppy farmers but also, to some extent, by sharecroppers. The 1998 UNDCP study on the role of opium as a source of informal credit found that the total amount of opium sold by each household through *salaam* in the four target districts (Ghorak, Khakrez, Maiwand and Shinwar) ranged from 1 kg to 90 kg at prices of $10 to $36/kg. This meant that the size of individual loans ranged from just $10 to $3000; based on the average price paid to farmers ($17.9), the loans ranged from $18 to $1600.[12]

It is interesting that these were smaller amounts than were given by money lenders ($130-$270; average $200)[13] and significantly lower than the loans taken out by micro- and medium scale enterprises in Kabul in 2002. The latter ranged from less than $100 to more than $5000 with the average loan size of around $2000, including loans taken from family members[14].

Overall more *salaam* arrangements were reported than there were respondents, indicating that respondents had obtained advances more than once. There was an increase in the number of *salaam* arrangements from Maizan (mid-September to mid-October) to Hamal (mid March to mid-April). The explanation for this phenomenon is that the terms of *salaam* improve with the proximity of the approaching harvest. Thus households try to delay the sale of their future produce until it is absolutely essential for them to get cash. In order to limit the costs, they often sell only small amounts of their future produce when they are in urgent need for cash. Consequently, respondents reported multiple *salaam* arrangements. One quarter of all such arrangements takes place just prior to the time of the opium poppy harvest.

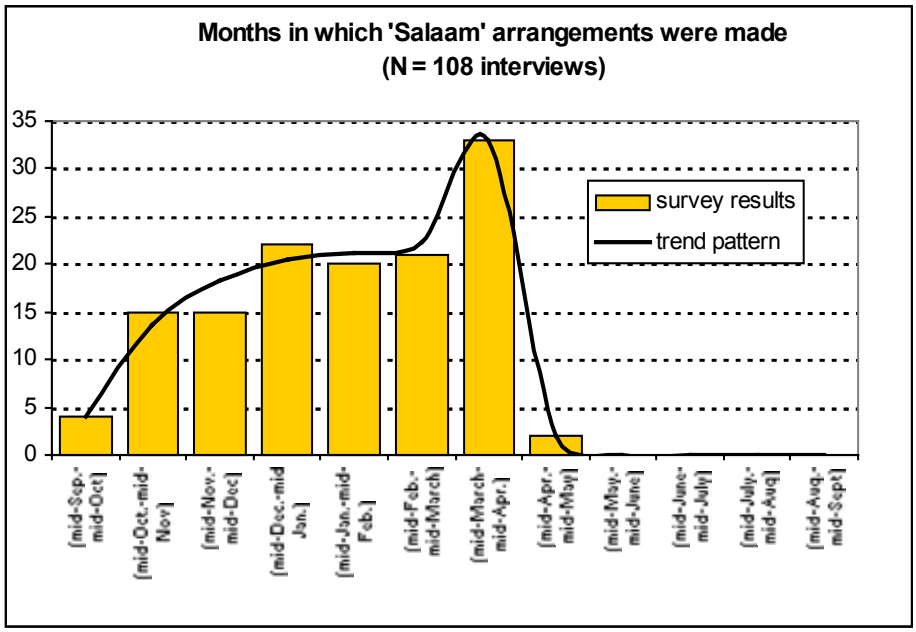

Figure 7
Source: UNDCP, Afghanistan Strategic Study #3, The Role of Opium as a Source of Informal Credit, January 1999, p. 9.

Costs of such loan arrangements were, extremely high in 1998. The payments received as part of the *salaam* arrangements for opium turned out to be, on average, just 42% of the value of the opium at harvest time. In other words, if a farmer received $42 as an advance, he actually lost $58. This is equivalent to an interest rate of 138% for a loan obtained for just a few months. The average length of a *salaam* contract was 3.2 months. This means that the interest rate, on an annual basis, amounted to 517% in 1998. *Salaam* paid in advance for wheat and for black cumin turned out to be less costly (with farmers' receiving 48% and 54% of the value at harvest time, respectively). The interest rates, calculated on an annual basis, were nonetheless still substantial: 406% and 319%, respectively.

Table 1. Cost of *salaam* for opium in four districts* of Afghanistan		
Average price at harvest time per kg	$ 42.60	100%
Average advance price received per kg	$ 17.90	42%
Cost per kg of opium	$ 24.70	58%
Cost in % of advance price	138%	
Average length of loan	3.2 months	
Interest rate on an annual basis	**517%**	

Ghorak, Khakrez, Maiwand (Kandahar) and Shinwar (Nangarhar).

Source: UNDCP, *Afghanistan, Strategic Study #4, The Role of Opium as a Source of Informal Credit*, January 1999, p. 10.

A study conducted in the same year among opium traders in Nangarhar province reported that the average advance on opium ranged from $20.8 for farmers who were considered a risk, to $26/kg to farmers who were considered trustworthy. The same traders reported subsequently that they sold the opium at rates ranging from $47.8/kg to $76/kg as prices were rising. The mark-up thus ranged from $21.8 to $55.2/kg compared to a mark up of only 3 to 9/kg for those traders who were not in a position to provide advances. Thus, the gains from acting as a financier amounted to between $18.8 and $46.2/kg. Taking the mid-points for the further calculation, the average financing gains out of a *salaam* contract amounted to 139%[e], which is almost identical to the outcome of the calculations shown above.[15]

The same study among opium traders in the south (Kandahar and Helmand province) found that they provided *salaam* at a rate of $12.7 to $19/kg in January 1998, less than the *salaam* in eastern Afghanistan. Given a post harvest price of $60.3 to $62.2/kg the traders earned about $45/kg[16], and thus more than the traders in eastern Afghanistan. However, this includes profits. It would therefore be wrong to interpret this figure as the financing cost of the farmers. Using the actual farmgate prices reported by farmers in UNDCP's annual opium poppy survey for the year 1998, and the same exchange rate as applied in the study on the opium trade (Afg 35000 to 1 US$), the average farmgate price for fresh opium amounted to $26/kg in Helmand and $30/kg Kandahar at harvest time. Taking the mid-points for the calculation, the farmers received about 57%[f] of the farmgate price as *salaam* which was actually a higher percentage than in eastern Afghanistan. The average cost for a farmer in the south was about $12/kg or 75% ($12/$15.9) for a period of about 3 months. The average annual interest rate for *salaam* in southern Afghanistan thus amounted to about 300% (75% / 3*12).

The calculations above highlight variations found across Afghanistan. It must also be noted that, in 1998, heavy rain during the harvest time destroyed some 20% of the opium poppy harvest across the country and thus caused opium prices to rise. In some areas of Kandahar and Helmand the opium yield fell by half in 1998. This d*e-facto* increased lending costs.

The situation became difficult for those farmers whose crop was damaged and thus could not deliver the opium as promised. Some four weeks after the 1998 harvest of opium poppy in Kandahar (districts of Ghorak, Khakrez, Maiwand) and Nangarhar (district of Shinwar) about 60% of the respondents interviewed reported that they had failed to repay seasonal debts which they had incurred during the winter cropping season due to the poor harvest following extensive rain.[17]

The terms for rescheduling debt, in general, were quite unfavourable. The amount of the loan doubled or tripled when repayment was delayed over a twelve-month period. Opium traders expected at least twice the amount of opium in 1999 from those households which could not repay the agreed amount in 1998.[18] As a consequence, some 25% of respondents in Shinwar district (Nangarhar), for instance, stated that they were forced to increase the share of land dedicated to opium in the 1998/99 growing season to repay their current debt.[19]

Indeed, the area dedicated to opium poppy cultivation rose by some 20% in 1999 as compared to 1998. Though opium poppy cultivation spread around the country it is interesting to note that 86% of the overall increase took place in districts which had already been cultivating opium poppy prior to 1998. Only 14 percent of the total increase was accounted for by the cultivation of opium poppy in new districts. Almost 70% of the total increase in areas under poppy cultivation occurred in the provinces of Helmand and Nangarhar.[20] In these provinces,

[e] (= (($18.8+$46.2)/2)/($20.8+$26)/2)
[f] (($12.7+$19)/2) / (($26+$30)/2)

opium already played a key role in the local economies throughout the 1990s. The rain at harvest time in 1998 destroyed significant proportions of the poppy crop and thus left many farmers with unsettled *salaam* contracts which they only could settle by growing more opium poppy in 1999.

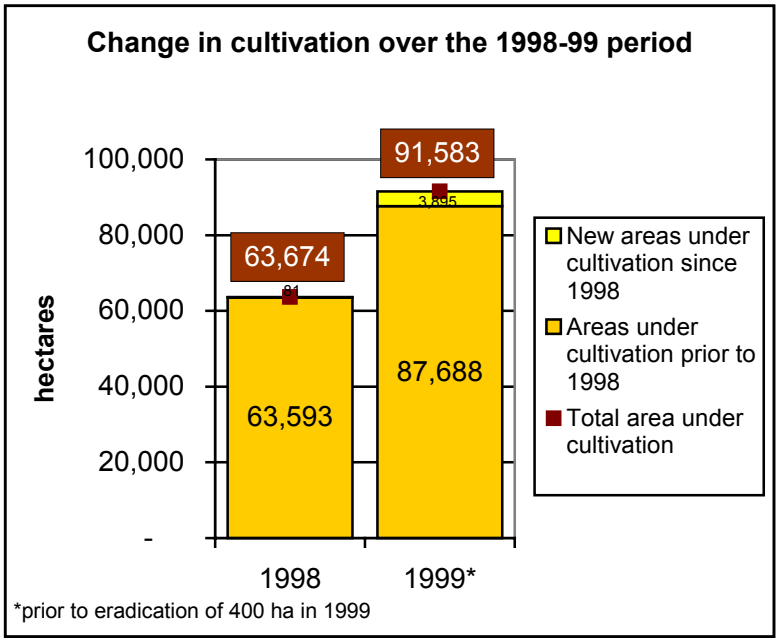

Figure 8
Sources: UNDCP, Afghanistan Opium Survey 1999 and 1998.

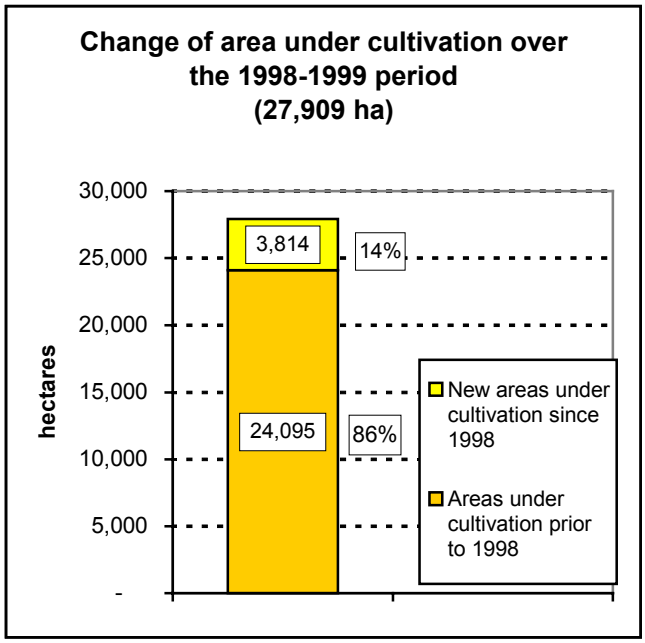

Figure 9
Sources: UNDCP, Afghanistan Opium **Survey 1999 and 1998.**

Some farmers reported that they purchased opium from other farmers or traders, thus causing additional price increases in the months following the harvest. The higher prices, which remained high in the second half of 1998, also acted as an incentive for many more farmers to sow poppy in the winter of 1998 for the harvest in the spring of 1999. Farmers who repaid their *salaam* debts in June, buying the opium from the open market, paid

four times the value of the original advance which they had received[21]. Assuming that they held the loan, on average, for about half a year, their interest rate, calculated on an annual basis, was about 600%[9].

The foregoing discussion demonstrates that financing costs based on informal credit, without a proper banking system in place, have been extremely high in Afghanistan and have clearly contributed to the spread of opium poppy cultivation in the country.

4.2.2. Purchase of commodities on credit

Alternative sources of financing were not cheap either and contributed to rising rural indebtedness. Respondents in the four target districts reported that purchasing commodities from shopkeepers or other traders on credit was possible. The commodities obtained through this system ranged from food, medicine and other household goods, to agricultural inputs, including seeds, tools and fertilisers. The data in the *Baseline Survey* revealed that famers often obtained fertilisers from shopkeepers using this informal credit system. For both urea and diammonium phosphate, the price of obtaining fertilisers on credit was some 40% higher than purchasing it with cash. [22]

Another system, known as *anawat* in Kandahar and *hila* in Nangarhar, also facilitates the purchase of commodities on credit. The *anawat* system is usually used for items such as opium as well as for livestock and luxury items such as vehicles. It is one of the few systems of credit which is not seasonal. *Anawat* requires commodities to be obtained at an agreed price that is considerably higher than the cash price. The commodities obtained, but not paid for immediately, are then sold back to the seller within a short period of time, often instantly, at a sigfnificantly lower price (often at just half the price at which the goods were purchased). The *anawat* system allows households to obtain cash loans whilst bypassing Islamic strictures on interest. For example one respondent had taken *anawat* to raise money for covering some of the costs related to the construction of his house; he purchased 16 kg of dry opium and immediately resold the opium to the lender for the equivalent amount of $700 (i.e. $43.8/kg) which he received in cash. The average price of dry opium at the time was $65/ kg. This meant that the borrower had to repay $1040 for the loan of $700, equivalent to an interest rate of about 50% ($340/$700) on this loan. As the person was not able to repay this loan out of his income, and subsequently had to resort to further loans, he entered into a spiral of indebtedness which resulted in the sale of all of his household assets, including his livestock.[23] Against the background of such a scenario, not uncommon in many of the rural areas of Afghanistan, even farmers who originally had no intention of growing opium often began to cultivate.

4.2.3. Interest free loans

Farmers preferred credit arrangement which was an interest-free loan known as *qarze hasana.* This type of loan was typically obtained from member of the immediate or extended family, often to pay for the high costs of a marriage. The costs associated with a marriage are considerable in Afghanistan, because the groom has to pay a bride price or *walwar*, typically ranging from $1400 to $5550, a fortune for most Afghans.

A number of respondents indicated that a considerable proportion of their existing debts actually could be attributed to *qarze hasana* loans obtained in order to pay for the bride. A few informants suggested that they actually had to increase their poppy cultivation in order to pay for the high costs associated with their marriages and/or to repay the loans which they had taken out to pay for the marriage. [24]

4.2.4. Indebtedness and incidence of default

Overall, rural Afghanistan appears to suffer from relatively high levels of indebtedness. Among the 108 persons interviewed in the four target districts in mid 1998, the average indebtedness for landlords was equivalent to 22% of their average annual net income; the proportion among the owner cultivators was 39% and among the landless was 53%. The average amount of debt held per household was $695 among the landless, $1245 among owner-cultivators and $1668 among landlords.[25] The Baseline Survey, conducted among 600 households in early 1998 came to almost identical results (average debt per household among landless: $709, owner-cultivators: $1052, and landlords $1502).

[9] (300% / 6 *12)

Despite the relatively high levels of indebtedness, respondents and key informants claimed that there were very few defaulters under the informal credit arrangements.[26] The frequent solution to a household's debt problem was to expand opium poppy cultivation. While expanding opium production was more or less accepted, a significant number of respondents reported that failing to repay existing debts was viewed with disdain by both the authorities and the general population. Thus a somewhat paradoxical situation existed in Afghanistan. Although the vast majority of respondents believed that the opium trade was un-Islamic, they accepted participation in it in one way or another. When it came to honouring financial obligations, however, social mores prevented them from simply defaulting.

Conclusion

This chapter has tried to document the extent to which opium poppy became an integrated part of the livelihood strategies of many rural communities in Afghanistan. The integration of opium into the informal credit system makes it much more than simply an agricultural crop that can be easily exchanged by another one.

If the role of opium is to be eliminated in any sustainable way, new savings and credit systems will have to be developed to cater for the micro-financing requirements of the opium producing districts. As the foregoing discussion has shown, the existing savings systems are rather risky while the informal credit systems are very expensive for the farmers. Further expansion of opium poppy cultivation will continue to be driven by this micro-economic engine unless cheaper and safer credit systems are established in the opium growing areas.

ENDNOTES

[1] Sarah Forster and Doug Pearce, Afghanistan – CGAP Microfinance Review, Final Draft, May 2002.
[2] *ibid*., p. 5.
[3] IPC*, Afghanistan: The Scope for Promoting micro-Small and Medium Sized Entrprises in the Private Sector by Establishing a Microfinance Bank*, March 2002, p. 29.
[4] UNICEF, "2000 Afghanistan, Multiple Indicator Cluster Survey", *in Monitoring and Evaluation Working Paper Series No. 1*, September 2001, p.12.
[5] UNDCP, Afghanistan Strategic Study #8, December 2000, p. 52.
[6] UNDCP, Afghanistan Annual Opium Poppy Survey 2000 data.
[7] Agency Coordinating Body for Afghan Relief Survey Unit, *Helmand Initiative Socio-Economic Survey*, Habitat, April 2000.
[8] Sarah Foster and Doug Pearce, *Afghanistan CGAP Microfinance Review*, (Final Draft) May 2002, p. 5.
[9] IPC, Afghanistan, "The Scope for Promoting Micro, Small and Medium Sized Enterprises in the Private Sector by Establishing a Microfinance Bank", March 2002, p. 30.
[10] UNDCP, *Afghanistan, Baseline Survey* 1998 data.
[11] UNDCP, *Afghanistan Strategic Study 2, the Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders*, Oct. 1998, p. 13.
[12] UNDCP*, Afghanistan, Strategic Study #3, The Role of Opium as a Source of Informal Credit*, January 1999, p. 9.
[13] Sarah Forster and Doug Pearce, "Afghanistan CGAP Microfinance Review", (Final Draft), May 2002, p. 28.
[14] IPC, *Afghanistan, The Scope for Promoting Micro, Small and Medium Sized Enterprises in the Private Sector by Establishing a Microfinance Bank*, March 2002, p. 31.
[15] UNDCP, *Afghanistan Strategic Study 2, the Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders*, Oct. 1998, p. 14.
[16] *ibid.*
[17] UNDCP*, Afghanistan, Strategic Study #3, The Role of Opium as a Source of Informal Credit*, January 1999, p. 15.
[18] *ibid*.
[19] UNDCP*, Afghanistan, Strategic Study #3, The Role of Opium as a Source of Informal Credit*, January 1999, p. 16.
[20] UNDCP, Afghanistan Annual Opium Poppy Survey 1998 and 1999 data.
[21] UNDCP*, Afghanistan, Strategic Study #3, The Role of Opium as a Source of Informal Credit*, January 1999, p. 16.
[22] Baseline Survey 1999, quoted in UNDCP, *Afghanistan, Strategic Study #3, The Role of Opium as a Source of Informal Credit*, January 1999, p. 10.
[23] UNDCP*, Afghanistan, Strategic Study #3, The Role of Opium as a Source of Informal Credit*, January 1999, p. 10.
[24] *ibid*., p. 11.
[25] *ibid*., pp. 12-14.
[26] *ibid*., p. 17.

Chapter V

GREED, WARLORDS AND THE OPIUM TRADE

5. Greed, warlords and the opium trade

The previous chapter analysed credit markets in the opium producing regions and highlighted the involvement of opium traders in these activities. This chapter will focus on the opium traders as such, and examine the development of the thriving commodity trade in opium in rural markets within the socio-political context of the country's war economy. It should be noted at the outset that in contrast to all other countries, trade in opiates was not perceived to be an illegal activity within Afghanistan. This changes fundamentally the overall context of this trade and has to be borne in mind while trying to answer the key question posed in this chapter, i.e. why Afghan traders actually entered the opium trade.

5.1. Socio-political context

Opium in Afghanistan would be virtually worthless if it could not be sold abroad. Low prices would have prompted Afghan farmers to give up opium production and look for alternative crops. Thus, a link was needed between domestic production and demand for opiates abroad. This link exists due to traders. They have played a crucial role in the growth of Afghanistan's opiates industry. They developed Afghanistan's opium market, linking eastern Afghanistan with Pakistan, southern Afghanistan with Pakistan and Iran, and western and northern Afghanistan with neighbouring countries of Central Asia. They identified opium as one out of a few commodities, which could be produced in excess of local demand and for which a strong demand existed outside Afghanistan. (Other Afghan goods for which a market existed abroad were natural gas, gem stones such as emeralds and lapis lazuli, marble, granite and timber; however most of these products were concentrated in a few places in northern Afghanistan while opium can be grown across the country). In return, traders provided the rural opium poppy growing regions with all the goods - i.e. mainly food, other consumer goods as well as arms – they required. As a result Afghanistan was integrated into the global economy, though based on the export of a rather peculiar raw material.

Before the war, Afghanistan had been largely self-sufficient in terms of its food requirements and was at times even a small exporter of wheat. But traditional subsistence agriculture, and its irrigation system, was largely destroyed by the war. This led to a massive decline in food output. For several months of the year Afghans had to rely on food imports and/or on food aid. Farmers, for the first time, had to acquire food against cash. This meant the end of a rural economy that was largely based on subsistence farming and barter. The rural economy was forced into a rapid and extensive process of monetisation. Following the decline in Soviet aid after 1987 the Government started to print money in order to pay for its war efforts. As a result, food prices rose by factors of five to ten. Such a situation created tremendous incentives for cash-producing activities.[1] The only possibility to acquire cash in sufficient quantities was to produce opium that was then marketed by Afghan trader's abroad.

Other factors played a role as well. Large segments of the rural population left the country, mainly as a result of ongoing war, but also as a result of the food shortages. In the refugee camps in Pakistan, Iran and other countries, international humanitarian aid programmes provided food. But some of the camps as well as some of the *madrassas* (religious schools) set up in Pakistan also served as a basis for recruiting troops to fight the Soviet occupation and the distribution of arms shipments. Some of the groups responsible for handling and distributing the arms exploited the situation by smuggling the weapons not only to the regions and destinations where they were supposed to go, but also by diverting a portion of the arms and selling them on the arms markets across Afghanistan[2]. Arms were bought by local warlords as well as by individuals trying to defend their farms and property. Opium often served as a means to pay for these arms. Thus opium and arms were often smuggled along the same routes – arms into Afghanistan and opium out of Afghanistan.

From the 1980s local commanders themselves became increasingly interested in the operations of the opium industry, pushing local people to cultivate opium, as well as participating - to various degrees - in the opiate trade themselves. In later years some of them also became involved in heroin manufacturing. Whether directly involved or not they were reluctant to take action to prevent such activities as long as taxes could be levied, both on opium production and on trade in opiates. These taxes were part of the general tolls and tributes traders had to pay for transit. The expansion of cultivation and the trade in opiates strengthened the autonomy of the commanders *vis a vis* both the Government and the various Islamic parties. But there were limits: "*The war economy, like the political structure, remained largely fragmented among small, largely predatory actors, each of whom maintained an interest in sustaining the chaos that permitted his predation. At the same time, the overall lack of security of both person and property blocked the expansion of even this criminalized economy*."[3] Following the defeat of the communist regime in Kabul, predation was increasingly seen to pose a collective

problem. Each predatory actor benefited, but a large though diffuse mass of people began to feel exploited and trade came virtually to a standstill. Predation by commanders imposed heavy costs on commerce, blocked Pakistan's access to Central Asia and prevented consolidation of an Islamic order. Eventually in 1993/94 a coalition started to emerge between some sections of the Pakistani authorities, Afghan and Pakistani traders (sometimes called the transport mafia)[4], and ultra-conservative Afghan and Pakistan religious leaders and their students from the various *madrassas* in both Afghanistan and Pakistan. This movement, which became known as the Taliban (students), was to overcome this divide of the country. The Taliban succeeded in securing "*a transition from localised predatory warlordism to weak rentier state power based on a criminalized open economy*"[5]. Though prohibiting the cultivation and use of cannabis and the use of opiates immediately after having risen to power, the Taliban did not really dare to touch the opiate industry. There are also indications that in the initial phase of conquering the country, the Taliban promised a number of local commanders, in exchange for loyalty, the right to continue with their opiate business. Even after having issued a ban on opium poppy cultivation in July 2000, the Taliban did not forbid the trade in opiates, probably reflecting the fact that the traders constituted an important backbone for the regime.[a]

Afghanistan's "smuggling economy" already had strong foundations prior to the Taliban takeover, partly resulting from the Afghan Transit Trade Agreement (ATTA) between Pakistan and Afghanistan, dating back to 1950[6]. This agreement enabled Afghanistan, being a land-locked country, to import goods duty-free via the port of Karachi in Pakistan. From the 1980s onwards this trade gradually developed in a reverse direction. Goods often originating in the Persian Gulf, mainly duty-free Dubai, transited Pakistan to Afghanistan and were subsequently smuggled back into Pakistan in order to circumvent Pakistan's high import duties. In subsequent years, some of the goods were also directly flown into Afghanistan for smuggling into Pakistan, or transported via Iran or other neighbouring states to Afghanistan for final destination in Pakistan. A World Bank study estimated that this contraband trade was worth around $2.5 billion in 1997, equivalent to nearly half of Afghanistan's estimated GDP and significantly more than the overall trade in opiates (about $1 bn). The same study estimated that the Taliban derived at least $75 million p.a. from taxes on this trade.[7] The smuggling infrastructure thus created also served the trade in opium, arms and stolen goods, and came largely under Taliban control after 1996, when they consolidated their hold over most of the country's roads, cities, airports and customs posts. With much of the country under Taliban control, not only trade in general, but also contraband of otherwise legal goods, and trade in opiates increased. In other words, the greater security provided by the Taliban also improved the conditions for the trade in opiates in the second half of the 1990s.

5.2. Why traders engage in the opium trade

Profit is obviously the main motivation for traders to enter the opium market. This topic will be investigated in more detail below. But profits are only part of the explanation. A number of other factors deriving from Afghan society also play a role.

Religion plays an important role in people's lives in Afghanistan. One of the main goals in the life of a Muslim is to perform the *Haj* to Mecca in Saudi Arabia. Most ordinary Afghan citizens simply cannot afford this. However, participation in the Haj seems to be widespread among opium traders. UNDCP interviews with opium traders in southern Afghanistan in 1998 revealed that 85% of them (22 out of 25 interviewed) had actually performed the Haj; two of them were even mullahs.[8]

Another reason for traders to enter the opium economy was access to power, reputation and respect within the local community. Opium allowed relatively young persons to climb the social ladder in the local community. Often opium traders saw themselves as local heroes as they secured income for the local population, preventing them from starvation by smuggling locally produced opiates abroad and risking their lives for the community. Some research undertaken in northern Afghanistan (which would be probably true for other parts of the country as well) also indicated that there was a link between local commanders and opium traders. While the position as a local commander was often acquired through prowess in battle and entailed status and respect, the opium trader secured respect by making economic contributions to the locality.

The socio-economic profiles of opium traders in southern and eastern Afghanistan also revealed some interesting features. While most Afghan farmers can only afford to have one wife, half of the opium traders interviewed (N = 38) in 1998 had two wives and some even had married a third wife. The number of wives a man can afford is apparently a status symbol in Afghanistan, primarily because of the high *walwar* (bride price) which

[a] Some regulations forbidding trade in opiates existed on paper but were never implemented. (INCB mission to Afghanistan, Summer 2001).

has to be paid by the groom. Similarly, all of those interviewed in the south owned at least a car, a motorcycle or a tractor, which constituted clear status symbols. They also had, in general, larger than average landholdings within their particular area.[9]

While the aspiration for status symbols is not unique to Afghan opium traders, their relatively high educational background is surprising. Over half of the traders in the south had been educated up to 16 years of age (compared to just a quarter in the general population[10]), whilst a number of respondents in both eastern and southern Afghanistan were former teachers and government workers. With the breakdown of the civil administration, many respondents in the south argued that there were very few alternative income earning opportunities available to those who had received an intermediate level of education. Trading in opium was regarded as a natural choice for those who had received education while cultivating opium was the obvious livelihood strategy for those without a formal education.[11]

5.3. Profitability of the opium trade

Profit was the main reason for involvement in the opium trade. Given the *de-facto* legal nature of the opium trade, however, profits within Afghanistan were rather modest.

UNDCP research conducted in 1998 showed that the mark-up on the rapid turnover trade, where traders purchased opium from farmers to sell it quickly again in the various bazaars taking advantage of local price differentials, ranged from $3 to $9 per kg in eastern Afghanistan. Given a price of around $34 in June 1998, the mark up ranged from 9% to 26%. Approximately 60% of the opium traders interviewed in eastern Afghanistan traded less than 100 kg of opium per annum; 40% traded between 200 and 500 kg per annum[12]. Extrapolating these results to the country as a whole, one could estimate that there may have been some 15,000 opium traders in the country in 1998, operating at various scales, equivalent to 1 trader per 13 opium poppy cultivating farmers. Taking an average profit of $6 per kg, an average opium trader involved in the rapid turnover trade could expect an annual profit of about $1000 per year; those selling 500 kg would have made a profit of around $3000 a year. These profits are rather small compared to those made by opiates traders in transit countries or by heroin traffickers in the consumer countries. The opium trade within Afghanistan did not have a risk premium, reflecting the fact that the authorities were not even trying to prevent this trade.

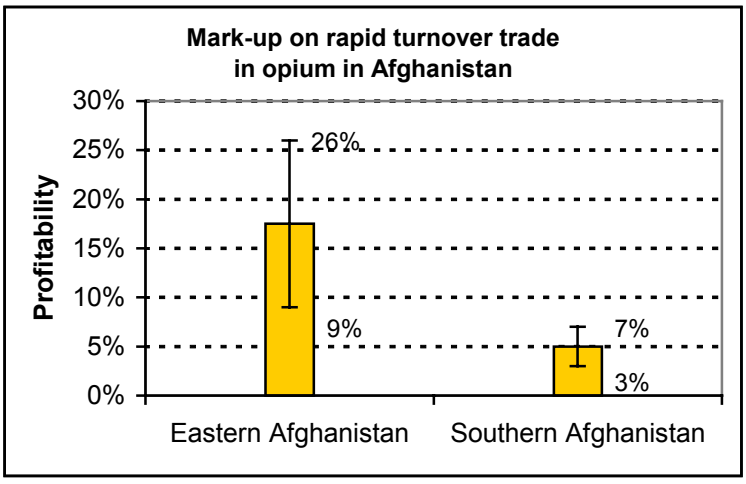

Figure 1
Source: UNDCP, *Afghanistan Strategic Study #2, The Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders*, October 1998, pp. 10-12.

In southern Afghanistan the profit margins on the rapid turnover trade were even smaller. Opium traders reported earning only between $1.2 to $3.2 per kg opium which – given an average price of $47 per kg (range: $32 in May to $62 in August 1998) was equivalent to a mark-up of 3% to 7%. The amounts which opium traders claimed to have purchased and sold ranged from 270 kg to one trader reporting buying and selling about 20 metric tons of opium a year. Using an average gain of $2 per kg, the annual profits ranged from slightly more than $500 to $40,000.

In the latter case, however, it can be assumed that a trader buying and selling some 20 tons was not really involved in the local rapid turnover trade, but mainly in shipping the opium to the border areas and/or smuggling it across the border to either Iran or Pakistan. Indeed, a quarter of the opium traders interviewed in southern Afghanistan were involved in shipping the opium to the border areas. Shipments to the border areas ranged from relatively small amounts to large amounts of up 3 tons in a single shipment.[13] (Seizures reported by the Iranian authorities basically confirmed these orders of magnitude. Single opium seizures ranged from less than 1 kg to 2.5 tons in 1998, 3.4 tons in 1999, 5 tons in 2000 and 4 tons in 2001). Traders transporting opium to the border gained, on average, about $11 per kg for wet opium and $12.5 for dry opium [b.] Transport costs ranged between $1.2 and $1.8 per kg. Average net profits thus amounted to slightly more than $10 per kg of opium transported to the border regions. (Most opium was transported in its dried form to the border, as this was easier to transport and had less odour than wet opium). If the net profits are expressed as a percentage of the farmgate prices, traders in southern Afghanistan shipping dry opium to the border region could expect a profitability ratio of around 12%, more than twice the rate which they could expect to earn in the local rapid-turnover trade. On a per kg basis, profits were about five times as much in transporting opium to the border regions than in the local rapid-turnover trade. A bulk trader, buying some 20 tons of opium and selling it in the border regions, could reckon with profits of around $200,000.

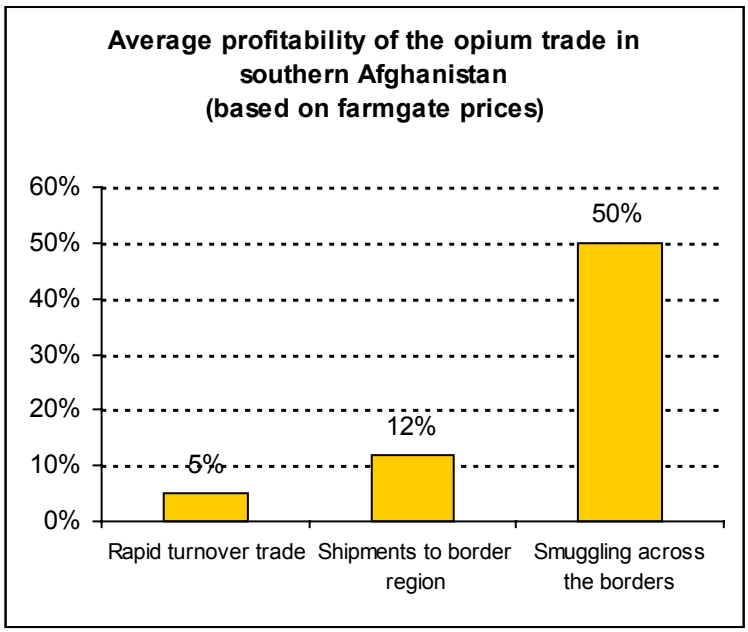

Figure 2
Source: UNDCP, *Afghanistan, Strategic Study #2, The Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders,* October 1998.

The most sizeable profits were made once the opium was smuggled across the border. While the price for best quality dry opium amounted to $82.5 per kg in southern Afghanistan in August 1998, the price in the border region was $95 and the price across the border in Pakistan amounted to $126 per kg. Taking transport costs of about $2 per kg into consideration, traders who bought the opium from the farmers and smuggled it across the border could reckon with profits of $41.5 per kg, equivalent to a profitability ratio of 50%. Just crossing the border would increase the price by some $30 per kg ($31 less transport costs), equivalent to about 32% of the wholesale price in the border region. However, crossing the border was a risky endeavour. Thus many of the interviewed Pashtun traders from the opium producing regions left this risky task of crossing Afghanistan's southern border to specialised Baluchi traders who had Afghan, Iranian or Pakistan nationalities.

Profits could be increased if opiates were not only smuggled across the border to Pakistan, but were moved further. The price of opium smuggled within Pakistan from Quetta (close to southern Afghanistan) to the seaport of Karachi would rise by some 30%[14]. However, throughout the 1990s there were well-armed caravans

[b] Farmgate prices for best quality wet opium in August 1998 were about $62 while opium prices for best quality wet opium in the border regions amounted to $73; farmgate prices for best quality dry opium were $82.5 while wholesale prices for best quality dry opium amounted to $95 per kg in the border region. (UNDCP, Afghanistan, *Strategic Study #2, The Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders*, October 1998, pp. 12-17.

of Afghan smugglers crossing Pakistan and then Iran because prices of opiates were still significantly higher in Iran. Opium prices in the Teheran wholesale market amounted to $827 per kg in 1998, a $6^1/_2$ fold increase from the prices in Pakistan's border region with Afghanistan or a 10-fold increase for traders buying dry opium from farmers in the opium poppy growing regions of southern Afghanistan. However, these profits had to be earned at a high price. Drug dealers caught by the authorities in Iran face the death penalty. Nonetheless, trade in opiates flourished in the 1990s up until the year 2000. As a result of rising opium production in Afghanistan and an apparently growing number of traders, prices in Iran started to fall from around $1200 per kg in 1996/97 to $400 in 2000, a decline of about two thirds. But, in 2001, as a result of the Taliban ban, prices quintupled to more than $2000 pr kg in November and December of that year. As poppy cultivation resumed in Afghanistan in 2002, the market reacted and prices fell by more than 40% between January 2002 and May 2002. As of June, however, the downward trend suddenly reversed following a price hike in Afghanistan. In August 2002 Iranian prices reached a temporary peak of more than $2000 per kg, following the announcement by the Afghan authorities of a more rigorous opium ban for the 2003 harvest season. Since then they started falling again, in line with first reports of re-planting of opium poppy in Afghanistan.

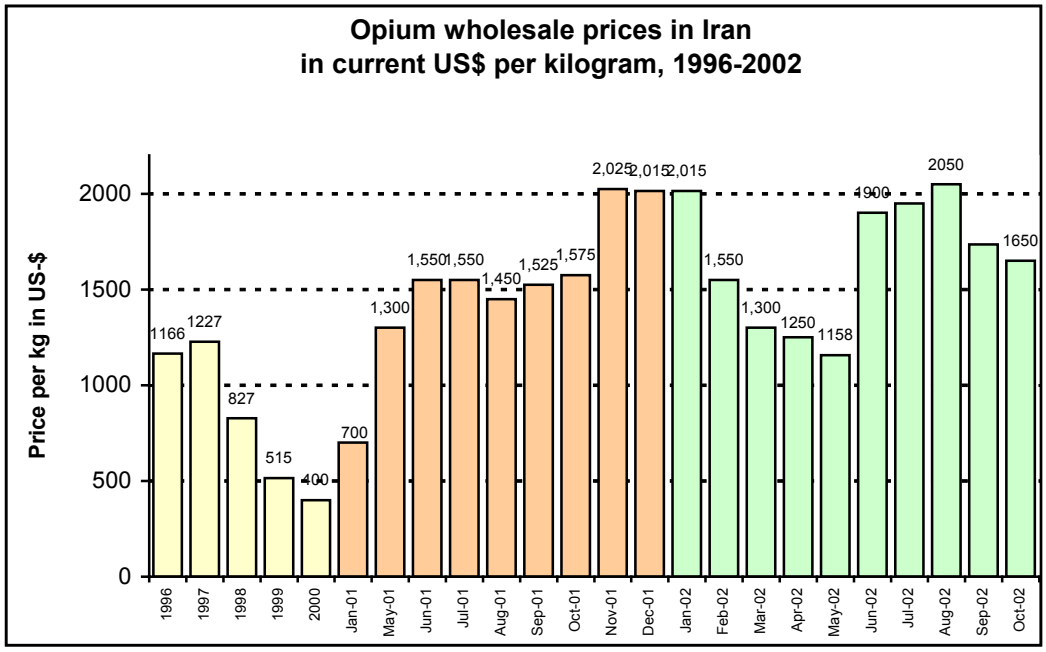

Figure 3
Source: UNDCP, *Global Illicit Drug Trends 2002* and UNDCP Field Office in Tehran.

But did changes in the underlying price levels of opium within Afghanistan also change traffickers' incomes? The analysis of price data over the 1998-2000 period suggests that this was not the case. There are no indications that the decline in prices over this period entailed a decline in profitability for drug traffickers. In 1998 opium prices in Tehran (some $830) were about ten times as high as in southern Afghanistan ($83 for dry opium). Following Afghanistan's 1999 bumper harvest, prices started falling. In 2000, the farmgate price of dry opium was $25 per kg at harvest time in Helmand and Kandahar. The average price for the year as a whole was around $40 and was again equivalent to one tenth of the price in Tehran (around $400). This provides some empirical evidence for the thesis that prices in the region are multiplicative rather than additive.[c]

[c] An 'additive' price structure would mean that a 10 dollar increase of farmgate prices of opium per kg – assuming a 10:1 ratio of opium to heroin - would result in a 1 dollar increase of heroin prices per kg all along the trafficking chain up to the retail markets of the end consumers. This theory predicts that irrespective of the price of a drug, all intermediaries charge fixed prices for their services. A multiplicative price structure means that a 10% price increase paid to opium farmers would result in a 10% increase all along the trafficking chain up to the retail markets of the end consumers. This theory predicts, that intermediaries charge their services according to the value of the drugs they transport/handle. The assumptions of the price structure of the drug markets have important policy implications. If the price structure of drug markets were 'additive', interventions at source, driving up prices, would be close to meaningless as a 1 dollar increase of a kg of heroin in the consumer markets would be hardly noticed. According to this model, interventions would be only effective close to the consumers (e.g. by intensifying police presence on the streets in consumer countries). If, on the other hand, the price structure is 'multiplicative', interventions at source are an efficient way to drive-up prices in both source and consumer countries, thus contributing to a stabilization/decline of drug consumption. In reality, the price structure of drug markets is neither purely 'additive' nor 'multiplicative', but something in between. It may,

The same, however, could not be said for 2001. Opium prices within Afghanistan rose ten-fold. Dry opium prices in Helmand, for instance, rose from $25 per kg at harvest time in 2000 to $260 per kg in 2001. The overall increase in the Tehran market over the same period was less than four-fold, from $400 in 2000 to $1520 per kg in 2001 (twelve months average). In 2002, dry opium prices in Helmand amounted to about $420 per kg at harvest time in April; in the same month opium prices in Tehran stood at $1250 per kg. This meant that as opium prices in Afghanistan rose, the overall gross profitability of shipping opium from the production areas of Afghanistan to Iran declined from a ten-fold increase in 2000 to a six-fold increase in 2001 and a three-fold increase in 2002.

One explanation for this decline in profitability was increased competition. Iranian authorities reported that the number of small-scale Afghan opium smugglers increased in 2001, though the overall quantities smuggled to Iran declined. While in 1999, 30% of all significant opium seizure cases reported by the Iranian authorities concerned seizures of more than 100 kg, this ratio fell to 16% in 2000 and 8% in 2001, indicating that larger numbers of small-scale traders got involved in the opium trade, leading to rising levels of competition. As a result, the average size of a seizure case of opium in Iran amounted to 142 kg in 1999, the year of Afghanistan's bumper harvest, but fell to 76 kg in 2000, 50 kg in 2001 and to 46 kg over the first two quarters of 2002, signalling a decline of average seizure cases by more than 70% over the 1999-2002 period.[15]

But, why would competition continue to increase when profitability was actually falling? Again, there are sound economic reasons for this. A trader made a gross profit of $360 per kg ($400 less farmgate price of $40) in shipping opium from the farmers in southern Afghanistan to Tehran in 2000. The overall price increases in 2001 meant that a trader could reckon with a gross profit of $1260 per kg ($1520 less farmgate price of $260), signalling a $3^1/_2$ fold increase of profits per unit trafficked between 2000 and 2001, even though profitability as such (defined as the ratio between sales and purchase prices) declined. This apparently prompted many small-scale traders to enter the business and try their luck.

5.4. Profitability of heroin manufacture

Another strategy pursued in Afghanistan was to increase the value-added by shifting into morphine/heroin manufacture and heroin trafficking. Originally, Afghanistan was only a producer of opium. As of the mid-1990s, however, heroin manufacture began to take place within Afghanistan. Most of the early morphine/heroin laboratories were located in eastern Afghanistan, having shifted across the border from neighbouring Pakistan. In subsequent years, heroin laboratories could be found in the border regions of most opium poppy growing areas, i.e. in eastern, southern and northern Afghanistan. In particular in northern Afghanistan the bulk of opiates are now already smuggled out of the country in the form of heroin (see discussion in Chapter 1.2.7). Profitability considerations played a role. However, data also suggest that it was not so much profitability as such, but the possibility of taking more profits per unit trafficked which led to the shift.

Calculations of profits to be made in transforming opium to heroin are rather complex. Generally, it is assumed that 10 kg of opium are needed to produce 1 kg of heroin[16]. However, this is a general ratio which does not take into account the different qualities of opium and heroin.

Typical conversion processes of opium into morphine base, applied in Afghanistan, use opium, calcium carbonate (lime) as oxide and ammonium chloride. UNDCP and DEA research in Southwest Asia suggested that out of 6 to 7 kg of opium 1 kg of morphine base (usually around 60% purity) is obtained. By adding a few more chemicals (acetic anhydride, acetone etc.), the morphine base can be transformed into heroin. Out of 1 kg of morphine base about 1 kg of heroin can be obtained[17] with more or less the same purity as the morphine base. In other words, 6 to 7 kg of opium will yield 1 kg of brown heroin (60% pure). An overview of the main processes involved is provided in box 1.

however, lean more towards one or the other model in specific circumstances.

Box 1: From Opium to Heroin: The Conversion Process

Opium processing is a multi-phase process consisting of the following steps:

Opium

Extraction step: In Southwest Asia, water, dried opium and lime are heated. The fire is extinguished, the contents allowed to settle, and then filtered through coarse jute sacks. The precipitate is discarded.

Crude morphine base

Precipitation step: Ammonium chloride is added to the fluid, which is then allowed to stand. The morphine base precipitates, and the solution is filtered again. The residue is crude morphine base.

Partially purified morphine base (optional)

Purification step: To purify the morphine base, the precipitate is washed with acetone. A further purification step may be performed using a tartrate salt formation, and charcoal absorption.

Heroin base

Acetylation step: The dried morphine base (crude or purified) is heated with an acetylating agent - usually acetic anhydride - mixed with water and the resulting solution filtered. Water and sodium carbonate are added, and a coarse precipitate is formed. The solution is filtered again and the residue is heroin base.

Heroin hydrochloride

Conversion step: The heroin base is dissolved in acetone (or ethanol or ether), and activated charcoal is added to the solution. After gentle heating, the solution is filtered and hydrochloric acid in acetone (or ether) is added to the liquid. The crystalline precipitate that is formed is heroin hydrochloride.

The product purity at each level of the process can differ substantially, depending on the skills of the chemists and the quality of materials used.

Most of the heroin produced in Afghanistan for export purposes is still brown heroin. It has a brown colour and a heroin purity of 40%-85%, typically around 60%. There is also some manufacture of white heroin, which sells at a higher price. Uncut samples of white heroin can have purity levels of more than 90%.[18] If white heroin is to be obtained, the brown morphine base is first transformed into a white morphine base, often using methanol (methyl alcohol), sulphuric acid, charcoal, and ammonium hydroxide. Out of 1 kg of brown morphine base one can obtain 0.55 kg of white morphine base. This means that for one kg of white heroin one would need 11-13 kg of opium (=6/0.55 to 7/0.55), though the 10:1 ratio continues to be used as well.

As part of UNDCP's project activities in Afghanistan in the 1990s, opiates prices were regularly collected in Jalalabad (Nangarhar) and Kandahar over the 1997-1999 period. Four heroin categories were used to account for different heroin qualities traded. The price of the best heroin in the market was put into category 4 while the lowest quality heroin was labelled as heroin 1. Categories 3 and 4 were usually destined for export while the categories of 1 and 2 were for the local or the regional market.[d]

[d] It should be noted that this categorization is not the same as the one used for South-East Asian heroin according to which 'heroin 4 is defined as injectable white heroin, 'heroin 3' as smokable brown heroin, 'heroin 2' as heroin base, and 'heroin 1' as crude morphine (Source: ODCCP, *Terminology and Information on Drugs*, New York 1999, p. 25.).

Table 1 shows that in 1998 the average wholesale price of top quality heroin per kg ('heroin 4') within Afghanistan (average of Nangarhar, Faizabad and Jalalabad) was some 22 times higher than the bazaar price of dry opium per kg. The bazaar price of the second best quality was 17 times higher than the dry opium price. This left sufficient room for profits, independent of laboratory efficiency (see below).

Table 1 also shows that in 1998 the ratio of 'heroin 4' prices to dry opium prices was the highest in Kandahar (southern Afghanistan), and the lowest in Faizabad (northern Afghanistan), followed by Jalalabad (eastern Afghanistan), an indirect reflection of the widespread existence of laboratories producing top quality heroin in northern and eastern Afghanistan. High profit margins in southern Afghanistan may have been a reflection of a lack of competition among the relatively small number of laboratories operating in this part of the country in the late 1990s.

Table 1: Ratio of morphine and heroin prices to dry opium price in Afghanistan

Afghanistan in 1998:			Ratio				
	Dry opium in US-$ per kg		Morphine	Heroin 1	Heroin 2	Heroin 3	Heroin 4
Kandahar	$51		6.6	6.9	11.4	20.1	36.4
Faizabad	$81					22.7	20.0
Jalalbad	$76		3.5	3.6	6.8	12.3	17.6
Average of ratios above			5.1	5.3	9.1	18.3	24.7
National average	$69		4.1	4.5	8.0	17.3	22.4

Source: UNDCP, Field Office.

Table 2 shows that the ratio of 'heroin 4' prices to dry opium prices fell significantly over the 1997-99 period, indicating that heroin manufacturing capacities for top quality heroin emerged across the country in the late 1990s. In southern Afghanistan not only ratios for 'heroin 4' but also ratios of 'heroin 3' and 'heroin 2' qualities to dry opium declined, suggesting that heroin manufacture, in general, was growing (though starting from low levels) in that part of the country. The pattern was more mixed in eastern Afghanistan.

Table 2: Ratio of morphine and heroin prices to dry opium price in Jalalabad and Kandahar

Jalalabad (Nangarhar)							
Year	Dry opium in US-$ per kg		Morphine	Heroin 1	Heroin 2	Heroin 3	Heroin 4
1997	$95		2.4	4.8	5.3	8.9	21.1
1998	$76		3.5	3.6	6.8	12.3	17.6
1999	$74		n.a.	2.6	9.8	12.6	16.0
Kandahar							
Year	Dry opium in US-$ per kg		Morphine	Heroin 1	Heroin 2	Heroin 3	Heroin 4
1997	$33		7.6	9.2	22.2	48.7	84.2
1998	$51		6.6	6.9	11.4	20.1	36.4
1999	$42		8.1	9.0	12.6	22.3	28.8

Source: UNDCP, Field Office.

Returning to the question of profitability, the following picture emerges:

If 10 kg of opium were required to produce top quality heroin ('heroin 4', usually white heroin)[e] opium costs would have amounted to $690 ($69*10) in 1998. The average price of top quality heroin was $1548 per kg (average of Faizabad ($1650), Jalalabad ($1389) and Kandahar ($1605)) in 1998. Thus gross profits of manufacturing heroin, excluding other costs, would have been $858 per kg of heroin ($1548 less $690). The mark-up (=gross profits) would have amounted to more than 120% of opium prices.

In the case of the second best heroin quality ('heroin 3'), the typical brown heroin produced in Afghanistan, 6 to 7 kg of opium were usually reported to be required for the production of one kg of heroin according to recipes reported to UNDCP in field research in South-West Asia in the early 1990s[19] as well as according to slightly different recipes contained in more recent classified DEA reports. Taking a 7:1 ratio, opium costs for one kg of heroin amounted to $483 ($69*7). One kg of heroin could be sold at $1199 (average of Faizabad ($1700), Kandahar ($1003) and Jalalabad (894)) in 1998. Thus gross profits of manufacturing heroin, excluding other costs, were $716 ($1199 less $483) per kg of heroin. The gross mark-up from manufacturing heroin was close to 150% of the original opium price, i.e. a similar order of magnitude as the mark-up for top-quality heroin ('heroin 4)[f].

If actual profits are to be calculated, other costs, notably precursor costs, labour costs and various fixed costs have to be taken into account as well. Information obtained in a previous UNDCP study on Pakistan's Illicit Opiate Industry (referring to the year 1993) suggested that all of these costs are rather small. The largest component of non-opium costs were found to be precursor chemicals, accounting for some 80% of the cost excluding opium; 95% of the precursor costs were related to just one substance: acetic anhydride[20]. Depending on the purity of the morphine base between 1 and 4 litres of acetic anhydride are required to produce 1 kg of heroin[21]. For the production of white heroin, which is usually produced from purified morphine base, the lower range of the estimate may be sufficient, but for brown heroin, which is a less pure product, around 4 litres of acetic anhydride may be required.

Prices for acetic anhydride across Afghanistan ranged from $13 to $34 per litre in 1998 according to UNDCP research[g]. The average price of acetic anhydride was $24. The cost of acetic anhydride for the manufacture of 1 kg of brown heroin thus fluctuated around $96 ($24*4). Including other chemicals needed, one can assume that overall precursor costs amounted to about $100 per kg of heroin produced. Other cost items referring to labour, fuel, packaging, and other miscellaneous costs as well as fixed costs such as rents and depreciation are not available for Afghanistan. Taking data from Pakistan as proxies, they can be estimated to amount to about $12 per kg of heroin produced. (Given differences in the price structures of Pakistan and Afghanistan, this cost estimate is likely to be on the high side). Taking all these cost items into consideration, total production cost in Afghanistan for one kg of brown heroin can be estimated at around $600. As the wholesale price for 1 kg of heroin within Afghanistan was close to $1200 in 1998, profits amounted to some $600 per kg of heroin produced. The average profitability of manufacturing heroin thus appears to have been around 100% and a strong incentive for Afghan groups to get involved in this activity.

The price structure of the late 1990s changed substantially in 2001 and 2002 as a consequence of the opium ban and strongly rising opium prices. As opium prices increased more strongly than heroin prices profitability of manufacturing heroin declined. In 1998 and 1999 first quality heroin fetched prices in Nangarhar province that were 17 times higher than dry opium and second quality heroin prices that were 13 times higher than the dry opium. By March 2002 prices for white heroin (based on DEA data) were only 10 times higher and prices for first quality brown heroin were only 7 times higher than dry opium prices in Nangarhar province. Applying the transformation ratios used above (10:1 for white heroin and 7:1 for brown heroin), Afghan heroin manufacturers would have ceased to make profits. But, it is unlikely that this was the case. There have been reports of ongoing heroin manufacture in Afghanistan and one can discount the possibility that clandestine laboratories in Afghanistan produced heroin at a loss[h].

[e] For instance, a UNDCP study on the illicit opiate industry of Pakistan, conducted in 1992/93, found a ratio of opium to white heroin of 10:1 and a 6:1 ratio for opium to brown heroin. (UNDCP, "The Illicit Opiate Industry of Pakistan" (Draft Report), December 1994, p. 31.)

[f] Differences between the two figures should not be over-interpreted. They may well be the result of some differences in definitions rather than underlying structural differences.

[g] Most acetic anhydride prices were reported from Jalalabad (eastern Afghanistan), and to a lesser extent from Faizabad (northern Afghanistan) and Mazar el Sharif (western Afghanistan), no prices, by contrast, were reported from southern Afghanistan, possibly reflecting the still less widespread heroin manufacture infrastructure in this part of the country back in 1998.

[h] There have been reports of some closures of heroin laboratories in Helmand province in 2001; however these closures apparently had more to do with a physical shortage of opium than with a lack of profitability.

Table 3: Estimated return on brown heroin production in Afghanistan in 1998					
	Price per unit		Units required for 1 kg of heroin	Costs	Revenue less costs
Brown heroin	$1,199	kg	1		$1,199.00
Opium	$69	kg	7	$483.00	
Acetic anhydride	$24	litres	4	$96.00	
Other chemicals[b]		lump sum[a]		$3.00	
Labour[c]	$4.2	man days[a]	1.2	$5.00	
Fuel, packaging, miscl[a].		lump sum[a]		$5.00	
Rent[a]		lump sum[a]		$2.00	
Depreciation[d]		lump sum[a]		$0.50	
Production costs					-$594.50
Profits per kg (processing margin)					$605.00
Profitability					**102%**

Notes:
a/ Data taken from study on the illicit opiate industry in Pakistan (data refer to 1993), as proxies for similar cost categories in Afghanistan:
b/ Other chemicals include mainly ammonium chloride and soda ash.
c/ Labour input per kg was calculated for a medium-sized laboratory, dividing the daily labour requirement of 12 persons by the daily output of 10 kg of brown heroin.
d/ Fixed costs were calculated by dividing total annual costs by total output. Estimates assume that a laboratory produces on average 10 kg of brown heroin per day for 120 days per year, i.e. 1.2 tons per year. (If production of a laboratory is larger, fixed costs per unit produced become smaller and vice versa)

Sources: UNDCP, Field Office, and UNDCP, "The Illicit Opiate Industry of Pakistan" (Draft Report), December 1994, p. 31.

Table 4: Ratio of heroin to opium prices in Ghani Khel drug market (Nangarhar) in March 2002					
	Opium	Morphine	Brown heroin 2nd quality	Brown heroin 1st quality	White Heroin
Prices[i]	$375	$2,933	$1,404	$2,559	$3,867
Ratio to dry opium		**7.8**	**3.7**	**6.8**	**10.3**
Source: DEA.					

One possible explanation could be the existence of a higher morphine content of Afghan opium than was considered so far, combined with higher laboratory efficiency. Indeed, opium samples (n=24) collected and analysed by UNDCP in 2000 and 2001 from several parts of Afghanistan (Badakshan, Nangarhar, Helmand) showed an average morphine content of 17% (range: 10.5% to 23.5%) of dry opium.[j]

For comparison, a similar study conducted by UNDCP in Myanmar revealed an average morphine content of just 11.4% (range 8.6%-15.2%).[k] A previous study, which collected opium samples from all of the known poppy growing regions, though with a strong bias of samples from Southeast Asia[l], also found a morphine content of

[i] Information received from mission reports to Nangarhar and from UNDCP's office in Jalalabad in May 2002 revealed similar prices: opium prices of around $370 and first quality heroin prices of $3750 per kg in Nangarhar, indicating a heroin price to opium price ratio of 10:1 (UNODCCP Country Office for Afghanistan, Sitrep 5, *Bi-Weekly Situation Report* (20 May – 2 June 2002).

[j] Unweighted average based on the analysis of the morphine content of opium found in 24 samples collected from fields across Afghanistan (Source: UNDCP, "Technical Report on Limited Opium Yield Surveys- 2000-2001" (Draft report), Nov. 2001 ").

[k] The morphine content of 27 samples was analyzed for the Myanmar figure. (Source: UNDCP, "Technical Report on Limited Opium Yield Surveys- 2000-2001" (Draft report), Nov. 2001) Source: UNDCP, "Limited Opium Yield Surveys - Afghanistan 2000-01 and Myanmar 2000" (Draft report).

[l] Simple average of 1414 samples collected globally in all production regions of South-East Asia, South-West Asia as well as South- Central-

on average 11.4% (range 3.1% - 19.2%)[22]. Such a morphine content indirectly confirmed the generally used 10:1 ratio for the transformation of opium into heroin in South-East Asia, though data for Afghanistan suggest that that a better ratio could be possible in that country (6:1; for details see below).

In line with traders' perceptions that the 'lowest quality' opium is, in general, found in southern Afghanistan and the 'best quality' opium in Badakshan (northern Afghanistan). UNDCP's yield study on Afghanistan found that the highest morphine content was in opium from Badakshan (18.2% on average in 2000) while opium with the lowest morphine content was found in southern Afghanistan (14%, on average, in Helmand). The morphine content of opium in eastern Afghanistan was close to the national average (16.6%, on average, in Nangarhar). Nonetheless, the study also showed that yield differences between fields even within the same region could be substantial.

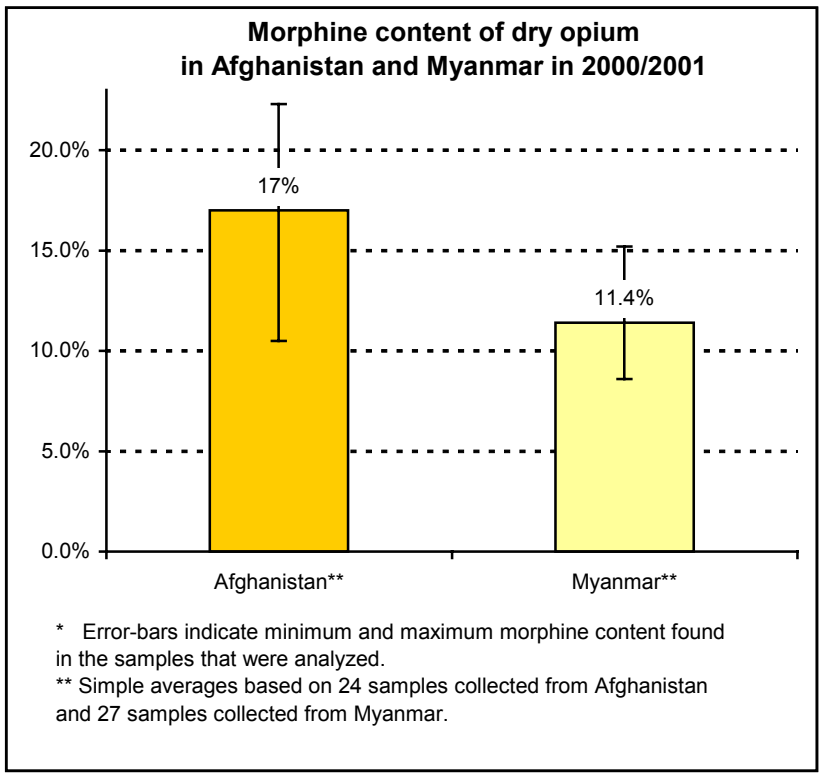

Figure 4
Sources: UNDCP, "Technical Report on Limited Opium Yield Surveys- 2000-2001" (Draft report), Nov. 2001.

In any case, the high morphine content of Afghan opium leaves ample room for efficiency gains. One simple way to improve laboratory efficiency without requiring additional equipment and better know-how is to use the residues from the opium extraction for re-extraction purposes ('recycling' of residues). This may not have been necessary as long as opium was as cheap as it was in the 1990s, but it is a simple solution once opium prices increased tenfold as they did in 2001. Thus, instead of disposing of the extraction residues, they can be used again for extracting the remaining morphine. By applying such a method repeatedly, almost all of the morphine can be extracted. This may lead to higher labour, precursor and fuel costs per kg of heroin manufactured, but all of these costs are, in any case, secondary. Prices for acetic anhydride, the most important cost component in the manufacture of heroin after opium, actually fell by two thirds in Afghanistan between the late 1990s and 2002.

and North America; the bulk of the samples (1100 or 78% of the total) originated in northern Thailand. (Source: UNDCP, *Recommended Methods for Testing Opium, Morphine and Heroin*, New York 1998.)

Significant efficiency gains can be achieved even if one takes into account that what is traded as 'dry opium' in Afghanistan is, in general, opium that has a moisture content of around 12% (typical range 10%-15%).[m] An average morphine content of 17% in fully dry opium would thus be equivalent to a morphine content of about 15% [n] in so-called 'dry opium', i.e. 0.15 kg morphine in 1 kg opium that has a moisture content of 12%. Assuming a typical quality of brown heroin of 60**%** (as found recently in heroin imported directly from Pakistan to the UK), clandestine laboratories, which improved their efficiency levels, could reduce their input for the manufacture of 1 kg of brown heroin from 7 kg (reported so far) to 4 kg of so-called 'dry opium' (=1/0.15kg*60%). Similarly, clandestine laboratories could minimise their required input for the production of white heroin at 90% purity from 10 kg to 6 kg of so-called 'dry opium' (=1/0.15kg*90%).

In other words, clandestine laboratories operating at 50-60% efficiency levels would not have been profitable any longer in 2002 (unless they had opium stocks from previous harvests when opium prices were still low). However, by improving efficiency levels and thus minimising opium input, laboratories could still reap significant profits, as will be shown below.

A tentative estimate for brown heroin suggests that based on improved laboratory efficiency (100% efficiency) up to $1000 per kg of brown heroin could still have been earned in March 2002, equivalent to an overall profitability of around 65% of funds invested. A similar estimate for white heroin suggests that based on improved laboratory efficiency (100% efficiency) up to $1550 per kg of white heroin could still be earned, equivalent to an overall profitability of around 67%.

Table 5: Tentative estimate of the maximum profits of brown heroin production in eastern Afghanistan in 2002

	Price per unit		Units required for 1 kg of heroin	Costs	Revenue less costs
Brown heroin	$2,559	kg	1		$2,559
Opium	$375	kg	4	$1,500.00	
Acetic anhydride	$8	litres	4	$32.00	
*Other chemicals**		lump sum*		$4.00	
*Labour**	$4	man days*	2	$8.00	
Fuel, packaging, miscl.*		lump sum*		$7.50	
*Rent**		lump sum*		$2.00	
*Depreciation**		lump sum*		$0.50	
Production costs					-$1,554
Profits per kg (processing margin)					$1,005
Profitability					**65%**

*Notes:
Data taken from study on the illicit opiate industry in Pakistan (data refer to 1993), as proxies for similar cost categories in Afghanistan, and adjusted to take account of recycling of residues:
Other chemicals include mainly ammonium chloride and soda ash.
Labour input per kg was calculated for a medium-sized laboratory, dividing the daily labour requirement of 20 persons by the daily output of 10 kg of brown heroin.
Fixed costs were calculated by dividing total annual costs by total output. Estimates assume that a laboratory produces on average 10 kg of brown heroin per day for 120 days per year, i.e. 1.2 tons per year. (If production of a laboratory is larger, fixed costs per unit produced become smaller and vice versa)

Sources: UNDCP Field Office, DEA and UNDCP, "The Illicit Opiate Industry of Pakistan" (Draft Report), December 1994, p. 31.

[m] Fresh opium traditionally was found to have had a water content of around 40%. (Range: 30%-50%); the moisture content of one-year-old opium was found to between 10-12%. (UNDCP, Information from Scientific Section. August 2002.)

[n] Morphine content of 17% in 100 % dry opium is equivalent to a 15% morphine content in a kg of so-called dry opium that contains 12% of water. Explanation: a kg of opium which contains 12% water contains only 0.88 kg of fully dry opium. 17% of this opium (0.88 kg * 0.17) equals 0.1496 kg. Thus, 1 kg of so-called dry opium which has water content of 12% contains 0.15 kgs of morphine, equivalent to a morphine content of 15%. In mathematical terms, the morphine content can be simply calculated as follows: mc*(1-wc), with mc being the morphine content, and wc the water content, i.e. in the specific case: 17% * (1-12%) = 15%.

Table 6: Tentative estimate of the maximum profits of white heroin production in eastern Afghanistan in 2002					
	Price per unit		Units required for 1 kg of heroin	Costs	Revenue less costs
White heroin	$3,867	kg	1		$3,867
Opium	$375	kg	6	$2,250.00	
Acetic anhydride	$8	litres	2.5	$20.00	
*Other chemicals**		lump sum*		$15.00	
*Labour**	$4	man days*	4	$16.00	
Fuel, packaging, miscl.*		lump sum*		$8.00	
*Rent**		lump sum*		$4.00	
*Depreciation**		lump sum*		$1.00	
Production costs					-$2,314
Profits per kg (processing margin)					$1,553
Profitability					**67%**

* Notes
Data taken from study on the illicit opiate industry in Pakistan (data refer to 1993), as proxies for similar cost categories in Afghanistan and adjusted to take account of recycling of residues:
Other chemicals include mainly ammonium chloride and soda ash.
Labour input per kg was calculated for a medium-sized laboratory, dividing the daily labour requirement of 20 persons by the daily output of 5 kg of white heroin.
Fixed costs were calculated by dividing total annual costs by total output. Estimates assume that a laboratory produces on average 5 kg of white heroin per day for 120 days per year, i.e. 0.6 tons per year. (If production of a laboratory is larger, fixed costs per unit produced become smaller and vice versa)

Sources: UNDCP Field Office, DEA and UNDCP, "The Illicit Opiate Industry of Pakistan" (Draft Report), December 1994, p. 31.

Heroin manufacture is thus likely to have remained a lucrative business activity in Afghanistan for those clandestine laboratories which

(i) had acquired sufficient opium stocks when the opium price was still low, or
(ii) were not limited to selling their heroin to traders within Afghanistan but had a direct access to foreign heroin markets, or
(iii) were able to adapt to falling profit margins by increasing their efficiency levels.

There was indeed ample room for such efficiency gains given the high morphine content of Afghan opium. But data also suggest that a certain know-how (or one of the other two factors mentioned above) would be needed to make heroin manufacture a profitable activity. Calculations have shown that the critical factors for the 'success' of heroin manufacture from an economic point of view are (i) the price of heroin, (ii) the price of opium and (iii) the input of opium required which is, in turn, a function of the morphine content and laboratory efficiency. All other cost items are secondary.

Even if a hundred percent laboratory efficiency may not have been achieved by clandestine Afghan laboratories and higher calculated maximum profits for March 2002 are halved (reflecting 75%-80% laboratory efficiency), the overall profits from heroin manufacture by some of the large laboratories could have still been huge.

UNDCP is aware of a number of small-to medium scale laboratories operating in eastern and southern Afghanistan and, in recent years, increasingly in northern Afghanistan. Such laboratories, which earlier had been set up in Pakistan and were later moved across the border to eastern Afghanistan, produce, on average, some 10 kg of brown heroin per day; they often produce only during a limited period (some 4 months), following the opium harvest[23]. In northern Afghanistan many of the newly set up laboratories are also small in size, often family run, producing between 5 and 10 kg of heroin a day.[24] In addition, classified information suggests that there are also a number of large morphine/heroin laboratories in southern, eastern and northern Afghanistan which have

been producing up to 150 kg of morphine base a day. They produce morphine/heroin, in general, without interruption. The average production capacity of nine large laboratories of which UNDCP is aware, is close to 90 kg of morphine base per day (average: 87 kg; range: 50 to150 kg), employing on average 23 persons (range: 18-30). Total production capacity of these nine laboratories amounted to about 285 tons of morphine per annum or, on average, 32 tons per laboratory. Even if one deducts 25% (as indicated by available data on daily morphine and daily heroin output) for the additional time required to manufacture heroin out of morphine base, the average annual heroin producing capacity of such laboratories is still around 24 tons. If such a laboratory makes only $500 in profits per kg of brown heroin produced, annual profits could amount to $12 million. Profits may go up to $24 million (24,000 kg * $1000 per kg) as laboratory efficiency approaches 100%.

The persons operating such laboratories (frequently local warlords/commanders) have huge economic interests that these activities continue. They would do whatever they may deem necessary to prevent the authorities from destroying the laboratories. Thus the equipment of such laboratories is not only traditional laboratory equipment, water tanks and power generators, but also sophisticated communication equipment and weapons of all kinds.

5.5. Profitability of heroin trafficking

Once the heroin has been manufactured, it still needs to be shipped abroad. The difference between the heroin price in Afghanistan and the heroin price abroad constitutes the gross profits that could be made. Profitability calculations are, however, rendered difficult, as it is not always clear how the heroin qualities found in Afghanistan relate to the heroin qualities abroad.

In Teheran, for example, the heroin wholesale price in 1999 was reported to have amounted to $2510 per kg[25] while the various heroin qualities sold in the Kandahar market (southern Afghanistan) ranged from $366 to $1111 per kg. Assuming that only the better quality heroin ('heroin 3' and 'heroin 4') was destined for exports, one could assume an average bazaar price of $1085 per kg ($1058 for 'heroin 3' and $1111 for 'heroin 4'). The gross profits may have thus been $1425 per kg, equivalent to a gross profitability of 130%, a rather small percentage compared to opium profitability. One critical factor in these calculations, however, is the level of purity. One study on the Iranian drug market, based on heroin samples examined by the authorities, argued that heroin purity was 20-22%, on average in the late 1990s[26]. If average purity of heroin in Afghanistan destined for exports was 50% in the 1990s (and closer to 60% in more recent years) the price of Iranian heroin would have to be multiplied - at least - by two ($2510 *2 = $5020 per kg) in order to arrive at heroin of comparable quality. The profits would then have been close to $4000 per kg; the heroin prices between Afghanistan and Iran would have risen $3^1/_2$ times. But, there are indications that the actual purity levels in Afghanistan could have been even higher. The average purity of heroin, having arrived in the UK directly via Pakistan, seized by UK customs,was 64% over the period from June 2000 to May 2001. Most of this heroin appears to have been manufactured within Afghanistan. Assuming, against this background, an average heroin purity of around 60% in Afghanistan in 1999 and an average heroin purity of 20% in Tehran, a price of $2510 for 1 kg of heroin at 20% purity would have been equivalent to a heroin price of around $7530 at 60% purity (= $2510 / 20% * 60%). Based on these assumptions, the pure heroin prices may have risen seven-fold between southern Afghanistan and Iran.

Nonetheless, heroin trafficking profitability remained below the profitability of opium trafficking. Opium shipments could reckon with a ten-fold price increase between southern Afghanistan and the Tehran market in the late 1990s. The lower profitability of heroin trafficking compared to opium trafficking in Iran was confirmed in another UNDCP/UNICRI sponsored review of narcotic economics in Iran. While heroin prices per kg at the point of entry into Iran (eastern Iran) were five times larger than opium prices, heroin prices in Tehran were only slightly more than 3 times higher than opium prices. There is a difference in perceived risk, and thus in the risk premium charged by drug traffickers. Heroin trafficking in Iran is, in general, perceived to be less of a risk than opium trafficking, given opium's bulky nature and its intensive odour, which makes detection more likely.

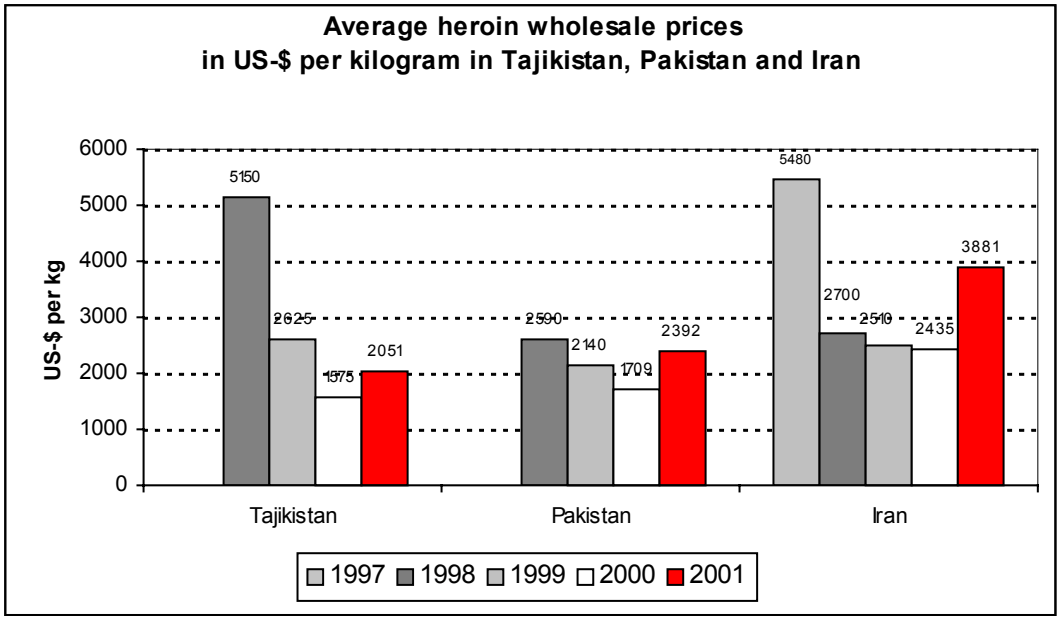

Figure 5
Source: UNDCP Field Offices.

If profitability of the opium trade was apparently larger, why did traders engage in heroin trafficking? Differences in risk are a possible explanation, but they are not the only one. Profit considerations play a role as well. Though the profit margins of trafficking opium are larger than for heroin, the reverse is true for the actual profits per kg. While one kg of dry opium shipped from southern Afghanistan to Tehran brought traffickers gross profits of $745 per kg (data for 1998), gross profits amounted to $1425 (data for 1999) in the case of heroin. These basic patterns have not really changed in subsequent years. In March 2002 brown heroin traded in Afghanistan at around $1980 per kg ($2560 for first quality and $1400 for second quality brown heroin). In the Teheran market the reported wholesale price for heroin was between $5000 and $5250 per kg in April of the same year (up to 50% purity). Heroin prices were thus some $2^1/_2$ times higher in Tehran than in Afghanistan. Again, opium trafficking – with prices being some 3 times higher in Tehran than in Afghanistan – continued to be more lucrative than heroin trafficking. But gross profits of some $3150 per smuggled kg of heroin were about twice as high as gross profits per kg of smuggled opium ($1670).

Given the income situation of ordinary Afghans, such profits are enormous. A Needs Assessment Report prepared by UNDP in January 2002 reported that wages amounted to $1 to $2 per day. This would be equivalent to an annual income of $365-$730 per year[27]. Even if one takes the higher end of this range, available data suggest that smuggling one kg of opium to Tehran was equivalent to 2 years of income in Afghanistan while smuggling one kg of heroin was equivalent to 4 years of income.

The average size of a heroin seizure case in Iran (based on individual seizure cases reported to UNDCP, Interpol and the World Customs Organisation) fell from 22.4 kg in 1999 (range 0.1 kg to 1.9 tons) to 20.8 kg in 2000 (range: 0.1 kg to 865 kg) and 5.7 kg in 2001 (range: 0.1 kg to 100 kg), but rose again over the first two quarters of 2002 to 7 kg (range: 0.1 kg to 100 kg). The size of an opium seizure case was thus on average 6 times larger in weight than a heroin seizure case over the 1999-2002 period (3 ½ times in 2000, 6 times in 1999 as well as in 2002, and 9 times in 2001)[o], suggesting that, on average, higher profits were made per shipment of opium than per shipment of heroin.

Nonetheless, heroin trafficking profits were substantial. Trafficking 7 kg of heroin from Afghanistan to Tehran in 2002 yielded some $22,000 in gross profits, equivalent to 30 years of income of an ordinary Afghan citizen as reported in 2001. It goes without saying that such profit prospects are strong incentives to engage in trafficking activities even if traffickers risk the death penalty in Iran.

Trafficking heroin from Afghanistan to Pakistan or the countries of Central Asia is, in general, a less lucrative business from a narrow economic point of view. In 2001 heroin wholesale prices in Iran were more than

[o] The average size of a seizure case of opium in Iran amounted to 142 kg in 1999, the year of Afghanistan's bumper harvest, but fell to 76 kg in 2000, 50 kg in 2001 and to 46 kg over the first two quarters of 2002.

60% higher than those in Pakistan and almost 90% higher than those in Tajikistan, which translates into less profits to be made by Afghan traders. However, smuggling heroin to neighbouring Pakistan or Tajikistan is still attractive because the risks involved are less significant. Though Iran is not the only country in the region which has a death penalty for drug trafficking[p], the other countries have limited resources available to fight drug trafficking, increasing the chances of opiates traders to sell their heroin without being caught by the authorities. Indeed, there are indications that a growing number of Afghan drug traffickers have been renouncing the large profits to be made in shipping heroin to Iran and opted instead for the lower but less risky profits to be made in shipping heroin to Central Asia.

Information obtained from the Tajik authorities suggested that heroin could be bought at around $790 per kg in northern Afghanistan[q] in 2001 (Khatlon direction: $650-$700, direction Gorniy-Badakshan: $800-$1000) prior to September 11.[r]

Table 7: Gross profits out of heroin trafficking from northern Afghanistan in 2001

	Heroin wholesale prices per kilogram			Gross trafficking profits per kilogram	Profitability in % of prices in northern Afghanistan
	minimum	maximum	average		
Northern Afghanistan					
Khatlon direction	$650	$700	$680		
Gorny-Badakhshan direction	$800	$1,000	$900		
Average northern Afghanistan			**$790**		
Tajikistan					
Mokovski (border with Afghanistan)	$1,500	$1,600	$1,550	$760	96%
Pyanj (border with Afghanistan)	$1,800	$2,000	$1,900	$1,110	141%
Dushanbe	$3,000	$4,000	$3,500	$2,710	343%
Kyrgyzstan					
Osh and Batken (south of the country)	$3,000	$4,000	$3,500	$2,710	343%
Bishkek	$5,000	$7,000	$6,000	$5,210	659%
Karakol	$6,000	$8,000	$7,000	$6,210	786%
Kazakhstan					
Almaty	$7,000	$8,000	$7,500	$6,710	849%
Northern Kazakhstan	$8,000	$9,000	$8,500	$7,710	976%
Uzbekistan					
border with Afghanistan/Tajikistan	$800	$4,000	$2,400	$1,610	204%
Tashkent	$8,000	$1,000	$4,500	$3,710	470%
Pakistan					
Peshawar*	$514	$4,303	$1,625	$835	*106%*

[p] A death penalty for large-scale drug trafficking is possible in Tajikistan and existed – until recently (August 2001) – in Turkmenistan. See also the annex on sanctions and penalties for drug trafficking in Central Asian countries.

[q] In 2001 opium production was concentrated in northern Afghanistan (> 80%) and one can also assume that most of the heroin manufactured within Afghanistan in 2001originated in northern Afghanistan.

[r] Overall price levels of opium and heroin in northern Afghanistan and the central Asian countries increased after September 11.

Table 7: Gross profits out of heroin trafficking from northern Afghanistan in 2001					
	Heroin wholesale prices per kilogram			Gross trafficking profits per kilogram	Profitability in % of prices in northern Afghanistan
	minimum	maximum	average		
Quetta*	$1,648	$2,674	$2,119	$1,329	*168%*
Karachi*	$2,312	$5,335	$3,433	$2,643	*335%*
Iran					
*Tehran**	*$1,500*	*$5,550*	*$3,881*	*$3,091*	*391%*
Turkmenistan					
Ashgabad	*$7,500*	*$8,000*	*$7,750*	*$6,960*	*881%*
northern Turkmenistan	*$7,500*	*$8,500*	*$8,000*	*$7,210*	*913%*

* minimum and maximum data for Pakistan and Iran refer to monthly averages.

Source: UNDCP Field Offices.

Using this figure as a basis, Afghan traders could make profits of around 100% by smuggling heroin just across the border to Tajikistan or Pakistan. This was less than traders could gain from smuggling heroin across the border to Iran. However, if traders did not stop at the border but smuggled the heroin on to Kazakhstan (via Kyrgyzstan, or via Uzbekistan) or to northern Turkmenistan (via Uzbekistan or via Taliban controlled Afghanistan), they could expect a gross profitability of more than 900% in 2001, clearly exceeding the profitability of smuggling heroin to Iran (around 400%). Even less ambitious destinations for Afghan traders such as Kyrgyzstan or Uzbekistan could yield profitability ratios that were slightly above those of Iran while profitability ratios that could be obtained by sending heroin to Karachi (Pakistan) for further shipment to Europe (by sea or by air) were only slightly smaller than those encountered in Iran in 2001.

In other words, the Central Asian countries as well as Pakistan emerged as lucrative alternative outlets for Afghan heroin in 2001 offering – from a trafficker's point of view - better profit/risk ratios than those existing in Iran. Available information on actual heroin trafficking activities confirms that heroin traffickers took these market signals seriously and acted accordingly. In particular, there are indications that larger-scale heroin traffickers shifted their smuggling activities to Central Asia, notably Tajikistan. Whereas the average size of a heroin seizure case in Iran amounted to just 5.7 kg in 2001 (down from 22.4 kg in 1999), the average heroin seizure case in Pakistan was 8.3 kg and in Tajikistan 23.4 kg in 2001, i.e. three times the size in Pakistan and four times the size in Iran.[s]

Conclusion

Though a number of factors played a role in the engagement of Afghan traders in the opium trade, the overriding factor is the large profit to be made in the opium trade, in heroin manufacture and trafficking. Given the magnitude of these profits, it is also clear that legitimate income alternatives created as part of the reconstruction of Afghanistan cannot replace them. Thus, the authorities will face considerable opposition in curtailing drug trafficking as significant income for a not negligible number of Afghan people, who in some instances are even part of the local elite, is at stake. Notably warlords and local commanders, involved in the drug trade, can be expected to defend their lucrative business operations by all means.

The narcotics traders constitute the crucial link between demand for opiates outside Afghanistan and the opium poppy farmers within Afghanistan. As long as these trafficking networks operate, incentives will exist for farmers to grow opium poppy, and as long as farmers grow opium poppy traders will continue to sell this commodity abroad and feed global opiates markets.

[s] Information based on UNDCP/Interpol/WCO individual seizure data.

ENDNOTES

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PART III:
REGIONAL CONSEQUENCES

Chapter VI

DEVASTATION IN NEIGHBOURING COUNRIES

6. Devastation in neighbouring countries

Afghanistan's opium production has also had consequences for neighbouring countries in terms of trafficking, spread of abuse and spread of drug related HIV. This will be documented below. The impact of the opium economy, however, reaches beyond these immediate consequences. There are indications that some of the funds generated out of drug trafficking were used by insurgency groups, thus destabilising the state, the economy and civil society at large.

For the purpose of this study Afghanistan's neighbouring countries have been defined to include Pakistan, Iran and all of the Central Asian states, i.e. Tajikistan, Uzbekistan, Turmenistan, Kyrgyzstan and Kazakhstan. The latter two countries do not share a common border with Afghanistan. They have been included in the analysis because (i) border controls among all of the Central Asian countries tend to be weak, facilitating trafficking across the region once opiates cross the border from Afghanistan, (ii) ethnically the Central Asian countries share many of the same characteristics, facilitating drug trafficking across the region and (iii) all Central Asian countries, whether or not they share a common border with Afghanistan, have been found to be strongly affected by trafficking of Afghan opiates.

6.1. Socio-economic context

6.1.1. Population

The largest country neighbouring Afghanistan, in terms of population, is Pakistan (141 million people), followed by Iran (70 million). The Central Asian countries, together, have a population of close to 60 million. The largest central Asian country is Uzbekistan, followed by Kazakhstan. The total population of all of the countries neighbouring Afghanistan is thus close to 270 million inhabitants, twelve times the population of Afghanistan. Pakistan accounts for more than half of the total, Iran for a quarter and Central Asia for a fifth.

Table 1: Population of countries neighbouring Afghanistan (2000)

	Pakistan	Iran	Central Asia						TOTAL
			Uzbeki-stan	Kazakh-stan	Tajiki-stan	Kyrgyz-stan	Turkmeni-stan	Central Asia	
in million	141.3	70.3	24.9	16.2	6.1	4.9	4.7	56.8	268.4
in % of 'neighbouring countries'	52.6%	26.2%	9.3%	6.0%	2.3%	1.8%	1.8%	21.2%	100.0%

Source: UNDP, *Human Development Report 2002.* pp. 163-164.

In ethnic terms, the region is very mixed:[a]

In Pakistan 15% of the population (some 20 million people) are Pashtuns, most of whom live in the North-West Frontier Province along the border with Afghanistan. The Pashtuns also form the majority of the population of Afghanistan (8 to 10 million people or some 40% of Afghanistan's total population).

Five percent of Pakistan's population (7 million) are Baluch, who live along the south-western border with Afghanistan and Iran. The Baluch also live in southern Afghanistan, as well as in Iran along the border with Pakistan and Afghanistan. About 1% of Iran's population speak Baluch (some 700,000 people).

Iran's Kurdish population (estimated at 8% of the country's total population) is concentrated on the western borders. A Kurdish population is also found across the border in Turkey.

Close to the border with Turkmenistan, an ethnic Turkmen population is found in Iran (some 1.5, million or 2% of the population) as well as in the border areas of Afghanistan and Turkmenistan. Many of the Turkmens (and the Uzbeks) living in Afghanistan today actually moved to the country following the Russian Revolution of 1917.

[a] The following data are only tentative, taking from various national statistics, to illustrate this point. (Data have been taken from the 2002 edition of the Fischer Weltalmanach).

Almost half the population of Afghanistan speaks Dari, a Persian dialect, which facilitates direct links with Iran as well as with Tajikistan. The largest Dari speaking community in Afghanistan are the Tajiks (5 to 6 million people, 25% of Afghanistan's population), living mainly in the northern provinces. This facilitates trade and trafficking with neighbouring Tajikistan, which only has a population of slightly more than 6 million people. An important Tajik minority of more than 1.2 million persons is also found in Uzbekistan, where it forms approximately 5% of the population, and a smaller one in Kyrgyzstan.

Uzbeks are even more wide-spread across Central Asia. About 5% of the Afghan population are Uzbeks (more than 1 million people). In addition to Uzbekistan, there are important Uzbek minorities in Tajikistan (23.5% of the population), in Turkmenistan (9% of the population) and in Kasakhstan (2.2% of the population).

Most people in Central Asia using one of the Turkic related languages - Uzbek, Turmen, Kyrgyz or Kazakh - can more or less understand each other in their mother tongue. In addition, Russian is widely spoken and serves as *lingua franca* across Central Asia.

Important, though diminishing, Russian minorities are found across all of Central Asia. In Kazakhstan they form 35.8% of the total population or 5.8 million people, in Kyrgyzstan 18.8% (0.9 million), in Turkmenistan 9.8% (0.5 million), in Tajikistan 7.6% (0.5 million) and in Uzbekistan 5.5% (1.4 million).[1]

Considerable numbers of people of Central Asian ancestry (Tajiks as well as others) are found in several of the larger towns of the Russian Federation, including Moscow, while multiple links also exist between the local Russian minorities and Russians in the Russian Federation.

Some of the Central Asian countries, notably Kazakhstan, also had minorities of ethnic Germans in some pockets of the country. During World War II these ethnic Germans were resettled by Stalin from the Volga region to Central Asia.[2] Following the break-up of the Soviet Union many such families, moved to Germany, though they hardly spoke German any longer. They thus faced problems of integration and in a number of cases maintained stronger links with their former country of residence than with their new home country.

All of the ethnic patterns and links described here could facilitate drug trafficking across borders.

6.1.2. Size of economies

The overall size of all of the economies of the countries neighbouring Afghanistan, measured by the Gross Domestic Product (GDP)[b], converted by the official exchange rates of the International Monetary Fund (IMF), amounted to some $200 billion in 2000. This corresponds to the size of the economy of Austria, Belgium, Sweden or Switzerland, and is equivalent to less than 1% of the aggregated GDP of all OECD countries.

More than half of the aggregated GDP of the countries neighbouring Afghanistan is accounted for by Iran and more than 30% by Pakistan. The Central Asian countries account for less than 20% of the combined GDP of the countries neighbouring Afghanistan. Among the Central Asian countries the ranking between the country having the largest and the second largest population is reversed: the largest Central Asian economy is clearly Kazakhstan, followed by Uzbekistan. The smallest economy is Tajikistan (GDP of $1 billion), followed by Kyrgyzstan (GDP of $1.4 billion). Small economies, such as the latter two, are particularly vulnerable to being destabilized by the huge flow of funds resulting from drug trafficking.

[b] The Gross Domestic Product (GDP) is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. The main difference between the GDP and the Gross National Product (GNP) is that net receipts of income from abroad are included in the GNP figures but not in the GDP figures. Parallel, income made by non-residents in the country under investigation reduce the GNP but would not affect the calculation of the GDP. (World Bank, *2002 World Development Indicators and UNDP, Human Development Report 2002*).

Table 2: Gross Domestic Product (GDP), converted at the official average exchange rate for the year 2000 reported by the International Monetary Fund (IMF), in billion US-$ of countries neighbouring Afghanistan									
	Iran	Pakistan	Central Asia						TOTAL
			Kazakh-stan	Uzbeki-stan	Turkm-enistan	Kyrgyz-stan	Tajikistan	Central Asia	
in billion US-$	104.9	61.6	18.2	7.7	4.4	1.3	1.0	32.6	199.1
in % of 'neighbouring countries'	52.7%	30.9%	9.1%	3.9%	2.2%	0.7%	0.5%	16.4%	100.0%
Source: UNDP, *Human Development Report 2002.* pp. 191-192.									

6.1.3. Level of development

In terms of income and economic development, there are significant differences among the countries neighbouring Afghanistan. Taking the Gross National Product (GNP)[c] per capita converted into US-dollars by the Atlas method, the two richest countries among Afghanistan's neighbours are Iran and Kazakhstan, followed by Turkmenistan. All three countries benefit from natural resources, notably oil and gas. Tajikistan has the lowest GNP per capita figures among Afghanistan's neighbours. It is only 1/9th of Iran's per capita GNP or 15% of the average per capita GNP of low & middle income countries. The next lowest per capita GNP rates were reported from Kyrgyzstan, which has less than 1/4th of the average GNP per capita of low & middle income countries. Except Iran and Kazakhstan, all of the other countries neighbouring Afghanistan have a GNP per capita figure that is below the average GNP per capita of low & middle income countries.

Table 3 : Gross National Product (GNP) per capita in 2000 in US-$*								
	Iran	Kazakh-stan	Turkmeni stan	Pakistan	Uzbeki-stan	Kyrgyz-stan	Tajikistan	Low and middle income countries
GNP per capita in US-$	1,680	1,260	750	440	360	270	180	1,230
Index:	137	102	61	36	29	22	15	100
* based on the Atlas conversion method; this involves using a three-year average of exchange rates to smooth the effects of transitory exchange rate fluctuations. Note: red is used to highlight countries which are below the low & middle income countries' average. Source: 2002 World Bank, World Development Indicators.								

In terms of income and economic development, measured by the per capita Gross Domestic Product (GDP) adjusted by Purchasing Power Parities (PPP), which is a better indicator for actual levels of standard of living, there are significant differences among the countries neighbouring Afghanistan. This indicates that the differences are not just due to distorted exchange rates. While GDP per capita, expressed in PPP in Iran and Kazakhstan was more than 50% above the developing countries' average, the poorest country in the region (apart from Afghanistan) continues to be Tajikistan. Its PPP adjusted per capita GDP was again only 1/9th of the corresponding figure for Iran and 70% less than the developing countries' average in 2000. The second poorest country among Afghanistan's neighbours is, however, not Kyrgyzstan but Pakistan. Pakistan's PPP adjusted GDP was some 50% below the developing countries' average. Uzbekistan's GDP was 35% below and Kyrgyzstan's PPP adjusted GDP was 28% below the developing countries' average in 2000.

According to UNDP's Human Development Index (HDI), which includes not only PPP adjusted GDP per capita, but also a measurement for the overall health situation ('life-expectancy') and a measurement for the educational level (adult literacy and gross enrolment in the school/university system), the highest level of human development in 2000 among Afghanistan's neighbours was calculated for Kazakhstan (rank 79 out of

[c] The Gross National Product (GNP), also known by the World Bank as Gross National Income (GNI), is the sum of gross value added by all resident producers plus any product taxes (less subsidies) that are not included in the valuation of output plus net receipts of income from abroad. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
(World Bank, *2002 World Development Indicators).*

173 countries investigated).The two countries which faced the most severe problems among Afghanistan's neighbouring states were Tajikistan (rank 112) and Pakistan (rank 138). The position of the latter two countries was below the developing countries' average.

Table 4: Gross Domestic Product (GDP) per capita in Purchasing Power Parities dollars (PPP$) in 2000 and Human Development Index (HDI) 2000

	Iran	Kazakh-stan	Turk-menistan	Kyrgyzstan	Uzbekistan	Pakistan	Tajikistan	Developing countries average
GDP per capita in US$ in PPP	5,884	5,871	3,956	2,711	2,441	1,928	1,152	3,783
Index Developing countries = 100	**156**	**155**	**105**	**72**	**65**	**51**	**30**	**100**
HDI	0.721	0.750	0.741	0.712	0.727	0.499	0.667	0.654
Rank in HDI (out of 173 countries)	**98**	**79**	**87**	**102**	**95**	**138**	**112**	-

Note: red is used to highlight countries which are below the developing countries' average.
Source: UNDP, *Human Development Report 2002.* pp. 151-152.

6.1.4. Economic growth

In terms of economic growth all countries neighbouring Afghanistan performed below the developing countries' average (3.1%) over the 1990-2000 period. Iran (1.9% p.a.) and Pakistan (1.2% p.a.) were the only to show positive growth rates. All of the central Asian states suffered declines. These declines seem to have been primarily linked to the break up of the Soviet Union and the transition to independent statehood, and the consequent inability to rely on the huge market of the Soviet Union or on subsidies from Moscow. The most severe declines over the 1990-2000 period were reported by Tajikistan (-11.8% p.a) also suffering from the consequences of a civil war (1992-97).

Though drug trafficking cannot be pinpointed as the main cause of poor economic performance, the data presented above indicate that trafficking in Afghan opiates did not foster economic development in the region. Poor economic development in several of the countries, notably in some of the Central Asian states, appears to have contributed to the rising attraction of criminal activities over the last couple of years. It may be also noted that Iran, which spent the most against drug trafficking, had the highest per capita growth rate among the countries neighbouring Afghanistan.

Table 5: GDP per capita growth 1990-2000

	Iran	Pakistan	Uzbeki-stan	Kazakh-stan	Kyrgyz-stan	Turk-menistan	Tajiki-stan	Developing countries average	Source
GDP per capita growth (p.a.) 1990-2000	1.9%	1.2%	-2.4%	-3.1%	-5.1%	-8.0%	-11.8%	3.1%	UNDP

Source: UNDP, *Human Development Report 2002.* pp. 151-152 and World bank, *2002 World Development Indicators*

6.1.5. Foreign trade

Another set of indicators can be used to establish the level of vulnerability to drug trafficking: the foreign trade orientation of the countries concerned. Whenever there is large-scale licit import/export trade, drug traffickers find it easy to piggyback their illicit trade on to the legal activities. As much of the exports of the countries concerned are determined by raw material exports, notably oil and gas which are irrelevant for drug trafficking purposes, the level of imports constitutes a better indication of the extent to which foreign trade could be exploited by drug traffickers.

Overall imports of merchandise goods amounted to $37 billion in the countries neighbouring Afghanistan in the year 2000. Forty percent of this amount were imports of Iran, 30% imports of Pakistan and the rest imports of the countries of Central Asia. If trafficking patterns followed licit trade, the highest levels of trafficking out of Afghanistan would be expected for Iran, followed by Pakistan.

Table 6: Imports of countries neighbouring Afghanistan in 2000 in US-$

	Iran	Pakistan	Central Asia						TOTAL
			Kazakh-stan	Uzbeki-stan	Turk-menistan	Tajiki-stan	Kyrgyz-stan	Central Asia	
in billion US-$	15,220	11,048	5,050	2,810	1,400	675	555	10,490	36,758
in % of 'neighbouring countries'	41.4%	30.1%	13.7%	7.6%	3.8%	1.8%	1.5%	28.5%	100.0%

Source: World Bank, *World Development Indicators*, pp. 224-226.

Though Iran and Pakistan, being the largest countries, also have the highest levels of imports, once imports are expressed as a percentage of GDP, the highest import ratios are found in Tajikistan. This represents a pattern frequently found in smaller countries where foreign trade plays – in relative terms - a greater importance than in larger countries. Applying the analogy of traffickers piggybacking clandestine exports on to the legitimate trade, one might expect that trafficking of opiates via Tajikistan is, in relative terms (i.e. compared to the population or the size of the economy), more important than to Iran or Pakistan.

Table 7 : Imports and exports of goods and services of countries neighbouring Afghanistan as % of GDP

	Tajiki-stan	Kyrgyz-stan	Turk-menistan	Kazakh-stan	Uzbeki-stan	Iran	Pakistan	Developing countries
Imports	85	55	53	47	39	21	19	32
Exports:	81	43	63	59	44	35	16	34

Note: red is used to highlight countries which have a ratio above the developing countries' average.
Source: UNDP, Human Development Report 2002, New York, 2002, pp. 199-201..

Indeed, if heroin and morphine seizure data for the year 2001 are analyzed, most seizures among the countries neighbouring Afghanistan were reported from Iran (48%), followed by Pakistan (33%), more or less following the importance of these countries in foreign trade. However, once the seizures are expressed per million inhabitants or per billion GDP, by far the largest seizures took place in Tajikistan.

Table 8: Seizures of heroin and morphine in 2001 in kg

	Iran	Pakistan	Tajiki-stan	Uzbeki-stan	Turk-menistan*	Kyrgyz-stan	Kazakh-stan	Total
Heroin and morphine seizures	12,669	8,755	4,239	467	200	184	137	26,651
in %	48%	33%	16%	2%	1%	1%	1%	100%

* data for 2000.
Source: UNDCP, DELTA.

Table 9: Seizures of heroin and morphine per million inhabitants in 2001

	Tajikistan	Iran	Pakistan	Turkmenistan*	Kyrgyzstan	Uzbekistan	Kazakhstan
Heroin and morphine seizures in kg per million inhabitants	**695**	**180**	**62**	**43**	**38**	**19**	**8**

* data for 2000.
Sources: UNDCP, DELTA and UNDP, Human Development Report .

Table 10: Seizures of heroin and morphine per billion GDP in 2001							
	Tajikistan	Pakistan	Kyrgyzstan	Iran	Uzbekistan	Turkmenistan	Kazakhstan
Heroin and morphine seizures in kg per billion GDP	**4,239**	**142**	**141**	**121**	**61**	**45**	**8**
* data for 2000. Sources: UNDCP, DELTA and UNDP, Human Development Report .							

6.2. Trafficking

Trafficking patterns, as reflected in seizure data, will be analysed here in more detail. A first obvious finding concerns the massive extent to which countries neighbouring Afghanistan (Iran, Pakistan and the countries of Central Asia) are affected by drug trafficking activities. In 2000 the 'neighbouring countries' of Afghanistan were responsible for 61% of global seizures of opiates. Taking all the opiate seizures of the regions that are strongly affected by Afghanistan's opium production, i.e. Europe, the Near & Middle East and Central Asia, the 'neighbouring countries' of Afghanistan accounted for 71% of the opiate seizures in these three regions in 2000. By comparison, the 'neighbouring countries' accounted in 2000 for 22% of the population of the three regions or just 1% of the aggregated GDP of these three regions, clearly indicating the economic burden put on these countries by drug trafficking.

At the same time, available data suggest that more so than other countries neighbouring countries of Afghanistan successfully stepped up enforcement efforts over the last decade. In 1990, neighbouring countries of Afghanistan accounted for 65% of the combined opiates seizures of the three regions mentioned above. This ratio increased to 71% by the year 2000.

In almost all neighbouring states, opiates seizures increased over the last two decades. This was a consequence of increasing law enforcement efforts as well as of higher levels of Afghan opium production. Afghanistan's opium production doubled over the 1990-2000 period; seizures of opiates in Iran, Pakistan and the Central Asian countries, almost quadrupled over the same period (using opium equivalents and applying a transformation ratio of 10:1 for opium to heroin and a 1:1 for morphine to heroin). In 1990 the 'neighbouring countries' seized 10% of Afghanistan's estimated opium production expressed in opium equivalents. This ratio increased to 18% by 2000. One third was seized in the form of opium while two thirds were seized in the form of either heroin or morphine, reflecting growing opium processing capacities in the region.

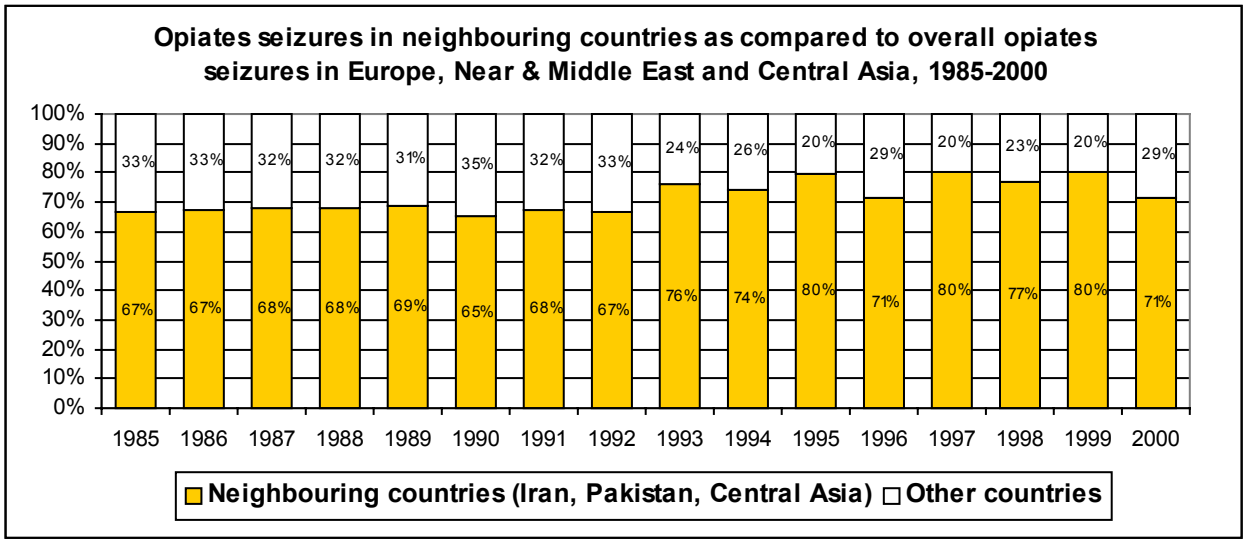


Figure 1
Source: UNDCP, DELTA.

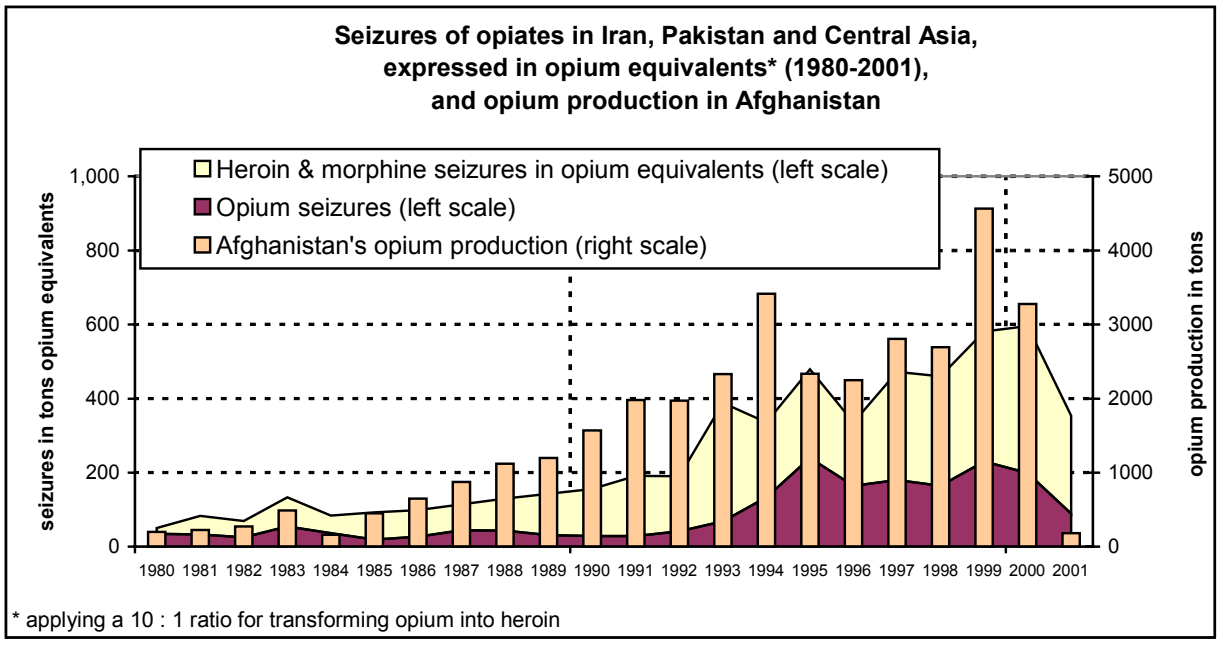


Figure 2
Source: UNDCP, *2002 Global Illicit Drugs Trends* and UNDCP, DELTA.

In 2001, following the large decline in Afghanistan's opium production, opiates seizures in the neighbouring countries of Afghanistan showed a marked decline of about 40%. Given the existence of huge stocks following the bumper harvests of 1999 and 2000 – seizures of opiates originating from these stocks, were almost twice as high as Afghanistan's 2001 opium production.

Seizure data show that throughout the last two decades Iran was affected most by *opium trafficking*. *Iranian* opium seizures showed a 9-fold increase between 1990 and 2000. In some years Pakistan's opium seizures were also sizeable. In 2001, however, opium seizures declined by 55% in the neighbouring countries. Declines were reported from all neighbouring countries.

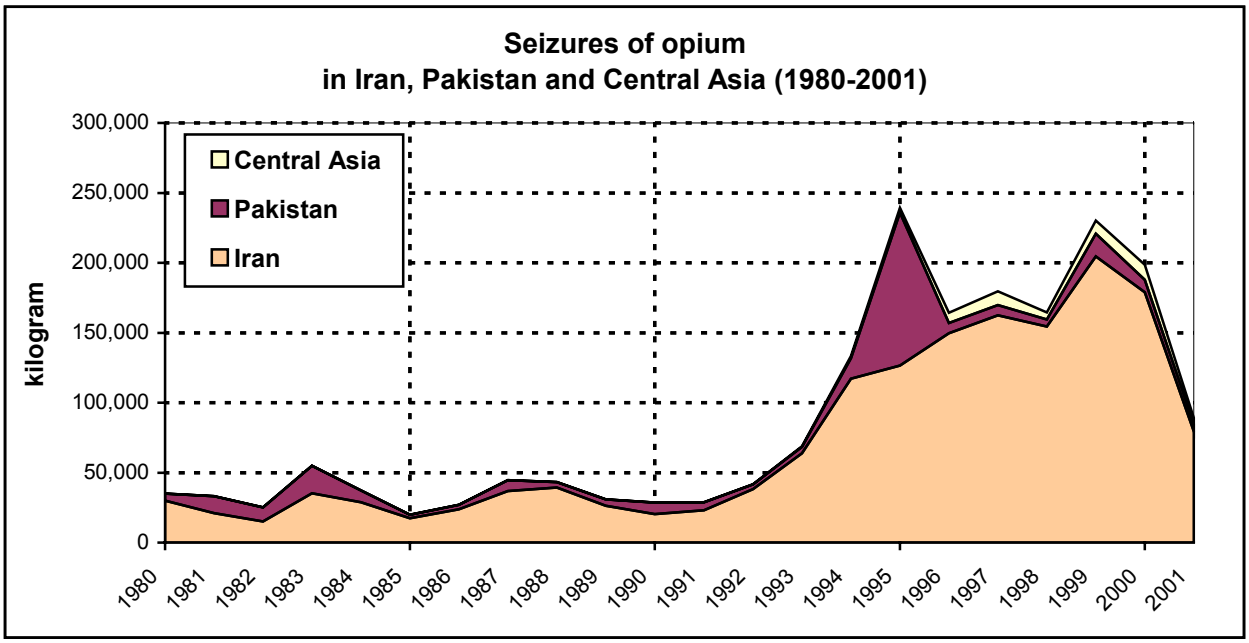
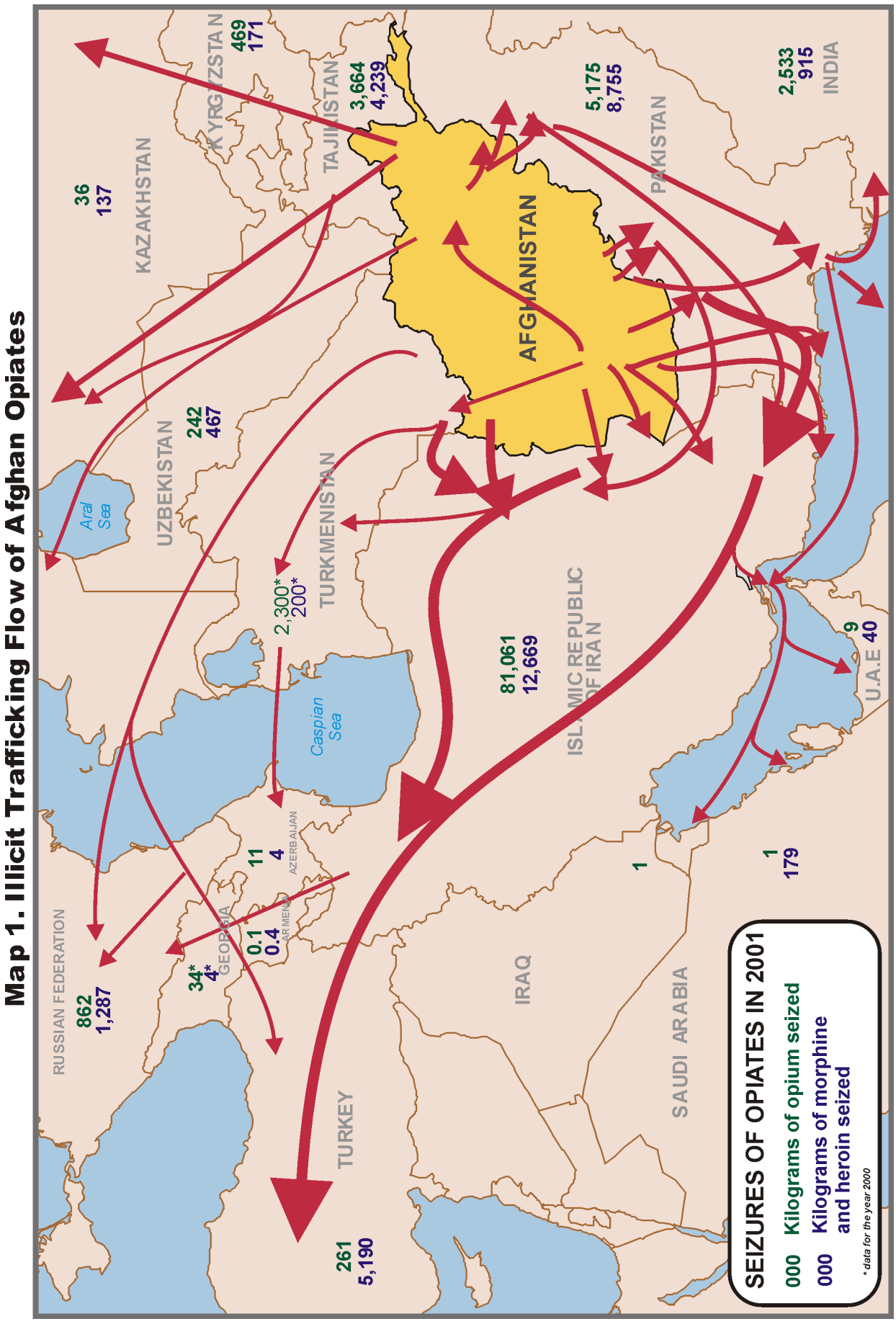


Figure 3
Source: UNDCP, DELTA.


Map 1. Illicit Trafficking Flow of Afghan Opiates
AFGHANISTAN
KAZAKHSTAN
KYRGYZSTAN
TAJIKISTAN
UZBEKISTAN
TURKMENISTAN
PAKISTAN
INDIA
IRAN
IRAQ
SAUDI ARABIA
U.A.E
TURKEY
GEORGIA
AZERBAIJAN
ARMENIA
RUSSIAN FEDERATION
Aral Sea
Caspian Sea
36
137
469
171
3,664
4,239
5,175
8,755
2,533
915
242
467
2,300*
200*
81,061
12,669
9
40
11
4
0.1
0.4
34*
4*
862
1,287
261
5,190
1
1
179
SEIZURES OF OPIATES IN 2001
000 Kilograms of opium seized
000 Kilograms of morphine and heroin seized
* data for the year 2000

A strong increase over the last two decades was also reported for heroin and morphine seizures. In 2001 heroin and morphine seizures declined, but the reduction (33%) was less significant than for opium seizures. If only heroin seizures are considered, the year 2001 showed an even further increase, reflecting the existence of huge heroin stocks as well as the expansion of heroin manufacture within Afghanistan. The bulk of heroin and morphine seizures over the last two decades were made by the Iranian authorities, but the dominance of Iran in morphine & heroin seizures is less significant than in opium seizures. If only heroin seizures are considered, Central Asia, Pakistan and Iran seem to be equally important as outlets of Afghan heroin in 2001.

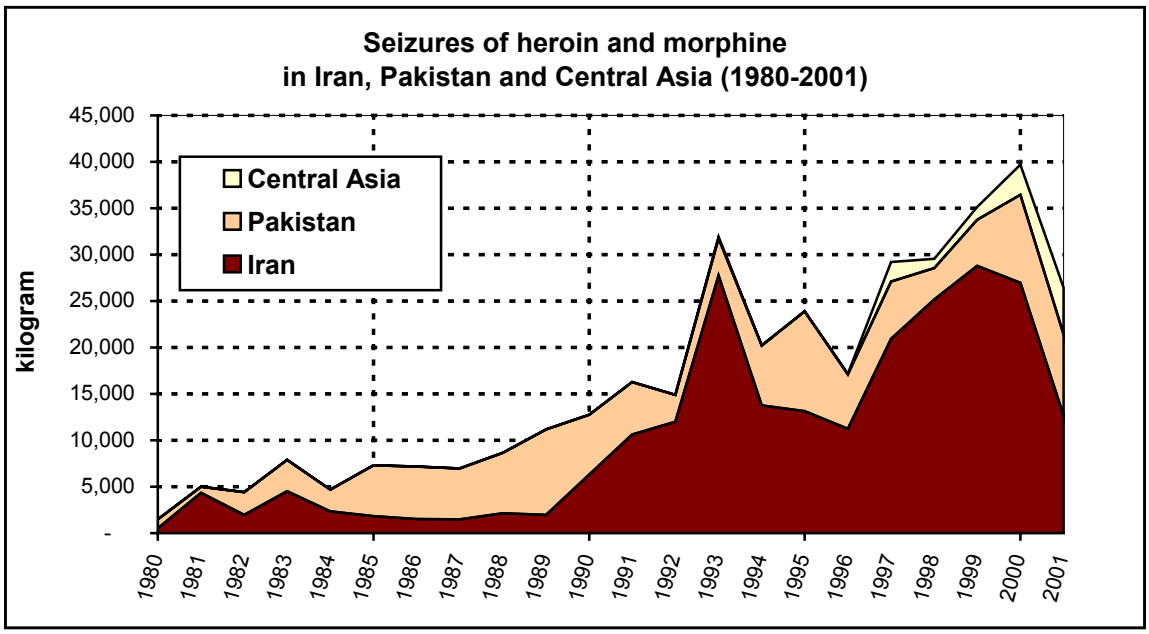


Figure 4
Source: UNDCP, DELTA.

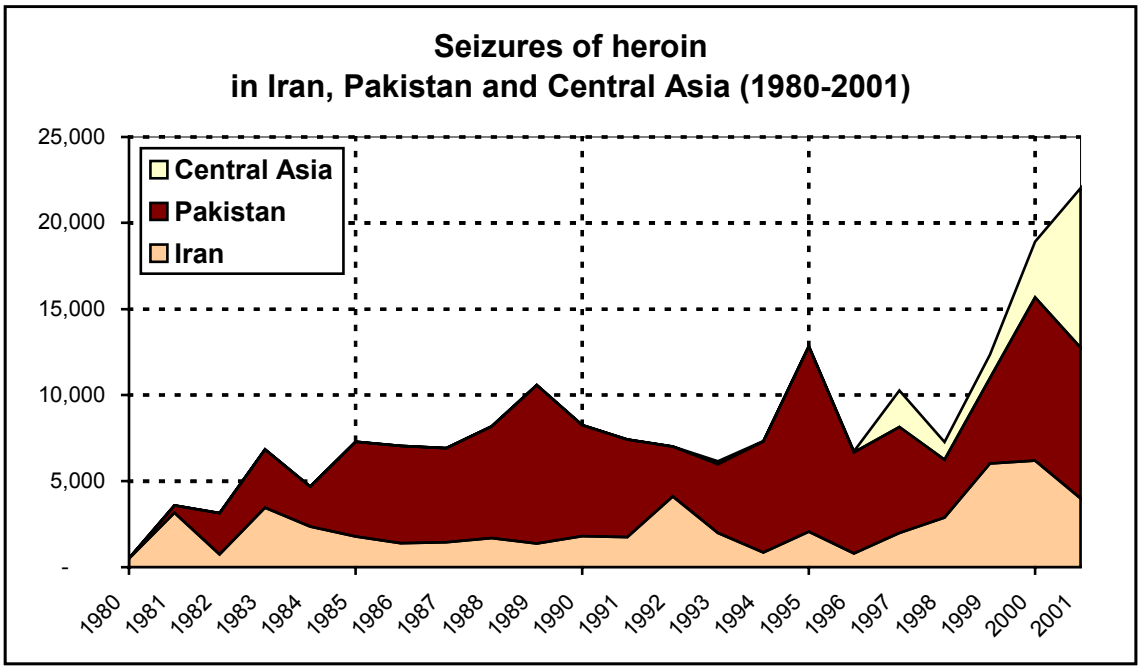


Figure 5
Source: UNDCP, DELTA.

6.2.1. Iran

More than half of total Iranian drug seizures in 2000 (as well as in previous years) took place in the three eastern provinces of Khorassan (bordering Afghanistan and Turkmenistan), Sistan & Baluchistan (bordering Pakistan and Afghanistan) and Kerman province (bordering the provinces of both Sistan & Baluchistan and Khorassan). Smaller amounts of narcotics also enter Iran from Pakistan by sea via the province of Hormozgan.[3] The Iranian authorities identified some 90 points of entry of opiates from Afghanistan to Khorassan province and some 50 points of entry between Afghanistan/Pakistan and the Iranian province of Sistan & Baluchistan. Out of all drugs seized by the Iranian authorities, 20% were in Khorassan and 14% in Sistan & Baluchistan in 2000, though in 2001 Iranian authorities reported a shift of trafficking towards the common Pakistan-Iranian border, affecting mainly Sistan & Baluchistan[4]. The main exit points are border crossings along the Turkish border and, to a lesser extent, Iran's southern coast, the border with Azerbaijan and the border with Turkmenistan.

Iran has paid a high price for drug interdiction in human terms. More than 3000 Iranian law enforcement personnel were killed over the last two decades[d], on average more than 150 persons per year, in trying to prevent drug traffickers from using Iranian territory to smuggle narcotics. In 2000, about half of all Iranian law enforcement personnel were killed in Khorassan province along the border with Afghanistan and a third killed were in Sistan & Baluchistan along the borders with Afghanistan and Pakistan[5]. A third of all Iranian drug seizures were made in armed clashes and ambushes in 2000. [6]

According to an estimate produced by the Bureau for Social Studies of Teheran, direct costs by government agencies to fight the drug problem amounted to 1,136 billion rials in 1988. Converted at the official UN exchange rate for 1998 (Rials 4300 for US$1), drug control costs would have amounted to US$264 million. More than half of the funds were spent on supply control measures. Converted at the official national exchange rate (Rials 3500 for US$1) the drug control expenditure would have amounted to $325 million. This was equivalent to 0.3% of Iran's GDP. In comparison, the UK, which has one of the highest drug control budgets in Europe, spent 0.16% of GDP on drug control in 1997/98 (£1.4 billion, up from £0.5 billion in 1993/94; 62% of the 1997/98 drug control budget went into supply control)[7]. Expenditure on supply control increased in Iran from 0.2% of GDP in 1998 to 0.4% of GDP in the year 2000. Drug Control Headquarters total expenditures for the year 2000 were reported to be $250-$300 million.

Table 11: Direct Drug Control Expenditure in Iran in 1998

	Million rials	in %	Million US-$		
			Non-oil export exchange rate	UN exchange rate	Official exchange rate
Exchange rate: Rials to US-$			5,395	4,305	3,500
Supply reduction	605,738	53%	112	141	173
Treatment and legal expenditures	385,820	34%	72	90	110
Prevention and awareness campaign	115,171	10%	21	27	33
Other	29,699	3%	6	7	8
Total drug control expenditure	**1,136,428**	**100%**	**211**	**264**	**325**
Gross domestic product (GDP)	324,800,000		60,200	75,400	92,800
in % of GDP	0.3%		0.3%	0.3%	0.3%

Sources: Cultural Research Bureau, "Illicit Drug Market in Tehran – Review of Narcotic Economics in Iran", (Draft), Tehran 2001; The Economist Intelligence Unit, Iran Country Profile, 2002.

[d] The precise figure provided by the Iranian authorities was 3078 by the end of 2000 (Islamic Republic of Iran, *The National Drug Control Report 2000*, 25.

From a global perspective, government expenditure involved in seizing one kilogram of heroin is comparatively low in Iran. While in the UK, for instance, the supply control budget was US$1.45 billion (£870 million) in 1998, the supply control budget of Iran, using the official UN exchange rate, was $141 million in the same year. The available supply control budget enabled the UK authorities to take 1,346 kg heroin out of the market in 1998. In the same year, the Iranian authorities seized 2,895 kg of heroin, 22,291 kg of morphine and 154,454 kg of opium. The Iranian authorities thus took in total 40.6 tons of opiates (expressed in heroin equivalents) out of the market, 30 times more than the UK with 1/10th of the UK budget at their disposal.

Drug control expenditure in Iran goes beyond the budget of the main drug control institutions in the country. Including construction and maintenance of fortifications erected at the country's eastern border, and various other indirect costs, the Drug Control Headquarters estimate that overall costs of fighting the drug problem have been as high as US$ 1 billion per year, which would have been equivalent to about 1½% of the country's GDP in recent years.

Table 12: Direct Drug Control Expenditure in Iran 1998-2000 - suppy control

	million US-$		
	1998	**1999**	**2000**
Drug Control Headquarters expenditure	n.a.	116	275
Strengthening eastern border	n.a.	25	n.a.
Supply control expenditure	112	141	275
GDP	60,200	54,200	70,300
Supply control expenditure as a percentage of GDP	0.2%	0.3%	0.4%

Sources: Cultural Research Bureau, "Illicit Drug Market in Tehran – Review of Narcotic Economics in Iran", (Draft), Tehran 2001; UNODCCP, Iran Country Profile 2002, The Economist Intelligence Unit, Iran Country Profile, 2002.

6.2.2. Pakistan

The second largest seizures of heroin and morphine in the 1990s were reported by Pakistan. For a couple of years in the 1980s, Pakistan's heroin and morphine seizures even exceeded those of Iran. Most Pakistan seizures in recent years took place in the Pakistan province of Baluchistan, bordering southern Afghanistan and Iran. Baluchistan was responsible for 81% of Pakistan's opium and 77% of its heroin seizures in 2000. The typical trafficking chain goes from southern Afghanistan to Baluchistan and then across the border to the Iranian province of Sistan & Baluchistan. Opiates, in particular in the form of heroin, are also smuggled from eastern Afghanistan via the North-West Frontier Province to the rest of the country. The NWFP accounted for 7% of heroin and 5% of opium seizures. On average consignments intercepted along this trafficking route are smaller. However, about three times as many arrests for trafficking are made

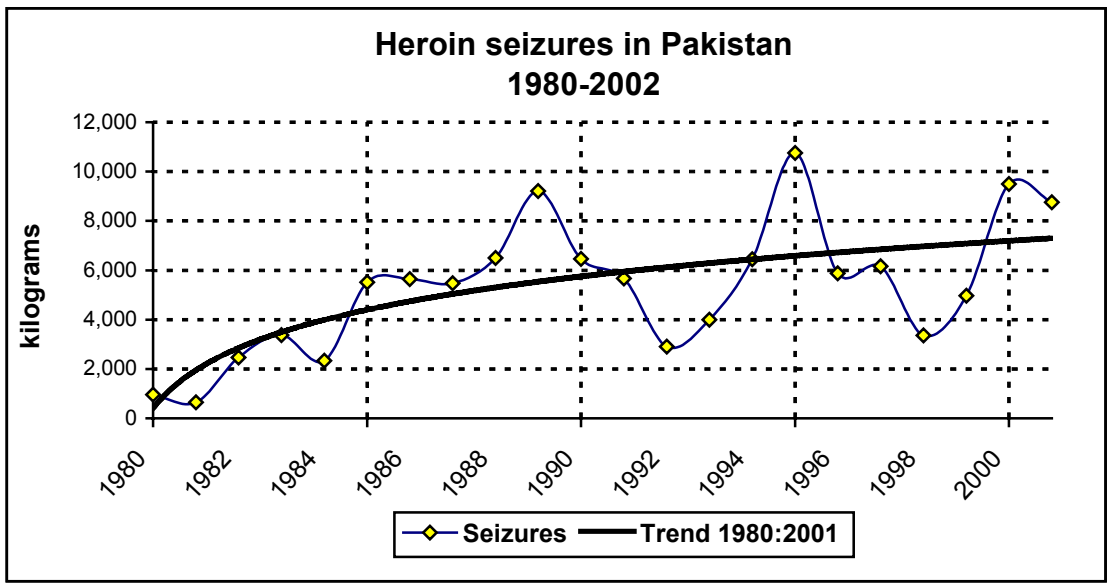


Figure 6
Source: UNDCP, *Global Illicit Drug Trends 2002*.

in NWFP (1117 cases) than in Baluchistan (343 cases). The sea coast area of Pakistan including the main ports of Karachi, Port Qasim and the smaller fishing ports and open areas of the Makran coast are also vulnerable to drug smuggling.[8] These shipments are often destined for the Gulf States and beyond, though some shipments also go by ship to neighbouring Iran.

Trafficking trends in Pakistan went clearly upwards in the 1980s, but were characterised by rather strong fluctuations in the 1990s. Heroin seizures fell in the early 1990s before increasing strongly in 1995, following Afghanistan's 1994 bumper harvest. Similarly, after a downward trend in subsequent years, heroin seizures increased strongly again in 2000 following Afghanistan's 1999 bumper harvest. In 2001, the year of the Taliban opium poppy ban, seizures fell again. Disregarding these cyclical fluctuations, the overall trend of heroin seizures showed a moderate increase in the 1990s after having increased strongly in the 1980s. Information on changes in abuse seems to confirm these trends. Following strong increases of heroin abuse in the 1980s, the increase in the 1990s was rather modest, which was in clear contrast to rapidly rising levels of heroin abuse in the Central Asian states.

6.2.3. Central Asia

Countries of Central Asia only started to report significant seizures as of the late 1990s. Parallel, trafficking of precursor chemicals via Central Asia to Afghanistan was reported.

A strong increase and a clear concentration of seizures among the countries of Central Asia is found in *Tajikistan,* reflecting increased trafficking from Afghanistan to the north, as well as improvements of the enforcement capacity of Tajikistan in recent years. Some 60% of all Afghan drugs entering Tajikistan are trafficked across the flat terrain of the Afghan-Tajik border (via Pynaj, Moskowsky, Nizhni Pyanj, Shuruabad, Parhar). The remaining 40% of the drugs are trafficked via the mountainous Gorno-Badakshan Autonomous Region (through Ishkashim, Khorog, Roushan and Kalay Khumb). Tajikistan was in recent years particularly affected by trafficking of heroin, following the establishment of a number of repositories and clandestine heroin laboratories in northern Afghanistan close to the Tajik border. A reverse traffic of precursor chemicals apparently runs from other Central Asian countries and/or the Russian Federation for the manufature of heroin in Afghanistan.

Drugs continue being trafficked from Tajikistan via the border near Khojand into the Syrdarya Oblast or via the southern route into the Sukhandarya Oblast in *Uzbekistan.* Significant trafficking was also reported on the Dushanbe-Moscow train[9]. Another major route goes from Gorno-Badakshan region of Tajikistan, through Osh in *Kyrgyzstan*, and into Uzbekistan's Ferghana Valley. (Indeed, most seizures in Kyrgyzstan continue to take place in Batken and Osh provinces)[10]. Prior to 1998 and the closing of the border between Afghanistan and Uzbekistan opiates were also directly trafficked from Afghanistan to Uzbekistan. As this border ("Friendship Bridge" on the Amudarya river) was opened again after the fall of the Taliban regime, one might expect trafficking along this route as well.

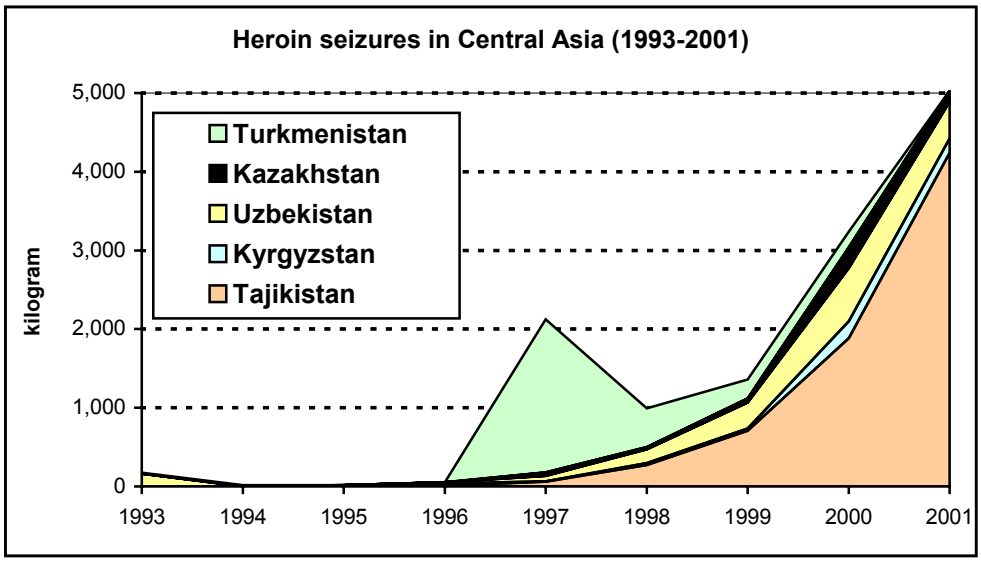


Figure 7
Source: UNDCP, DELTA

Railways linking Kazakhstan with Tajikistan, Turkmenistan, Uzbekistan and the Russian Federation are considered to be the most important trafficking channels via Kazakhstan. Important entry points into Kazakhstan are the rail crossing points of Rays (on the border with Uzbekistan) and Biney (on the border with Turkmenistan). Drug traffic via motor vehicles enters Kazakhstan mostly by crossing the border in Chimkent, Jambil or Almaty provinces. Most of the drugs going to Russia by rail or by vehicles cross the Russian border in the direction of Astrakhan, Orenburg, Chelyabinsk, Omsk and Novosibirsk.[11]

While heroin and morphine seizures showed an upward trend over the last two decades, heroin seizures only started to increase strongly as of the late 1990s, reflecting increasing levels of heroin manufacture within Afghanistan. In 2001, morphine seizures declined in the region, mainly due to falling morphine seizures in Iran. Improved heroin manufacture capacity meant that morphine was increasingly transformed into heroin within Afghanistan. Thus heroin seizures continued to increase in 2001. There was, however, a shift in the trafficking routes. Heroin trafficking via Central Asia increased while trafficking via Iran lost in importance. Heroin purity declined in the region in 2001, but rose again in the following year. This was a reflection of Afghanistan's large opium harvest in 2002.

The strongest growth rates - by far - in heroin seizures in recent years were reported from the *Central Asian countries*, notably from *Tajikistan*. Tajikistan was the only country in the region which showed rising levels of heroin seizures in 2001, reflecting shifts in trafficking routes towards northern Afghanistan, and thus further on to Tajikistan, and improved enforcement efforts by the authorities of Tajikistan.

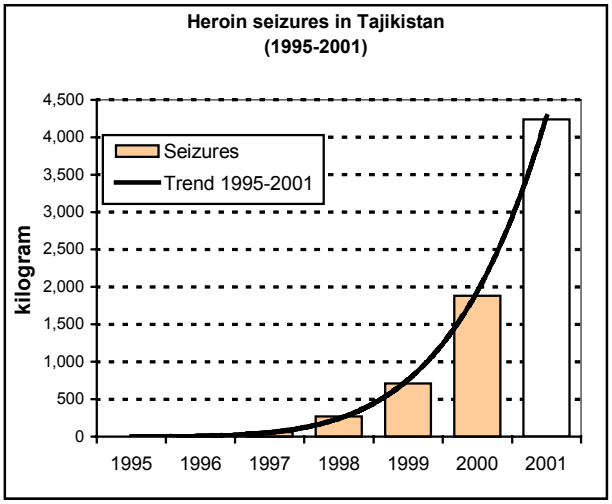


Figure 8
Source: UNDCP, DELTA

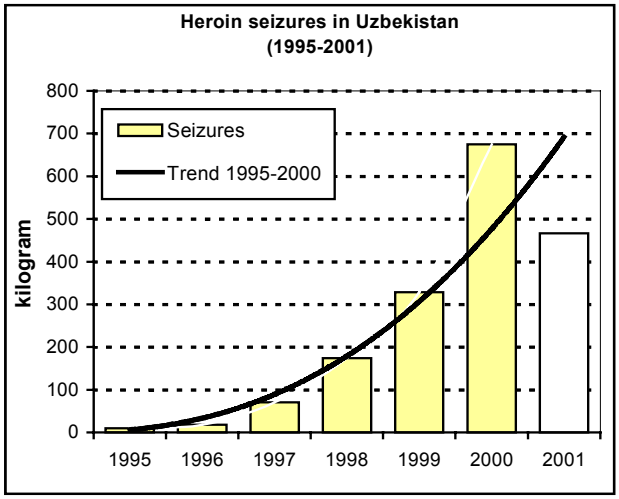


Figure 9
Source: UNDCP, DELTA

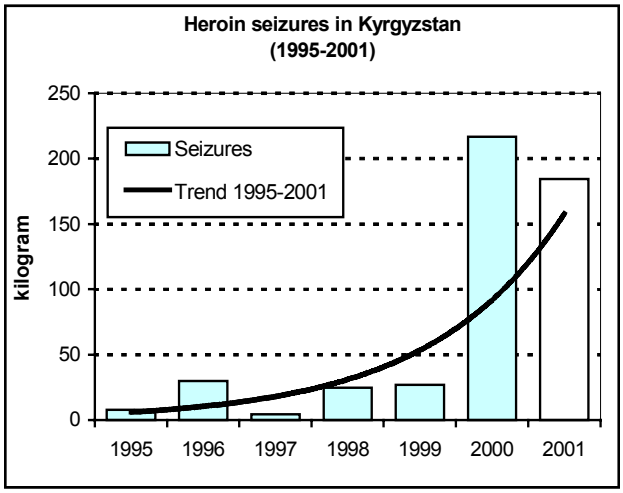


Figure 10
Source: UNDCP, DELTA

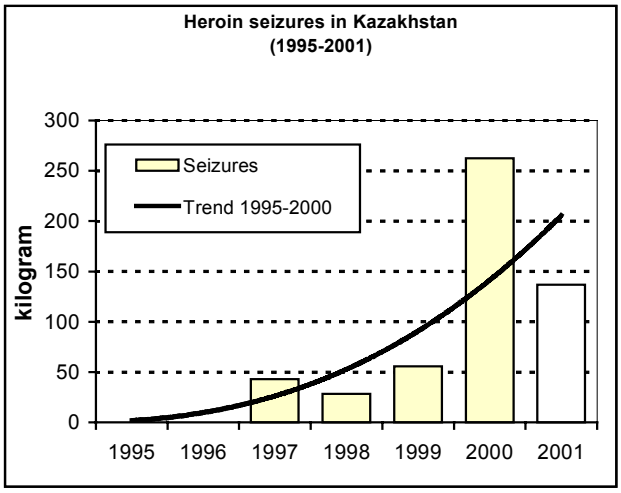


Figure 11
Source: UNDCP, DELTA

The only Central Asian country showing a downward trend in both heroin and opium seizures in recent years was *Turkmenistan.* Given the fact that Turkmenistan, bordering Afghanistan and Iran, was the only Central Asian country that had political relations with both the official Afghan government and the Taliban regime, and also maintained commercial relations with Taliban controlled regions, it seems surprising that drug traffickers were not making more use of these links. The main trafficking route via Turkmenistan, based on seizures made outside the region, went from Afghanistan via Turkmenistan to the Caspian Sea, Azerbaijan, Georgia and Turkey.[12] There seems to be a reverse trade of precursor chemicals, originating in Western Europe or the Russian Federation, going via Turkmenistan to Afghanistan.[13]

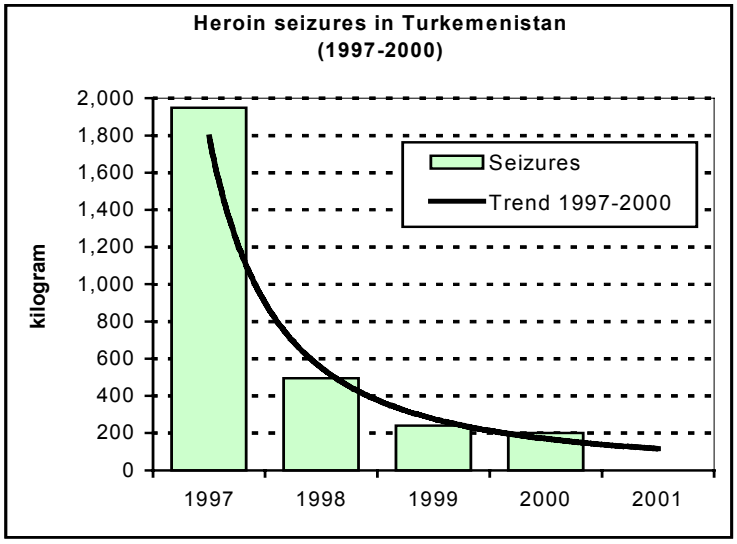


Figure 12
Source: UNDCP, DELTA.

6.3. Mega-income and profits

In this section an attempt will be made to quantify the trafficking activities described above in monetary terms. The calculations made below are based on limited empirical data and available qualitative information. The resulting estimates can only provide some basic orders of magnitude. They should not be mis-interpreted as precise figures of the funds generated from trafficking activities.

6.3.1. Methodology

The likely amounts of opiate trafficked in the region are determined from the latest year available production and seizure statistics, 2002 and 2001 respectively. The first question is how much of the opium produced is likely to be transformed into morphine/heroin and how much is trafficked in the form of opium. Seizure statistics of neighbouring countries are used to shed some light on this question. The next question is what are the directions in which opiates actually leave Afghanistan. Again, seizure statistics are used to identify likely distribution patterns. Multiplying Afghanistan's opium production with the distribution pattern of seizures gives an indication of the amounts likely to be trafficked across various routes. This approach relies on the assumption that seizures are a function of the amount of drugs trafficked, i.e. the higher the quantities of drugs trafficked the higher the amount seized. This assumption, however, is unlikely to reflect reality for all countries neighbouring Afghanistan. Therefore, adjustments are made to account for differences in enforcement activities. In concrete terms, the likely trafficking volumes for Iran, a country known to have strong enforcement activities, will have to be reduced while those of other countries (i.e. all other countries except Tajikistan) will have to be increased.

Thus determined, the quantities trafficked, expressed in kilograms, will then be multiplied with the "typical trafficking profits" per kilogram in order to arrive at the gross trafficking profits per country. The concept of "typical trafficking profits" is based on arrest statistics and other intelligence information, where patterns over time can be identified:

- The “typical trafficking profits” for Pakistani groups, for instance, accrue from buying opiates in the border regions with Afghanistan and selling the opiates across the border to Iranian groups operating in the border regions of eastern Iran. Some amounts of heroin are also shipped from Pakistan to the UK (directly or via countries of the Arabian peninsula) for supplying the local UK market.
- The “typical trafficking profits” accruing to criminal Iranian groups are from buying opiate in the eastern border provinces with Afghanistan and Pakistan and selling the opium in the Tehran market (or other Iranian towns) and the heroin/morphine to criminal groups operating in eastern Turkey.
- The “typical trafficking profits” generated by criminal groups from Central Asia accrue from purchasing opiates in the border region with Afghanistan (e.g. at the border between Afghanistan and Tajikistan) and selling the opium in neighbouring Central Asian countries (e.g. Kyrgyzstan) and smuggling the heroin to Moscow and other Russian towns. Russian arrest statistics show that Tajik individuals are heavily involved in these trafficking activities, far more than individuals from other Central Asian countries.

6.3.2. Results

6.3.2.1. Quantities trafficked

UNDCP’s annual opium poppy survey in Afghanistan found that 3,400 tons of opium were produced in Afghanistan in 2002, about the same quantity as in 2000. Using seizures made in countries neighbouring Afghanistan in the year before (including Turkmenistan’s seizures made in 2000 as a proxy for not as yet available seizure data of this country for the year 2001), and transforming all opiates into heroin equivalents (using the traditional 10:1 opium to heroin transformation ratio), 74% of the opiates were seized in the form of heroin/morphine and 26% were seized in the form of opium. This suggests that 884 tons of opium (3400*26%) and 252 tons heroin/morphine (3400*74%/10) were available for shipment to neighbouring countries. As was discussed earlier in this book, the actual transformation ratio could be far better (7:1, 6:1 or – theoretically- as low as 4:1). But, there is also a significant local consumption of opiates, affecting more than 2 million people (0.8-1.2 million in Iran, 0.9 million in Pakistan and 0.3 million in Central Asia) and significant amounts of the opiates are also seized in the countries neighbouring Afghanistan. Thus, it could be argued that the conservative 10:1 transformation ratio already takes into account some of the leakages to be expected from local consumption.

The next set of estimates relates to the likely quantities trafficked via the various countries neighbouring Afghanistan. Again using the distribution of seizures in 2001 as an indicator for the relative importance of countries as an outlet of Afghan opiates, the following pattern emerges:

- 84% of the opium was seized in Iran, 9% in Pakistan, 4% in Tajikistan and the rest (3%) in other Central Asian countries.

- 46% of heroin and morphine were seized in Iran in 2001, 35% in Pakistan, almost 16% in Tajikistan and the rest (3.5 %) in other Central Asian countries.

Calculated on the basis of opiates produced in Afghanistan in 2002 (3,400 tons), and subtracting seizures in the region, the likely amounts available for shipment out of Afghanistan appear to be: 685 tons of opium and 212 tons of heroin and morphine. The similarity of amounts produced in 2002 and 2000, allowed us to use seizure data for 2000 as a proxy for 2002.

Table 13: Pattern of opiate seizures in neighbouring countries in 2001						
	heroin & morphine	in %	opium	in %	opiates** in heroin equivalents	in %
Iran (Islamic Republic of)	12,669	46.3%	81,061	83.9%	20,775	56.1%
Pakistan	9,492	34.7%	8,867	9.2%	10,379	28.0%
Central Asia, of which:		19.0%		6.9%		15.9%
Tajikistan	4,239	15.5%	3,664	3.8%	4,605	12.4%
Uzbekistan	467	1.7%	242	0.3%	491	1.3%
Kyrgyzstan	171	0.6%	469	0.5%	218	0.6%
Kazakhstan	137	0.5%	36	0.0%	140	0.4%
Turkmenistan*	200	0.7%	2,300	2.4%	430	1.2%
Neighbouring countries	27,374	100%	96,640	100%	37,038	100%
Breakdown	74%		26%		100%	
* data for Turkmenistan refer to the year 2000. ** heroin, morphine and opium expressed in heroin equivalents, using a 10:1 conversion ratio of opium to heroin						
Source: UNDCP, DELTA.						

Distributing these amounts according to the seizure pattern shown above, some 576 tons of opium and 97 tons of heroin and morphine could have transited Iran, 62 tons of opium and 74 tons of heroin and morphine could have transited Pakistan and 27 tons of opium and 33 tons of heroin could have transited Tajikistan. Taking Central Asia as a whole, 48 tons of opium and 40 tons of heroin may have transited Central Asia. However, this 'raw distribution pattern' is subject to a number of adjustments. Enforcement efforts, and thus the likelihood of drugs being seized, are not identical in all of the countries neighbouring Afghanistan. Also, not all drugs were directly shipped from Afghanistan to neighbouring countries. These factors complicate the calculations.

As mentioned earlier, using seizures as a proxy for the actual distribution patterns of trafficking activities implicitly assumes that the likelihood of drugs being seized is the same across all countries in the region. There are, however, indications that this is not the case. For instance, the risks of drugs being intercepted appear to be higher in Iran than in all other countries neighbouring Afghanistan. This means that the proportions shown for Iran, and thus the calculated amounts are probably too high. Using seizures made in the year 2001 reveals a relatively low proportion of Iranian seizures and a relatively high proportion of seizures made in Central Asia, notably in Tajikistan. The latter reflected ongoing opium production and refining into heroin in northern Afghanistan in 2001. In other words, there are two opposing biases in the calculations which, at least partly, can be expected to offset one another. Nonetheless, some bias towards under-estimating opiates transiting the countries of Central Asia and over-estimating drugs smuggled via Iran remain likely.

Iranian researchers have used a slightly different approach in reviewing the narcotic economics of Iran. They came to the conclusion – based on consumption statistics - that in 1999 domestic consumption of opium in Iran amounted to 812 tons[e], equivalent to 528 tons of pure opium, assuming an average opium purity of 65%. As most of the opium directed to Iran is for domestic consumption, increased efficiency of law enforcement in Iran is likely to lower the Iran estimate of opium trafficking by some 10% to 528 tons. However, one cannot apply the same logic to heroin as most of the heroin and morphine trafficked via Iran is not for domestic consumption, but is smuggled via Turkey to various West European markets. Nonetheless, given the strong enforcement efforts in Iran, it seems reasonable to deduct for heroin and opium some 10% of the seizures based estimate to reduce the 'enforcement bias' in the Iranian estimate. This would give a trafficking volume of around 87 tons of heroin and morphine.

Less opiate trafficking in Iran means, however, that more opiates are smuggled via other countries. Accordingly, the estimated amounts for other countries must be raised. For the purposes of these calculations, the increase is distributed proportionately between Pakistan and Central Asia. However, given the strong enforcement efforts of Tajikistan in recent years, the share of Tajik seizures seems to be a fair

[e] This estimate was based on 800,000 hard-core addicts, consuming 2.5 grams of opium per day, 600,000 recreational opium users with a daily consumption of 0.35 grams of opium and 100,000 occasional users, taking on average 0.15 grams of opium per day. (Source: Cultural Research Bureau, "Illicit Drug Market in Tehran – Review of Narcotic Economics in Iran", Draft, Tehran 2001).

reflection of actual trafficking flows. By contrast, enforcement capacities in other central Asian countries are limited. Against this background it appears more appropriate to assume that trafficking via other central Asian countries is more important than estimates based on seizure statistics suggest, and to adjust these estimates accordingly (see Table 14).

Table 14. Quantities of opiates trafficked via countries neighbouring Afghanistan (estimates for 2002 based on 2001 seizure data)

	Unadjusted estimates				Adjusted estimates – taking the Iranian "enforcement bias" into account				
	Opium in kg	%	Heroin and morphine in kg			Opium in kg	%	Heroin and morphine in kg	%
Iran	575,779	84%	97,482	46%	Iran	528,000	77%	87,700	41%
Pakistan	61,691	9%	74,171	35%	Pakistan	88,567	13%	80,512	38%
Tajikistan	27,418	4%	32,847	16%	Tajikistan	27418	4%	32,847	16%
other central Asia	20,564	3%	7,417	3%	other central Asia adjusted	41,467	6%	10,859	5%
TOTAL	685,452	100%	211,918	100%	***TOTAL***	685,452	100%	211,918	100%

Source: Study estimates.

There are some additional discrepancies requiring adjustments with regard to Pakistan. The Iranian authorities reported in their National Drug Control Report, that the direct entry of drugs from Afghanistan into the Iranian province of Khorassan decreased significantly in 2001[f] (by two thirds as compared to 1999). Thus drugs increasingly entered Iran - as they had done in the early 1990s - via the Iranian province of Sistan & Baluchistan, bordering Pakistan. This suggests that a significant proportion of drugs smuggled via Iran is likely not to have been shipped directly from Afghanistan into Iran but to have transited Pakistan territory before. If this is the case, the calculated trafficking flows of opium via Pakistan, extrapolated from seizure statistics, would not be sufficient to meet such Iranian "requirements" for opium. The analysis of individual seizures, collected by UNDCP, Interpol and the World Customs Organisation suggests that in 2001, in addition to opiates destined for the Pakistan market and for direct overseas shipments, 53% of the opium and 66% of the heroin and morphine trafficked via Iran were smuggled into Iran via Pakistan.[g] The estimate of opium trafficked via Pakistan to Iran had thus to be raised from 200 tons to 280 tons (528 tons * 53%). In addition, opium is also used for domestic consumption. Based on an estimate of around 200,000 opium users in Pakistan, and a similar consumption pattern as in Iran, some 70 tons of opium may be consumed locally. Thus, some 350 tons of opium (280 + 70) could actually be trafficked via Pakistan territory.

However, once it is assumed that a significant proportion of opiates entering Pakistan do not leave the country directly to overseas destinations, but are trafficked on to Iran, the whole distribution pattern for the calculation must be re-adjusted. Otherwise, 18 tons of opium and 39 tons of heroin/morphine (i.e. almost half of the heroin and morphine trafficked via Iran) would remain unaccounted for (see Table 15). Thus a further round of re-adjustment of estimates was necessary. Given no special reasons to do otherwise, the re-adjustment was done proportionately.

[f] Seizures in Khorassan province, bordering Afghanistan, were as follows:

	1999	2000	2001
Opium:	63566	43148	20229
Morphine:	3008	4890	1844
Heroin	2154	980	717

Source: Islamic Republic of Iran, *National Drug Control Report 2001*, p. 10.

[g] These percentages were derived as follows: seizures made along the border regions with Afghanistan, i.e. Khorassan province and around the town of Zabul (located in Sistan & Baluchistan but bordering Afghanistan) were considered to reflect primarily opiates smuggled directly from Afghanistan into Iran. Seizures made further south, in the border regions with Pakistan, i.e. the province of Sistan & Baluchistan (except for the town of Zabul), and in the two adjacent provinces of Kerman and Homozgan, were considered to reflect primarily opiates trafficked via Pakistan into the Islamic Republic of Iran.

Following this re-adjustment, it is estimated that 107 tons transit Pakistan, equivalent to 50% of heroin and morphine production in Afghanistan. The 107 tons of heroin and morphine trafficked via Pakistan would be sufficient to supply the local market, direct overseas exports as well as the Iranian market. (108 tons * 66% = 71 tons). Domestic demand, using the consumption patterns identified by Iranian researchers, would amount to some 55 tons in Pakistan (500,000 hard-core heroin addicts *0.3 grams per day * 365 days), which – assuming an average purity of 20% of the heroin consumed in retail markets- would be equivalent to 11 tons of pure heroin. If 107 tons of heroin are trafficked from Afghanistan via Pakistan, 11 tons consumed locally and 71 tons used for shipments to Iran, a total of 25 tons would be available for direct shipments to Europe (of which 8 tons would go to the UK)[h] and other destinations (India, Arabian Peninsula, eastern and southern Africa, etc.).

In the case of Iran, it is estimated that 108 tons of heroin and morphine transit the country, including 71 tons (66%) via Pakistan and 37 tons (34%) directly via Afghanistan. Calculations for heroin consumption in Iran concluded an annual domestic consumption of 29.2 tons of heroin (1999). Based on an average purity of 20% it was estimated that heroin consumption in Iran was 5.8 tons of pure heroin in 1999.[i] This would still leave slightly more than 100 tons of heroin available for shipment to Western Europe. This estimate conforms with previous UNDCP estimates that put heroin consumption in Western Europe at 80-100 tons [j]

In the case of Tajikistan, the estimate would amount to 48 tons of heroin, less than half the amounts of Iran or Pakistan, but equivalent to about 70% of all heroin trafficked via Central Asia (69 tons).

Table 15. Quantities trafficked in countries neighbouring Afghanistan – readjustments for trafficking within the region (estimates for 2002)

	Opium in kg			Heroin and morphine in kg		
	Estimates taking trafficking via Iran into account	**Re-adjusted**	Entering neighbouring countries via Afghanistan		**Re-adjusted**	Entering neighbouring countries via Afghanistan
Iran	528,000	**542,570**		87,700.0	**107,702**	
from Afghanistan	248,160	**255,008**	37%	29,818.0	**36,619**	17%
from Pakistan	279,840	**287,562**		57,882.0	**71,084**	
Pakistan	350,000	**359,658**	52%	86,798.6	**106,596**	50%
Tajikistan	27,418	**28,175**	4%	38,998.0	**47,893**	23%
other central Asia adjusted	41,467	**42,611**	6%	16,946.0	**20,811**	10%
Opiates available for trafficking and local consumption	685,452		100%	211,918		100%
Calculated totals	667,045	685,452	100%	172,561	211,918	100%
Under-estimation	18,407			39,357		

[h] UK Customs found that 27% of the heroin samples analyzed over the June-December 2001 period were known (or are likely) to have been shipped to the UK via Pakistan. (Source: Forensic Science Service, *Heroin Intelligence Database: Heroin seized from 1 June 2000 to 10 December 2001*,January 2002, p. 5 and p. 41.).

[i] This estimate was based on 250,000 hard-core heroin addicts using 0.3 grams a day, 100,000 recreational heroin users consuming 50 milligrams per day and 10,000 occasional heroin users using 10 milligrams a day. (Source: Cultural Research Bureau, "Illicit Drug Market in Tehran – Review of Narcotic Economics in Iran", Draft, Tehran 2001).

[j] In addition, heroin trafficked via other routes arrives in Western Europe. Though the bulk of the heroin for Western Europe arrives via the Balkan route, and thus via Iran, smaller amounts are also directly shipped from Pakistan to Western Europe, or from Pakistan via the Arabian Peninsula or from Pakistan via Africa, or they are shipped from Afghanistan via Central Asia to Western Europe. In addition, small amounts of heroin found in the West European markets are from the Golden Triangle (Myanmar, Laos, Thailand).

6.3.2.2. Trafficking profits

The next question concerns the "typical trafficking profits" generated by trafficking groups in countries neighbouring Afghanistan. Data used for the calculation of the trafficking profits refer to prices in mid 2001. These prices had to be used as proxies because at the time of writing no comprehensive prices for the year 2002 were available. As there was a general – though not dramatic - increase in 2002, actual profits may have been higher than shown in the opiate prices calculations above.

Estimates assume that 543 tons of opium and 108 tons of heroin and morphine are smuggled via Iran. The typical profits made from purchasing opium in Sistan and Baluchistan province and selling it at the retail level in the Teheran market, were some $1900 per kilogram in 2001. Overall gross profits to be made from such wholesale and retail activities related to opium thus amounted to close to $1 billion in Iran. If in the case of heroin and morphine only the wholesale level is considered, buying heroin in Khorassan and selling it in eastern Turkey, could yield almost $2900 in gross profits per kilogram in 2001, equivalent to more than $0.3 billion. Total profits made by Iranian groups may have thus amounted to about $1.3 billion, equivalent to 1.3% of GDP. Profits could be smaller, however, because not all drug shipments via Iran are actually organized by criminal Iranian groups but by criminal groups from neighbouring countries (see below).

In the case of Pakistan, calculations are more complicated. Two kinds of typical profit profiles have been used: (i) wholesale prices for purchasing heroin in Peshawar (North-West Frontier Province) and wholesale prices for selling it in eastern Iran (Sistan and Baluchistan), which yields a profit of around $900 per kilogram, and (ii) buying heroin in Peshawar and selling it directly at the wholesale level in the UK, which yields a gross profit of around $25,000 per kilogram. Based on forensic analysis, the UK authorities estimate that 27% or 8 tons of the UK's overall domestic demand for heroin (some 30 tons)[14] could be supplied by laboratories in the Afghan/Pakistan border region. Most of the rest was found to be shipped to the UK via Turkey. Given that three quarters of all seizures of heroin in Western Europe originating in Pakistan, took place in the UK, it was assumed for the purposes of the calculations below, that 10 tons of heroin are being shipped by criminal Pakistani groups directly to Western Europe. The rest (97 tons of heroin and morphine) is either shipped from Pakistan via Iran and Turkey to Europe (71 tons), or is consumed locally (11 tons of pure heroin, as discussed before). 15 tons are shipped to other regions (India, Arabian Peninsula, Eastern Africa etc.). This distribution of heroin trafficked via Pakistan is approximate and could well be subject to adjustments once better information becomes available. However, as the heroin retail prices in Pakistan are of similar magnitude to the wholesale prices of opiates in eastern Iran, no detailed differentiation for the purposes of identifying orders of magnitude of funds generated from opiate trafficking are actually necessary. Aggregating the various profits from opium, heroin and morphine trafficking, calculations suggest that criminal Pakistani groups earn some $400 million a year from opiate trafficking activities, equivalent to 0.7% of GDP.

This is a conservative estimate. An earlier UNDCP study on the Illicit Opiate Industry of Pakistan, estimated that export profits amounted to some $1.5 billion (range: $0.8-$1.8 bn), based on exports of 50-80 tons of heroin per year, which at the time (1992/93) was equivalent to 4% of Pakistan's GDP. The lower figure of the range was based on the assumption that 50 tons of heroin were exported via Pakistan and that criminal Pakistani groups were able to reap 50% of the prevalent heroin wholesale price in Western Europe. The upper range was calculated assuming 75 tons of annual heroin exports and Pakistani groups reaping 75% of the prevaling heroin wholesale price in Western Europe. Though much of the research done for that study is still valid today, the specific assumptions made on export patterns do not appear realistic. The joint UNDCP/Interpol/WCO database on individual seizures shows that only 1% of overall heroin seizures made in Western Europe over the last few years could be traced back to direct shipments from Pakistan to Western Europe while 40% could be traced back to Turkey. (Most of the rest could only be traced back to some neighbouring countries). Significant heroin shipments from Pakistan to Europe have only been reported from the UK. Three quarters of all direct shipments from Pakistan to Western Europe over the last few years were destined for the UK.[k] In most other European countries criminal Pakistani groups do not seem to play much of a role in the heroin trade. There is evidence of some direct shipments – by air - from Pakistan to Spain, Germany, France, Italy as well as to the Scandinavian countries (Norway and Sweden), but it is not always clear from the seizure statistics whether Pakistani, West-African or criminal West-European groups were behind these shipments, and who was thus reaping the financial benefits.

[k] In this context, it may be noted that the UK is a country of final destination of heroin but not a transit country so that shipments from Pakistan to the UK are destined for the local market and not for other European countries.

The current estimate for Pakistan ($400 million in trafficking profits, equivalent to 0.7% of GDP) assumes that criminal Pakistani groups are involved in organising shipments of opiates to neighbouring Iran and to the UK but it does not take into account heroin shipments from Pakistan to several countries along the Arabian Peninsula (notably Oman and the United Arab Emirates), Eastern and southern Africa (South Africa, Kenya, Tanzania, Uganda, Ethiopia), Western Africa (Nigeria, Cote d'Ívoire, Togo etc.) or to Turkey and a number of other West-European countries mentioned above. Moreover, it does not take into account that many of the shipements via Iran to Turkey are organized by criminal groups from Pakistan. If one assumes that the average export price of heroin obtained by criminal Pakistani groups in shipping heroin to countries other than the UK is not the low wholesale prices of eastern Iran but a price of around $5000, equivalent to the average wholesale price reported from Turkey in 2001 (which is less than the wholesale prices in eastern or southern Africa), the gross profits of Pakistani groups could rise to some $800 million or 1.3% of GDP. Thus, any overall estimate between $400 and $800 million or 0.7%-1.3% of GDP seems reasonable. The possibility of greater income for Pakistani groups would mean that the income for criminal Iranian groups could fall. Taking this possibility into consideration, reasonable estimates suggest that in absolute terms the potential gross income of Iranian traffickers would still exceed those of Pakistani traffickers, but expressed as a percentage of GDP the gross income of drug traffickers in Pakistan and Iran are similar.

With regard to Central Asia the 'typical trafficking profits' are derived from purchasing opium and heroin in Tajikistan, in the border areas with northern Afghanistan, and selling the opium within Central Asia and the heroin in the Russian Federation. While the profits made from opium trafficking are minimal, gross profits made by shipping heroin to Moscow and selling it there are huge. Intelligence information as well as arrest statistics indeed show a very strong involvement of criminal groups of Central Asian origin in this trade: 92% of drug smugglers arrested at Russia's borders in 1999 had a Central Asian background; 75% were Tajiks, 9% Uzbeks, 4% Kazakhs, 3% from Kyrgyzstan and 1% were from Turkmenistan.[15] Based on an average price of more than $33,000 per kilogram, the gross profits to be made by criminal groups in Central Asia are likely to exceed $2 billion a year, and are thus higher than the gross profits made by criminal Iranian or Pakistani groups, even though the latter two ship far larger quantities in total. (See Table 16). Expressed as a percentage of GDP, the calculations suggest that the gross trafficking profits made in Central Asia are equivalent to 7% of the region's aggregate GDP, and constitute an even significantly higher percentage for countries with a small GDP, such as Tajikistan.

The overall income from trafficking in opiates in countries neighbouring Afghanistan can be estimated at around US$ 4 billion. This is equivalent to 2% of the aggregated GDP of the countries neighbouring Afghanistan (see Table 16).

Table 16: Estimates of gross profits derived from Afghan opiates trafficked by criminal groups in countries neighbouring Afghanistan

	Opium	Comments	Heroin/ morphine	TOTAL
Opium production in 2002 in kilograms	3,400,000			
Distribution opium: heroin/morphine	26%		74%	
in kilograms	884,000		251,600	
less seizures (of neighbouring countries in 2000)	-198,548		-39,682	
Opiates available for trafficking	685,452		211,918	
Distribution (seizures 2001)				
Iran	84%		46%	
Pakistan	9%		35%	
Tajikistan	4%		15.5%	
Other central Asia	3%		3.5%	
Sum	100%		100%	
Likely quantities trafficked				
Iran unadjusted (in kg)	575,779		97,482	
Iran adjusted (in kg)	542,570		87,700	
Pakistan unadjusted (in kg)	61,691		74,171	
Pakistan adjusted (in kg)	359,658		79,775	

Table 16: Estimates of gross profits derived from Afghan opiates trafficked by criminal groups in countries neighbouring Afghanistan				
	Opium	**Comments**	**Heroin/ morphine**	**TOTAL**
Central Asia undajusted (in kg)	47,982		40,264	
Central Asia adjusted (in kg)	70,786		68,704	
Iran				
Price at entry point in Iran (2001)	$540	Sistan & Baluchistan	$1,630	Khorassan
Price at exit point	$2,405	Tehran - retail price	$4,500	Turkey (min)
Difference	$1,865		$2,870	
Gross profits by Iranian groups unadjusted	$1,073,828,654		$279,773,961	$1,353,602,615
Gross profits by Iranian groups adjusted	$1,011,893,050		$309,106,159	$1,320,999,209
Gross profits in billion US-$	$ 1.01		$0.31	$1.32
GDP in billion				$104.9
as a percentage of GDP				1.3%
Pakistan				
Price at entry point in Pakistan (2001)	$363	Quetta	$738	Peshawar
Price at exit point	$540	Sistan & Baluchistan	$1,645	Sistan & Baluchistan
Difference I	$177		$907	
Price at exit point II	$540	Sistan & Baluchistan	$25,974	UK wholesale price
Difference II	$177		$25,236	
Gross profits by Pakistan groups unadjusted	$10,919,246		$310,563,585	$321,482,831
Gross profits by Pakistan groups adjusted	$63,659,462		$339,972,398	$403,631,860
Gross profits in billion US-$	$ 0.06		$0.34	$0.40
GDP in billion				$ 59.7
as a percentage of GDP				0.7%
CENTRAL ASIA				
Price at entry point in Tajikistan (2001)	80	Moskovskiy-Shurobad	$760	Moskovskiy-Shurobad
Price at exit point	550	Bishkek	$33,300	Moscow
Difference	$470		$32,540	
Gross profits by Central Asian groups unadjusted	$22,551,361		$1,310,203,374	$1,332,754,735
Gross profits by Central Asian groups adjusted	$33,269,399		$2,235,616,120	$2,268,885,519
In billion US-$	$0.03		$2.24	$2.27
GDP in billion				$32.6
in % of GDP				7.0%
TOTAL NEIGHBOURING COUNTRIES Gross profits in billion US-$	$1.11		$ 2.88	$3.99
GDP				$197.2
in % of GDP				2.0%

* assuming 1/3 or 10 tons of West European heroin to come directly via Pakistan to Western Europe (mostly UK) and the rest being shipped via Iran to Western Europe.
Sources: UNDCP, DELTA, Government reports, UNDP Human Development Report 2002, The Economist Intelligence Unit, Country Reports

6.4. Abuse and treatment

In recent years, all of Afghanistan's neighbouring countries have suffered from rising levels of opiate abuse as a consequence of rising production, trafficking and spill-overs into local markets. The highest levels of opiate addiction were reported from *Iran* where authorities estimate that there are 1.2 million chronic opiates (majority opium) users in the country, equivalent to 2.8% of the population age 15 and above. A more conservative estimate, based on a Rapid Assessment Study, conducted by the Iranian Ministry of Health and UNDCP, arrived at a figure of around 710,000 abusers of opiates in 1999, or 1.7% of the population age 15 and above. These are among the highest levels of opiate abuse in the world, and significantly higher than opiate abuse in Western Europe. Even in the largest heroin markets of western Europe, Italy and the UK, opiate abuse is less than half as important (0.7% and 0.8%, respectively of the population age 15-64)[16]. Iranian authorities report that abuse continues to increase.

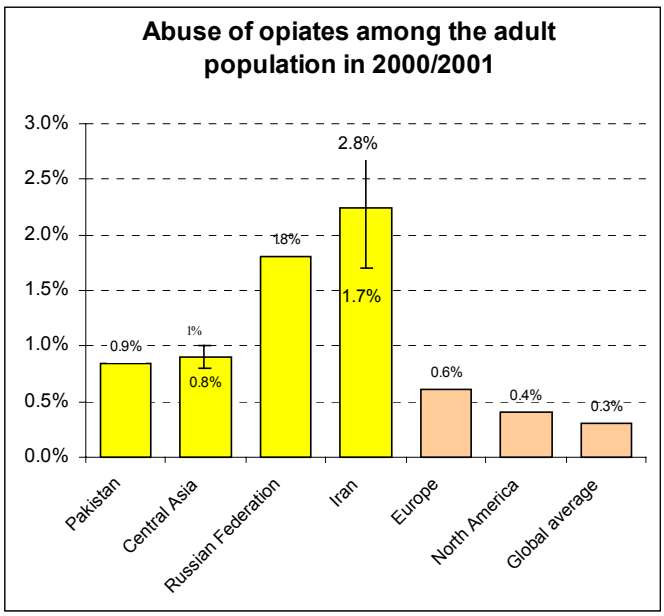
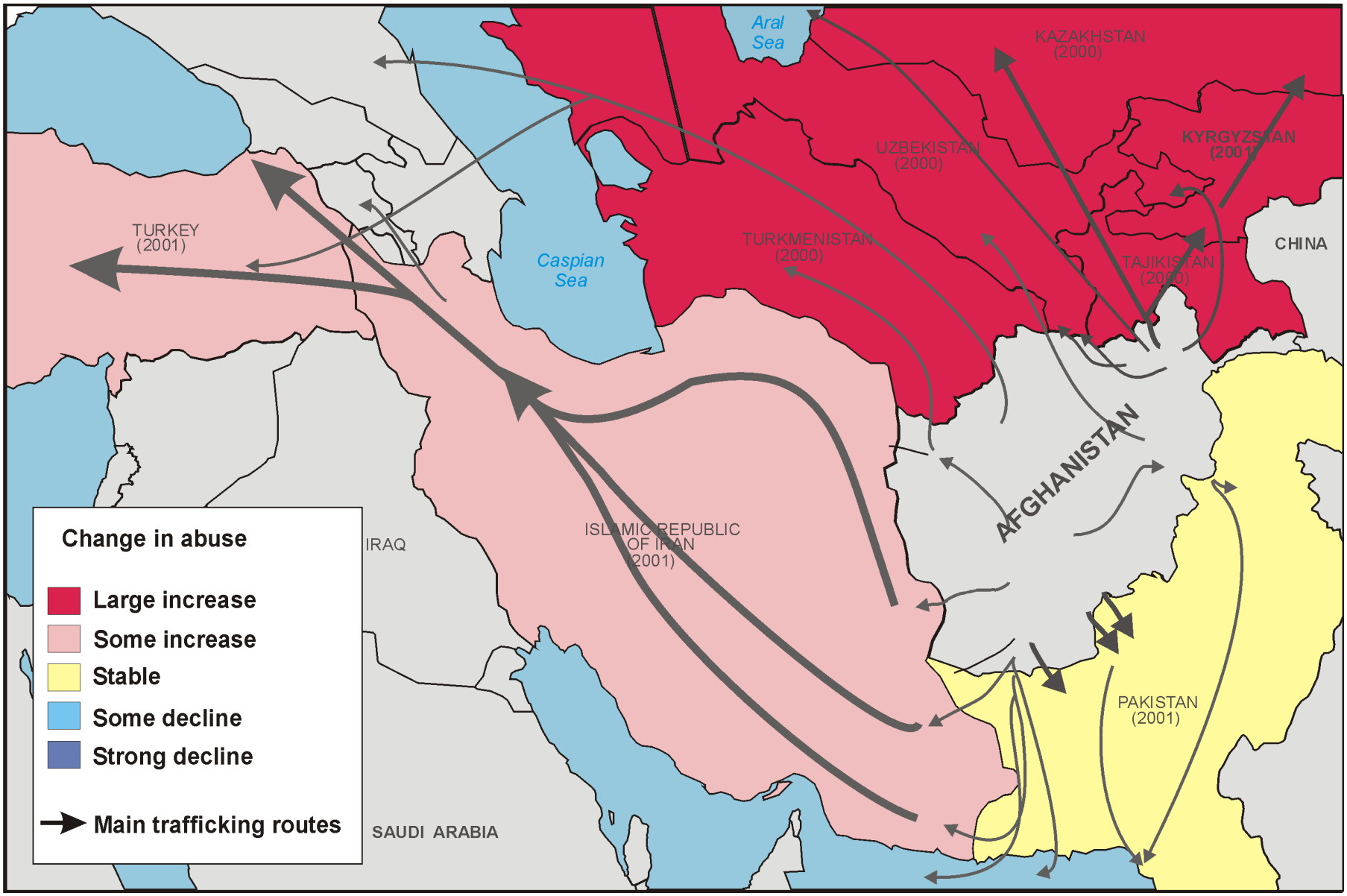


Figure 13
Sources: UNODCCP, *Global Illicit Drug Trends 2002* and UNODCCP Rapid Situation Assessments in Pakistan, Iran and Central Asia.

The strongest increase in opiate abuse in recent years, however, took place in the countries of *Central Asia,* and the increase appears to have continued in 2000/2001. First results of an ongoing UNODC study assessing the level of drug abuse in the countries of Central Asia suggest that problem drug users account for 1.1% of the population age 15 and above. The prevalence rates of opiate abuse in the region is equivalent to 0.9% of the population age 15 and above, and is similar to figures reported from Pakistan. Some 400,000 people in Central Asia are problem drug users, including more than 300,000 people addicted to opiates.

Map 2. Reported change in abuse of opiates in 2000/2001 in countries neighbouring Afghanistan



Sources: UNODCCP, Global Illicit Drug Trends 2002, UNDCP Annual Reports Questionnaire data and UNODC Field Offices.

Abuse of opiates in Pakistan was reported to be showing signs of stabilisation, and – based on a recent national assessment study - now seems to be lower than abuse levels in Iran, Kazakhstan, Kyrgyzstan or Tajikistan (though higher than in Uzbekistan and Afghanistan). Opiate abuse, in general, is estimated to affect some 700,000 persons in Pakistan, or 0.9% of the population age 15 and above. Nonetheless, Pakistan's prevalence rate for chronic heroin abuse, 0.6% among those age 15 and above (some 500,000 persons), is about twice as high as the West European average (1.2 million or 0.3% of those age 15 and above) and some 50% higher than heroin abuse in North America.

The situation is even more difficult for the countries neighbouring Afghanistan because they are confronted with levels of drug abuse which exceed those of the industrialized countries, without the similar levels of resources to deal with the problem. Indeed, the overall health budgets in the countries neighbouring Afghanistan – as shown in the table below – are hardly sufficient to deal with ordinary health problems, let alone to provide the additional expenses necessary for dealing with drug addiction.

Overall expenditure on health in the countries neighbouring Afghanistan amounted to, on average, 4.8% of GDP in 1998, which was only half the corresponding average reported from industrialized countries. The largest health expenditure among the countries neighbouring Afghanistan has been reported from Iran: $128 per capita (PPP adjusted). Funds available for health services in industrialized countries are, on average, some 20 times larger, but even there drug addicts sometimes wait to get into a treatment slot. The situation is even more difficult in some of the smaller Central Asian Republics. In Tajikistan and Kyrgyzstan, the funds available for health services amounted to just $13 and $11 per capita, per year, respectively. This is less than one tenth of funds for health services available in Iran. Expenditures in the industrialized countries on health are more than 200 times larger. In terms of the amount of public sector funds dedicated to health services, the lowest levels are Pakistan ($3 per capita), compared to $52 per capita in Iran and close to $1,800 per capita in the industrialized countries.

Table 17. Overall health expenditure per capita and as % of GDP

	Countries neighbouring Afghanistan							
	Iran[b]	Kazakh-stan[a]	Turk-menistan[b]	Uzbeki-stan[b]	Pakistan[a]	Tajiki-stan[b]	Kyrgyz-stan[a]	Un-weighted average
Health expenditure per capita in PPP US$	$128	$62	$30	$25	$18	$13	$11	$41
of which public sector	$52	$30	$24	$21	$3	$11	$6	$21
Health expenditure in % of GDP								
Public expenditure	1.7%	2.7%	4.1%	3.4%	0.7%	5.2%	2.2%	2.9%
Private expenditure	2.5%	2.9%	1.1%	0.6%	3.1%	0.9%	2.2%	1.9%
Total health expenditure in % of GDP	4.2%	5.6%	5.2%	4.0%	3.8%	6.1%	4.4%	4.8%
	Selected industrialized countries							
	USA[a]	Switzer-land[b]	Germany[b]	France[a]	Nether-lands[a]	Italy[a]	UK[a]	Un-weighted average
Health expenditure per capita in PPP US$	$4,271	$3,857	$2,697	$2,288	$2,173	$1,676	$1,675	$2,662
of which public sector	$1,902	$2,819	$2,029	$1,796	$1,482	$1,145	$1,388	$1,794
Health expenditure in % of GDP								
Public expenditure	5.7%	7.6%	7.9%	7.3%	6.0%	5.6%	5.8%	6.6%
Private expenditure	7.1%	2.8%	2.6%	2.0%	2.8%	2.6%	1.2%	3.0%
Total health expenditure in % of GDP	12.8%	10.4%	10.5%	9.3%	8.8%	8.2%	7.0%	9.6%

[a] Data refer to 1999
[b] Data refer to 1998
Source: UNDP, *Human Development Report 2002*, pp. 166-169.

6.4.1. Pakistan

The first country to suffer from large-scale heroin addiction in the region was Pakistan. Surveys on the size of the drug abusing population and on drug abuse trends have been conducted in the country since the early 1980s. They show a serious increase of heroin abuse over the last two decades. The surveys provide the only information available on many aspects of the drug problem in Pakistan and served to alert the country of the need to invest in demand reduction.

Though the surveys fulfilled important policy functions, doubts have been raised about the adequacy of the methodology which was used for calculating national estimates. Following a first survey in 1982, all subsequent surveys used qualitative information (i.e. perceptions of community leaders and other key informants) to establish growth rates.[I] Information on the current proportions of drug users in the sample, previous survey results, and growth rates derived from qualitative information were then used to estimate the total number of current drug users in the country. Over time, the estimates formed in this way were likely to drift away from the actual number of drug abusers in the country. In particular, the approach appears to have overstated the increases in heroin abuse. Nonetheless, the surveys should not simply be dismissed. They contain valuable information on basic trends of drug abuse in the country, and establish that Pakistan suffered from a strong increase in heroin consumption over the last two decades.

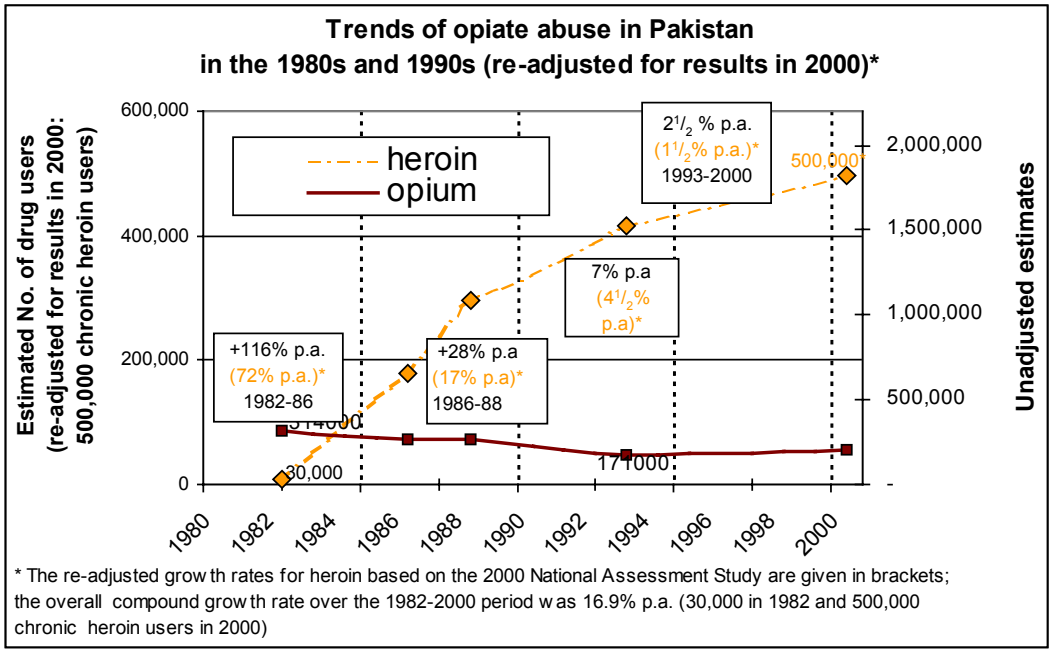


Figure 14
Sources: Study estimates based on UNODCCP, *Drug Abuse in Pakistan – Results from the Year 2000 National Assessment*, New York 2002 and Narcotics Control Division, *National Survey on Drug Abuse in Pakistan 1993,* Islamabad 1994.

In order to obtain a verifiable basis for calculating the extent of heroin abuse in the country which would be comparable to approaches developed in Europe over the last decade, UNODC conducted a National Assessment Study on Drug Abuse in Pakistan in 2000. The approach was based on identification of the total number of people in treatment for heroin abuse and estimation of the proportion of those in

[I] The surveys asked the opinion of community leaders on the growth of the number of drug users. Whenever a community leader expressed the opinion that consumption of a drug had increased somewhat, or increased drastically, since the time of the previous survey, an increase of 10%, or 25%, respectively was assumed. If they reported a decline or a drastic decline, it was assumed that this meant a decline by 10% or 25%, respectively. (See Narcotics Control Division, "National Survey on Drug Abuse in Pakistan 1993", p. 19). The resulting growth rates, as well as the calculated number of abusers, are unlikely to be realistic. However, changes in the growth rates are still likely to reflect the trend because the same methodology was used in various subsequent studies,. The 2000 National Assessment Study on drug abuse in Pakistan followed a different approach. The overall number of problematic heroin users in Pakistan, is now estimated to be around 500,000 people, which is less than previous estimates, though this does not mean a decline. Data suggest that there has still been some increase in use over the last couple of years, though less than in previous years. (UNODCCP, *Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study*, Vienna 2002). In the present study, an attempt was made to combine data from the new study with data from the previous studies to project the previous results forward, as well as to re-adjust the figures to the two anchor points of 1982 and 2000.

treatment compared to the overall addict population in the country. The proportions were derived from interviews with drug addicts and key informants. Based on this approach, an estimate of up to 500,000 chronic male heroin abusers (including drug injectors) was calculated for Pakistan. Comparing the results of the 1982 survey (30,000 heroin users) with the results of the 2000 National Assessment Study, the average annual growth rate amounted to 17% p.a. The increase, however, has not been linear. The reported trend data, based on the perceptions of key informants and community leaders (re-adjusted for the overall growth rate between 1982 and 2000), suggest that growth rates declined from double digit growth rates in the 1980s to single digits in the 1990s[m].

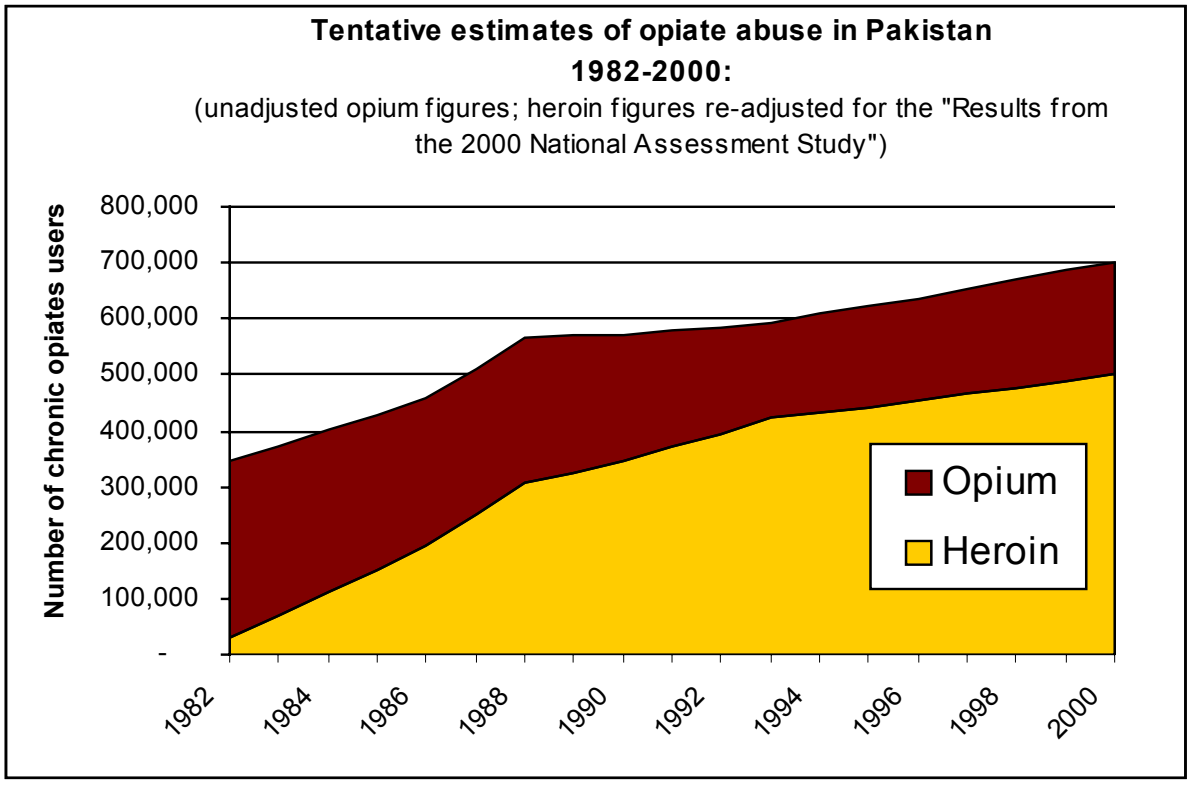


Figure 15
Sources: Study estimates based on UNODC, *Drug Abuse in Pakistan – Results from the Year 2000 National Assessment*, New York 2002 and Narcotics Control Division*, National Survey on Drug Abuse in Pakistan 1993,* Islamabad 1994.

This deceleration in the growth of heroin addiction appears to have become even more pronounced in recent years. For the year 2001, the Pakistan authorities reported first signs of a stabilisation of heroin abuse in the country.

Community leaders and key informants saw a gradual decline over the 1982-1993 period of opium abuse, followed by a stabilization in subsequent years. While in 1982 there were more than 300,000 opium abusers in the country, this figure was reported to have fallen to less than 200,000 by 1993. The number probably remained at these levels in subsequent years. All available information indicates that heroin

[m] In order to calculate the growth rates, the original estimates from 1982 to 1993 were used. Estimates of the number of heroin users were available for 1982, 1986, 1988 and 1993. Data gaps were filled (as done in the 1993 survey) by assuming a linear growth between the reference points. For the period from 1993 to 2000, growth rates were calculated using a similar methodology to the previous surveys: key informants' perceptions of 'increased a little' and 'increased a lot' were transformed into a 10% and 25% growth rate, respectively, while perceptions of 'decreased a little' and 'decreased a lot' were transformed into a 10% and 25% rate of decline. This gave a growth rate of 6.5%. In addition, as in previous surveys, population growth was taken into account (12.2% over the 1993-2000 period). Overall growth over the 1993-2000 period was calculated as follows: 1.065*1.122-1 = 0.195, equivalent to an increase of about 20%. The average annual growth over the period was thus 1.195^(1/7)-1 = 0.0258 or about 2 ½ %. However, the overall growth rate over the 1982-2000 period, taking all of the individual growth rates into account (i.e. 116.3% p.a. over 1982-86; 28.2% p.a. over 1986-1988; 7.1% p.a. over 1988-1993 and 2.6% p.a. over 1993-2000) would have amounted to 25.6% p.a, indicating an over-estimate. The actual average annual growth based on 30,000 heroin users in 1982 and 500,000 heroin users in 2000 was "just" 16.9% p.a. =((500,000/30,000)^(1/18)-1), i.e. one third less than the 'unadjusted growth rate'. In order to take account of this, all previously calculated growth rates were lowered by a third. The 'adjusted growth' rates (rounded) were thus: 72% p.a. for the 1982-86 period, 17% p.a for the 1986-88 period, $4^1/_2$% p.a. for the 1988-93 period and $1^1/_2$% for the 1993-2000 period, which, in total, is equivalent to an average growth rate of 16.9% p.a. over the 1982-2000 period.

abusers now clearly outnumber opium abusers by factors ranging from two to four. Back in 1982 there were still 10 times more opium than heroin abusers in the country.

If one combines the re-adjusted figures for heroin abuse (based on the 2000 National Assessment Study)[n] and the (unadjusted) estimates for opium abuse, it appears that overall abuse of opiates doubled in Pakistan between 1982 and 2000. Most of the increase took place in the 1980s. Between 1990 and 2000, abuse of opiates appears to have increased by less than a quarter.

The 2000 National Assessment Study did not look at the number of opium abusers, but information from key informants seems to confirm that today heroin abuse is far more widespread than opium abuse. Heroin is abused throughout Pakistan. It is less common than cannabis, but more commonly abused than any other substance, including alcohol. Forty six per cent of the key informants reported that heroin was commonly abused, while only 10% of informants expressed such a view with regard to opium. Only 8% of key informants reported that heroin abuse was rare in their locality, whereas 45% of them reported that opium was rarely used.

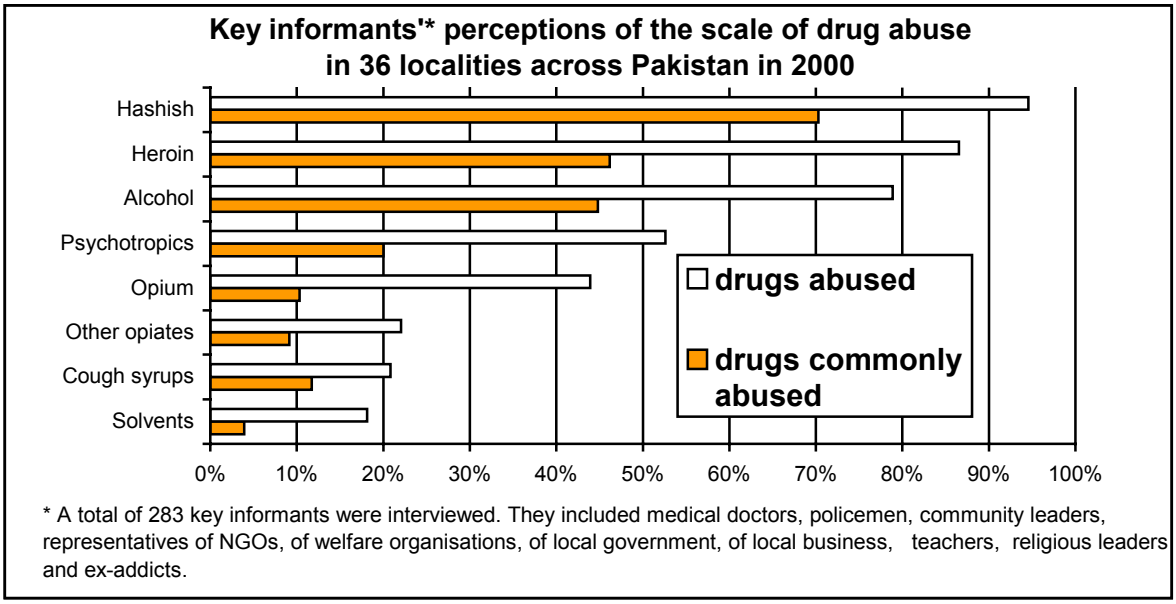


Figure 16
Source: UNODCCP, Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study, p. 14.

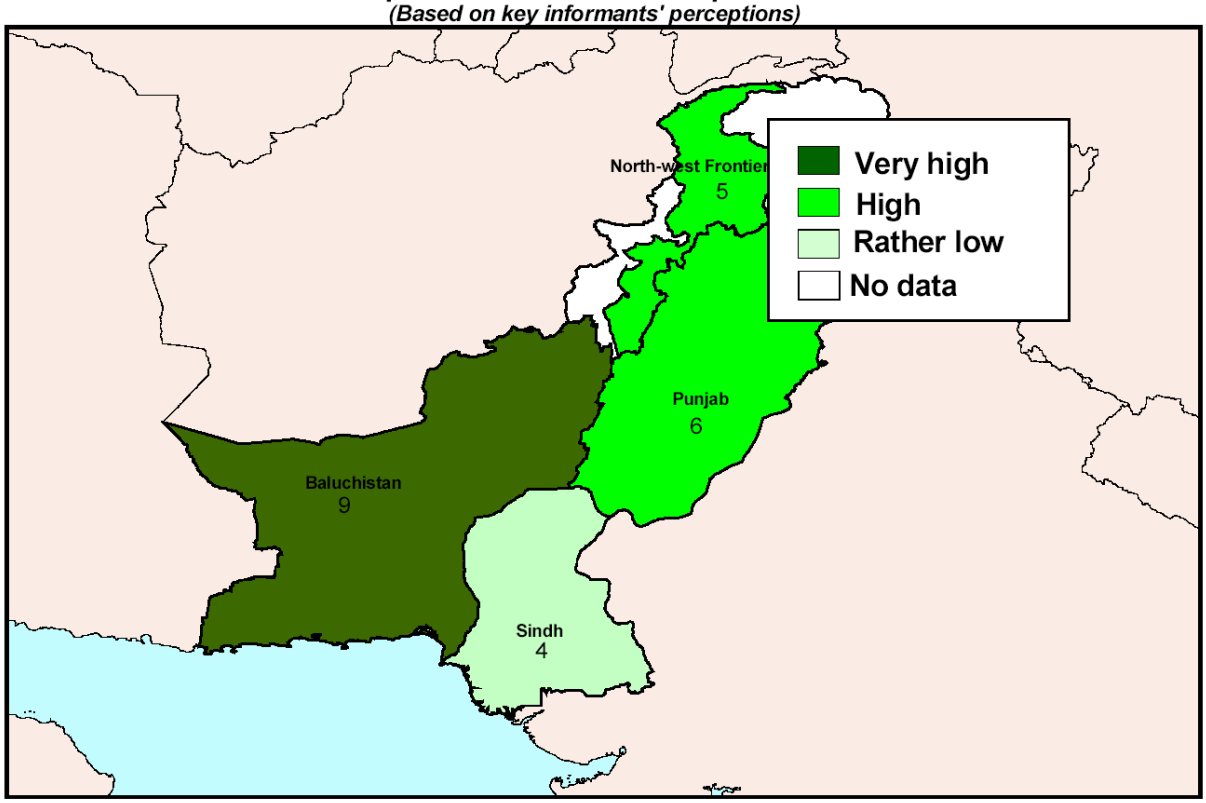
Regional distributions based on key informants' responses also confirm that heroin abuse is now more common than opium consumption across Pakistan. The highest spread of both heroin and opium abuse are found in the province of Baluchistan, along the main trafficking route of opiates from southern Afghanistan (Helmand and Kandahar provinces) to Iran. Relatively high levels are also found in Punjab, the most populous province of Pakistan, as well as in Sindh province where the port of Karachi, a principal trans-shipment point for Afghan opiates, is located. Heroin abuse is apparently less common in the North-West Frontier province (NWFP) though opium consumption there is about the national average.

The total number of new admissions for drug abuse to 73 treatment centers in 18 towns amounted to 17,425 cases over the August 1999-July 2000 period.[17] From this total, 45% of the patients were in Karachi division, 15% in Lahore district, 12% in Peshawar district and 6% in Quetta district. These four areas accounted for the bulk (77%) of all substance abuse treatment in Pakistan.

[n] In order to arrive at the 'adjusted estimates' for the 1982-2000 period, a linear regression was calculated using the adjusted figures for 1982 and 2000 (30,000 and 500,000 as anchor points).

Map 3. Pakistan: Scale of opium abuse in 2000

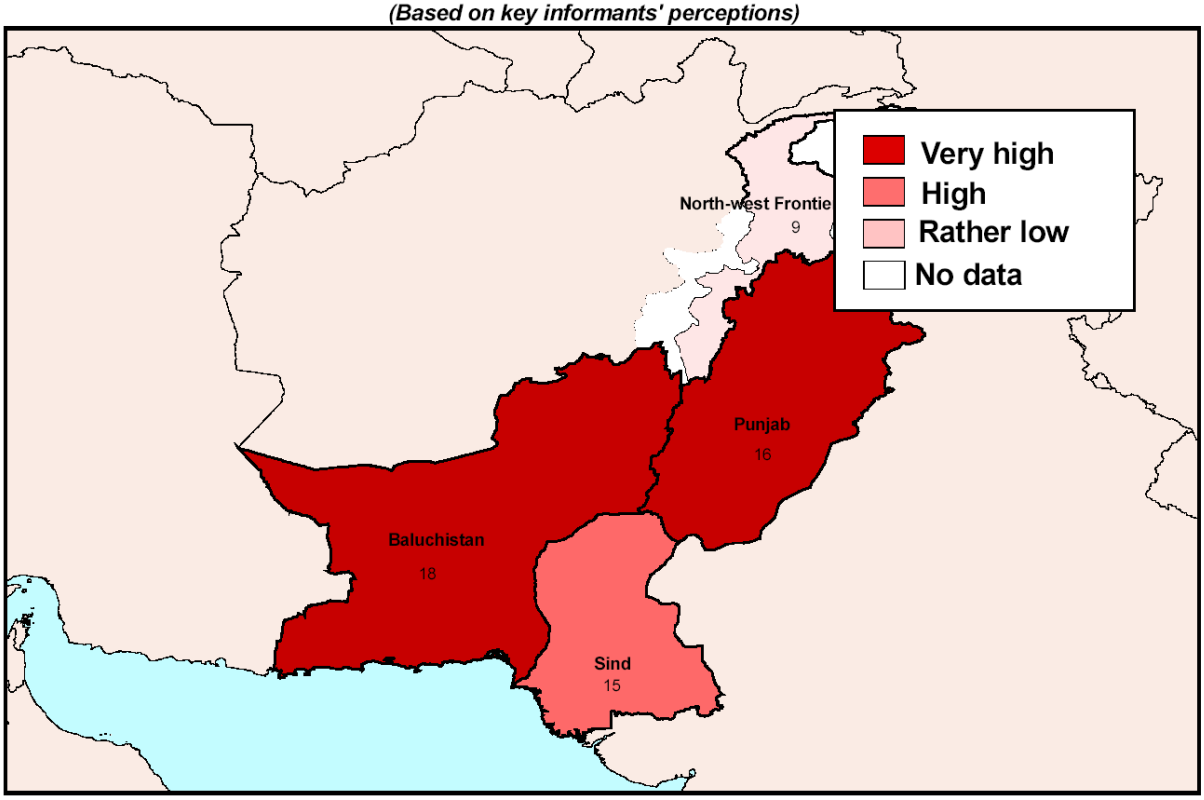
(Based on key informants' perceptions)



Source: UNODCCP Drug Abuse in Pakistan, Results from the Year 2000 National Assessment Study.

Map 4. Pakistan: Scale of heroin abuse in 2000

(Based on key informants' perceptions)



Source: UNODCCP Drug Abuse in Pakistan, Results from the Year 2000 National Assessment Study.

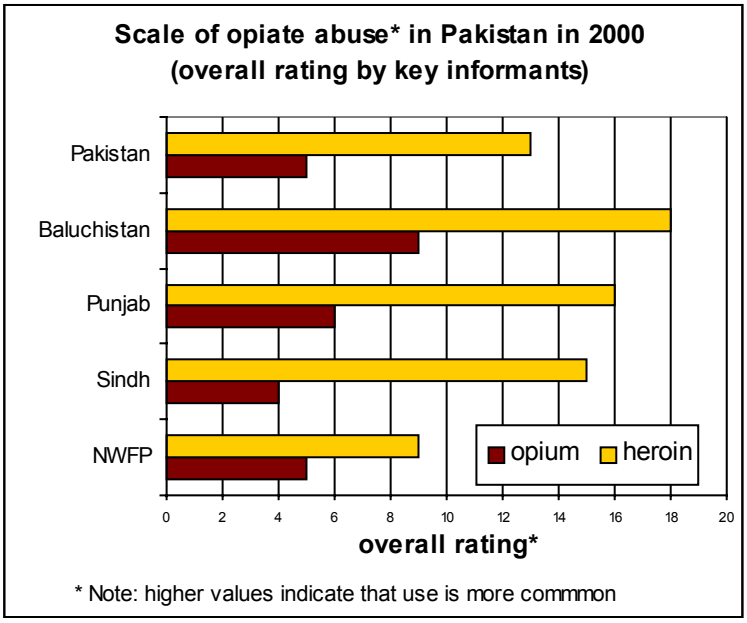


Figure 17
Source: UNODCCP, Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study.

Based on extrapolations from treatment data, using city-specific multipliers and taking the size of the population into account, the highest levels of heroin abuse by far are found in Quetta, the capital of Baluchistan, located along the main trafficking route of Afghan opiates to Iran or to Karachi. About 5% of Quetta's male inhabitants in the age group of 15 to 45 consume heroin. The next highest level of heroin abuse is found in Karachi (Sindh Province), another major trans-shipment point. Overall 0.7 – 2% of the male population age 15 to 45 are estimated to be chronic heroin abusers in Pakistan, which is a high ratio global standards.

Based on the results of key informant interviews, heroin abuse grew most strongly in Baluchistan and Sindh over the 1995-2000 period. The two provinces were most affected by rising opiate production in southern Afghanistan and thus rising levels of trafficking in the second half of the 1990s. Baluchistan was the only province where opium consumption has continued growing in recent years; in all other provinces it either stagnated or fell. In Punjab, which accounts for more than half of the country's total population, both heroin and opium abuse stabilised over the 1995-2000 period.

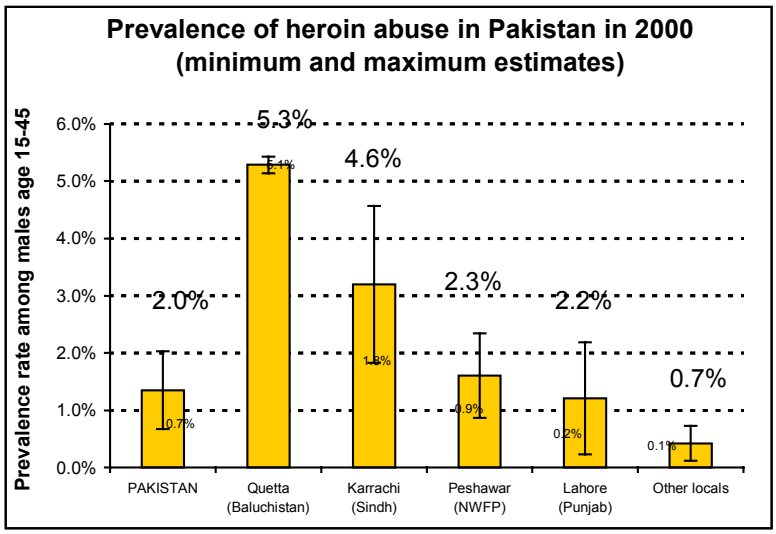
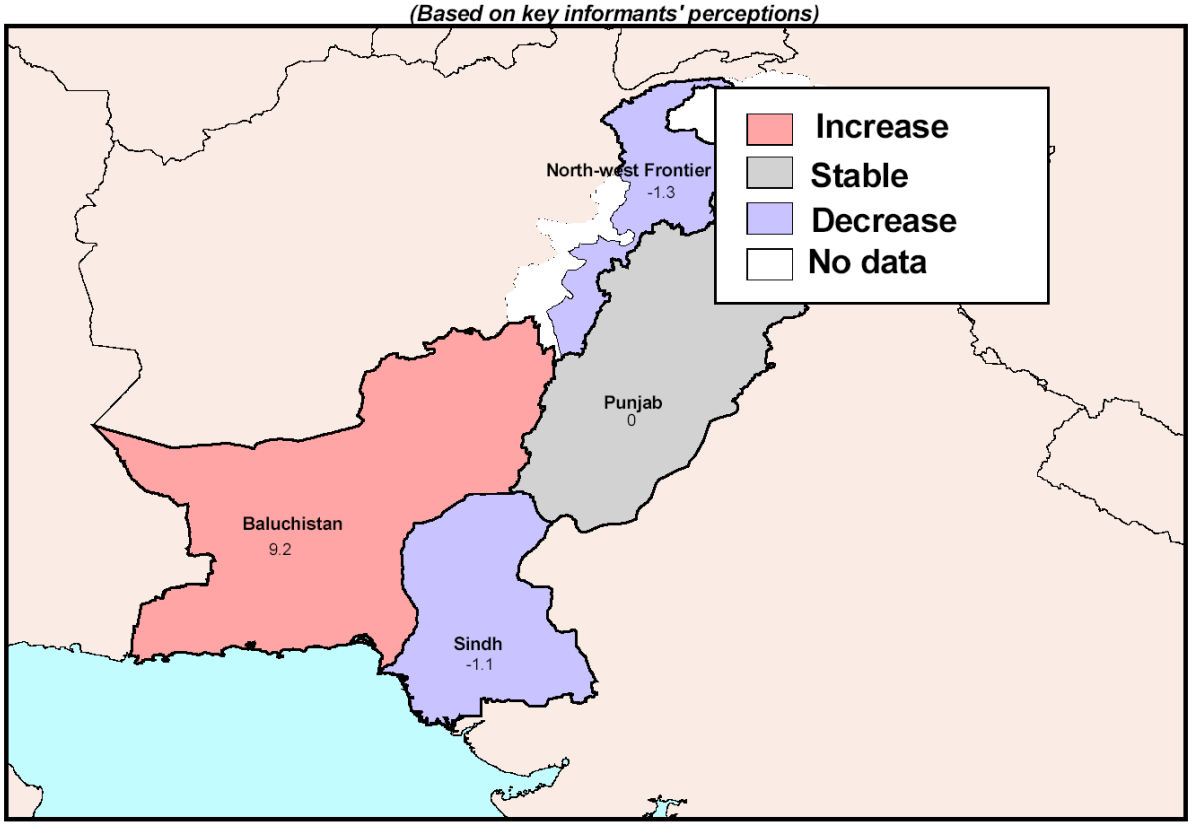


Figure 18
Source: UNODCCP, *Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study*, p. 64.

Map 5. Pakistan: Trends in abuse of opium: 1995-2000

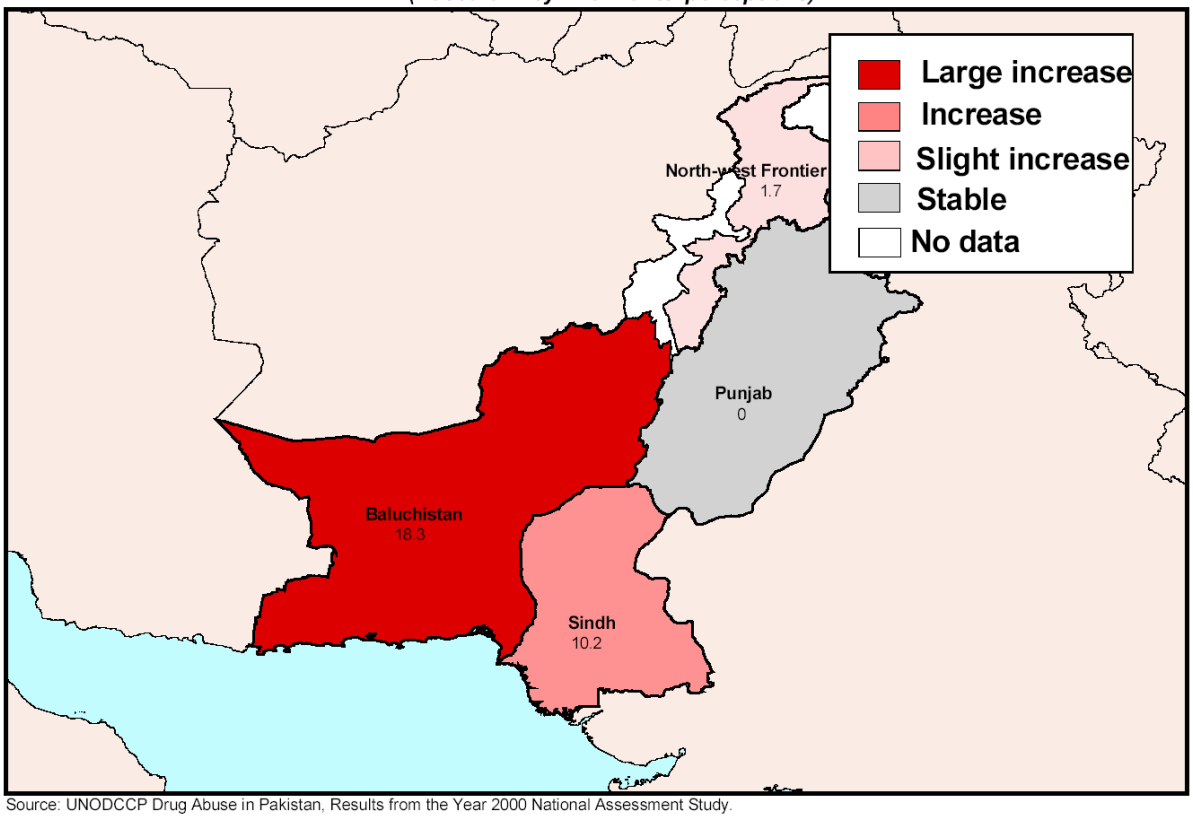
(Based on key informants' perceptions)



Source: UNODCCP Drug Abuse in Pakistan, Results from the Year 2000 National Assessment Study.

Map 6. Pakistan: Trends in abuse of heroin: 1995-2000

(Based on key informants' perceptions)



Source: UNODCCP Drug Abuse in Pakistan, Results from the Year 2000 National Assessment Study.

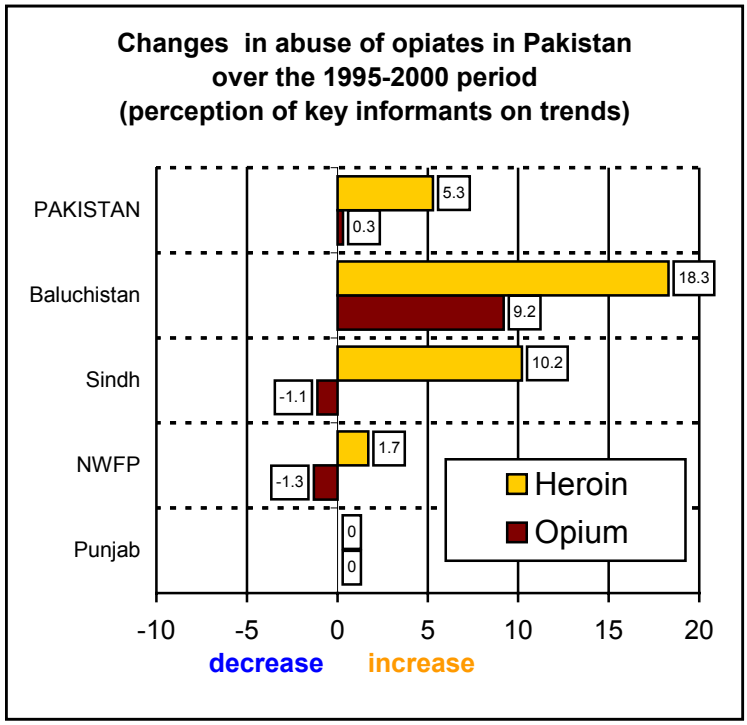


Figure 19
Source: UNODCCP, *Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study*

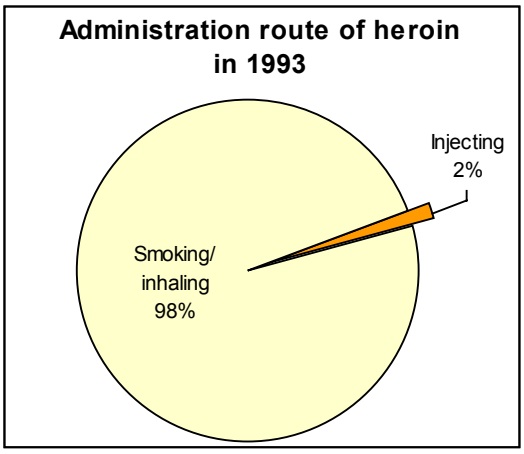


Figure 20
Source: UNODCCP, *Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study*

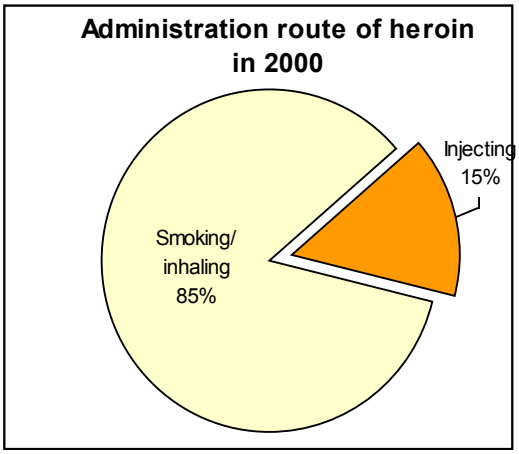


Figure 21
Source: UNODCCP, *Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study*

An issue of particular concern is the rise in injecting drug use, notably of heroin. While in 1988 injecting heroin was virtually unknown in Pakistan, by 1993 the survey found that 2% of heroin users were injecting. By the year 2000, 15% of heroin users reported that they were usually injecting heroin, while 73% smoked it and 11% inhaled it. If asked whether they had injected drugs at least once in the last 12 months, the proportion went up to 27%. When the question was modified, and users were asked whether they had ever injected heroin, as many as 31% of heroin users reported to have done so. Thus for each current injecting heroin user there is another user who has already tried injecting and could thus easily shift to this more efficient form of administration, particularly if heroin becomes more expensive. The highest levels of heroin injecting were found in Karachi (55% ever injected), while the lowest levels were found in Peshawar (12% ever injected) and Quetta (14% ever injected). This ties in with information on heroin prices which, over the last couple of years, have been highest in Karachi and lowest in the regions bordering Afghanistan,

including Quetta and Peshawar. Given these correlations, it is likely that the significantly higher heroin prices observed throughout Pakistan since the last quarter of 2001 could prompt a further shift towards injecting.

The main concern about drug injecting is the risk of the transmission of HIV and other blood borne infections through the sharing of contaminated equipment. There is considerable reason for concern. The 2000 National Assessment found that 53% of the drug injectors interviewed had used syringes from another injector while 72% admitted to have passed their equipment on to other injectors. In Karachi, where injecting heroin is most widespread, as many as 80% of the abusers did not use new needles every time they injected.

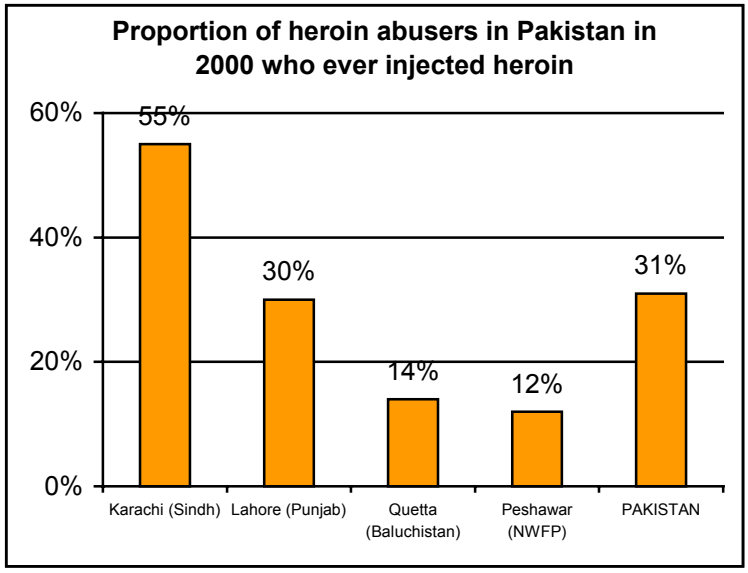


Figure 22
UNODCCP, *Drug Abuse in Pakistan, Results from the year 2000 National Assessment Study*

6.4.2. Iran

Iran reported significant increases in opiate abuse throughout the 1990s. Official estimates for the 1990s were 450,000 opiate abusers. By 1993, the authorities had raised the estimate to 500,000, including 350,000 opium abusers (1% of the population age 15 and above) and 150,000 heroin abusers (0.4% of the population age 15 and above). Estimates for subsequent years differed, depending upon the methodology used. All estimates, however, showed an upward trend compared to the early 1990s.

Estimates of 1997/1998 based on government data from compulsory drug screening before marriage, obtaining a government job, a licence for starting a trade or a driving licence, showed rates of opiate abuse ranging from 1.2% to 3.3% of the population tested (average 1.8%). If these results are extrapolated to the Iranian population aged 15 and above, the total number of opiates abusers could be estimated at around 710,000 for 1997 (range: 470,000 to 1.3 million people).[o]

In 1999, a Rapid Situation Assessment of Drug Abuse in Iran was conducted on behalf of the Iranian Ministry of Health and UNDCP. It arrived at an estimate of 710,000 users[p] of opiates, equivalent to 1.7% of

[o] The estimate of 710,000 people may have been an over-estimate at the time as most people applying for licences in Iran are men, and males have a higher tendency to use drugs than females. Indeed, if only data on marriages and government jobs are analyzed, the ratio falls to 1.3%, equivalent to about 510,000 people in 1997. By 2000 this ratio rose to 1.5%. However, one has to assume that those who are screened , are, in general, aware of the implications of a positive test. There is thus a strong likelihood that many people who are taking drugs, would not apply for a government job or would avoid applying for a licence. This would partly offset the male bias in the sample.

[p] The survey found that 24.2% of drug users had been in treatment and rehabilitation centers at least once in their lifetime, i.e. one out of four. Over the past 11 years 197,109 people had been treated, most of them in recent years. About 10% of admissions were re-admissions. Thus the actual number of persons in contact with the treatment system was about 177,398. Since the number of persons

the population age 15 and above in 1999, which is a higher percentage than in Pakistan (0.9%) or the average of the Central Asian region (1.1%). The survey also found that – in contrast to Pakistan – opium is still the most widely used opiate in Iran. Growth rates, however, were apparently stronger for heroin than for opium. The survey also showed that there is an important overlap as drug users tend to consume more than one drug: 73% of the sample of drug abusers analysed were taking opium, 22% were using an opium residue and 39% were taking heroin. Hashish was consumed by 13% of the problem drug users investigated. Applying these proportions to the estimate mentioned above, the number of opium abusers can be estimated at around 520,000 (1.2% of the population age 15 and above). The number of heroin abusers can be estimated at around 280,000 (0.7% of the population age 15 and above). These figures indicate an increase in the number of opium abusers of 50% between 1992 and 1999 and an increase in the number of heroin abusers of close to 90%.

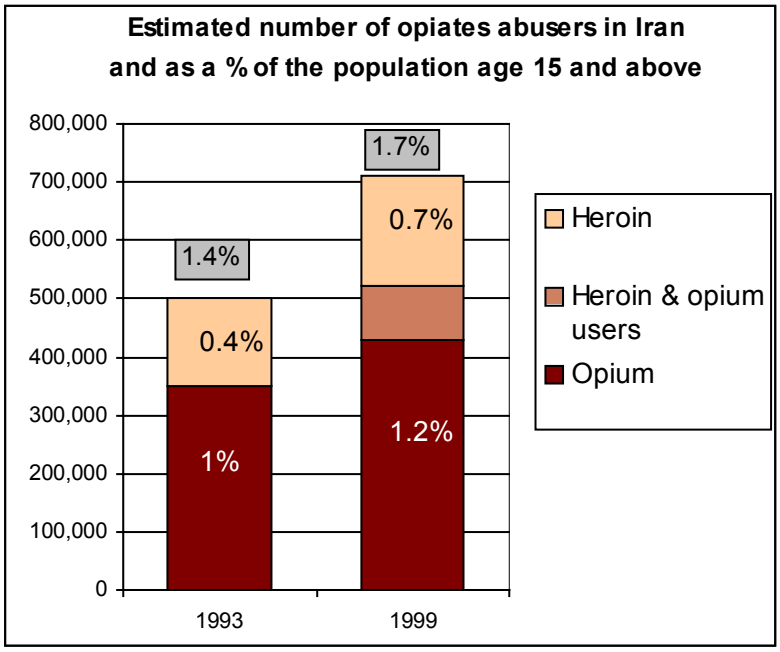


Figure 23
Sources: Anti-Narcotics Headquarters, "Workshop of National Focal Points on Drug Abuse 1993, Drug Abuse Situation in I.R. of Iran and Current Organizations for Demand Reduction, Iran's Country Report", Ministry of Health and UNODCCP, *Rapid Situation Assessment on Drug Abuse in Iran*, Tehran 2000.

Similar orders of magnitude can be also obtained if estimates are based on the number of injecting drug users identified by the authorities (140,277) and the findings of the 1999 Rapid Assessment, which indicated that 16% of the problem drug users injected drugs in the month prior to the study, and 21.9% had injected at least once. The number of drug abusers could then be estimated to range between 640,000 (140,277/0.219) and 877,000 (140,277/0.16), equivalent to a mid-point estimate of around 760,000 persons or 1.8% of those aged 15 and above in 1999. Using the same approach based on the number of injecting drug users identified by the authorities as of March 2001 (147,077), the estimate of drug users would have increased to a range from between 670,000 and 920,000 with a mid-point estimate of 795,000. Given a parallel increase in the overall population aged 15 and above, the prevalence rate would have amounted to 1.8%. Since one cannot assume that the authorities identified all injecting drug users, the actual number of injecting users and thus the overall estimate may well have been larger.

treated corresponded to about one-fourth of all drug addicts, the estimated number of drug addicts in Iran was calculated to amount to about 710,000 persons (=177398*4).

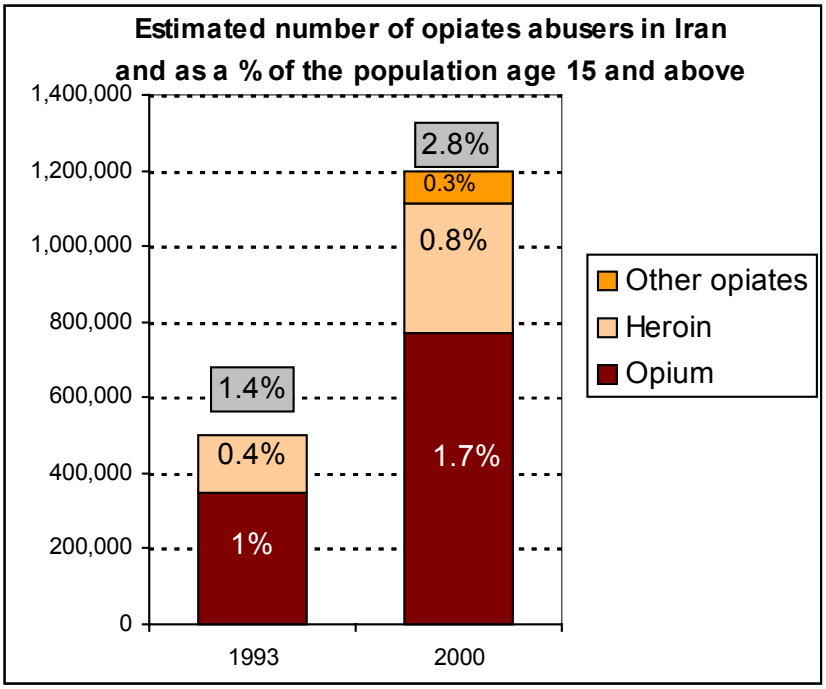


Figure 24
Sources: UNDCP, Anti-Narcotics Headquarters, "Workshop of National Focal Points on Drug Abuse 1993, Drug Abuse Situation in I.R. of Iran and Current Organizations for Demand Reduction, Iran's Country Report, UNDCP, Annual Reports Questionnaire 2001 data and Anti-Narcotics Headquarters quoted in UNODCCP, Office for the I.R. of Iran, Country Profile 2002.

Indeed, based on the estimation technique used by the Iranian Drug Control Headquarters, the resulting estimates were significantly higher. The prevalence figure for drug abuse in Iran, based on the so-called 'case enumeration technique', was estimated at 1.2 million people (2000)[q], equivalent to about 2% of the total population or almost 2.8% of the population age 15 and above. The Iranian authorities (in their reply to the 2001 Annual Reports Questionnaire), provide the following breakdown of opiate abuse: 64% of the opiate abusers consume opium, 29% heroin and 7% other opiates. Applying these proportions to the overall estimate of 1.2 million, the number of opium users may have reached 770,000 (1.7% of the population age 15 and above) while the heroin abusing population could number 350,000 persons (0.8% of the population age 15 and above). In addition to the 1.2 million chronic opiate users, authorities estimate that there may be some 800,000 recreational opiate users in Iran. The total number of opiate consumers in Iran would thus amount to 2 million people.

While there is thus a broad range of estimates of opiate abuse in Iran, there is little doubt that opiate abuse increased significantly over the last decade. A number of other indicators point in this direction as well. A marked increase was also reported in the number of referrals to the country's rehabilitation centres for drug abuse by the State Welfare Organization. This went hand in hand with an expansion of treatment facilities over the last decade. While the overall number of treatment facilities amounted to just 17 rehabilitation centres in the early 1990s[18], between 1997 and 1999 the State Welfare Organization

[q] This is now the most frequently quoted figure in Iran.

established 65 new outpatient centres in Iran's provincial capitals[19]. Rehabilitation centres increased to a total of 100 by the year 2000[20]. More than 30,000 drug abusers per year were detoxified at these centres in the late 1990s and 2000-2001. In addition, work was initiated for setting up 9 residential therapeutic communities in Iran.[21] The overall number of people treated for substance abuse tripled between 1992 and 2001.

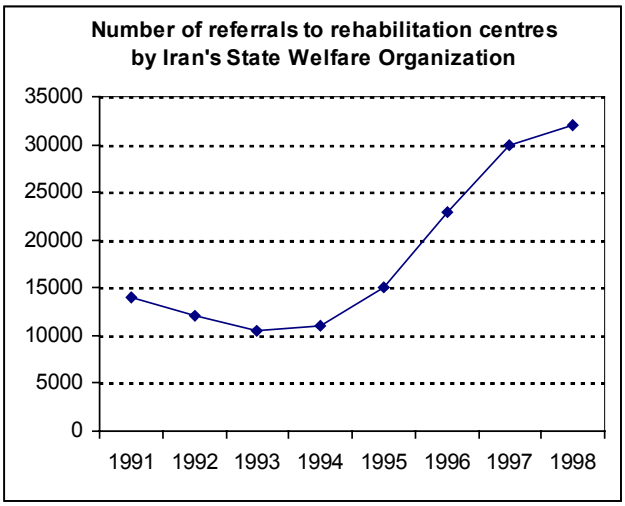


Figure 25
Source: UNODCCP, Office of the I.R. of Iran, Country Profile 2002.

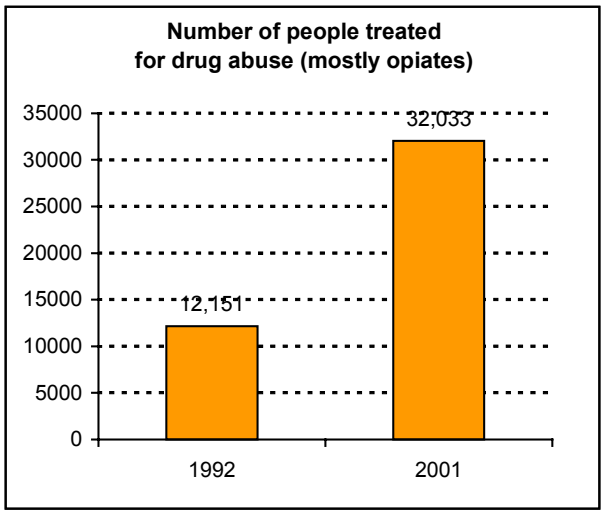


Figure 26
Sources: UNDCP, Annual Reports Questionnaire data 1992 and 2001.

A breakdown of the overall drug control budget of Iran for 1998, i.e. prior to the latest increases of investment in treatment, showed that about $90 million (using the UN exchange rate), or more than a third of the total drug control budget, was dedicated to substance abuse treatment. Another 10% of the drug control budget was used for prevention activities. Substance abuse treatment accounted for about 3% of total health expenditure (private and state) of the country. With some 30,000 persons having been treated each year, the Iranian authorities spent about $3000 per drug addict on treatment. This is equivalent to twice the average GDP per capita in Iran.[r]

Table 18. Direct Drug Control Expenditure* in Iran

	Million rials	in %	Million US-$		
			Non-oil export exchange rate	UN exchange rate	Official exchange rate
Exchange rate: Rials to US-$			5,395	4,305	3,500
Supply reduction	605,738	53%	112	141	173
Treatment and legal expenditures	385,820	34%	72	90	110
Prevention and awareness campaign	115,171	10%	21	27	33
Other	29,699	3%	6	7	8
Total drug control expenditure	**1,136,428**	**100%**	**211**	**264**	**325**
Gross domestic product (GDP)	324,800,000		60,200	75,400	92,800
in % of GDP	0.3%				

* Data refer to the year 1998.

Sources: Cultural Research Bureau, "Illicit Drug Market in Tehran – Review of Narcotic Economics in Iran", (Draft), Tehran 2001; The Economist Intelligence Unit, Iran Country Profile, 2002.

[r] $1492 GDP per capita (Source: UNDP, *Human Development Report 2002*).

Despite improved treatment facilities, drug related deaths more than tripled in Iran between 2000 and 2001. Some of this increase was related to the shift from opium to heroin consumption. This was due to the combination of an opium shortage (the consequence of 2000 opium ban in Afghanistan) and a heroin glut in Iran's drug markets in 2001 (because of large heroin stocks in the region). As the demand for heroin increased, heroin purity declined. Some of the death cases seem to have been linked to adulterations in the 'cut' heroin. Lower purity also appears to have prompted some users to switch from smoking opium to injecting heroin, which increased the risks of serious illness as well as death.

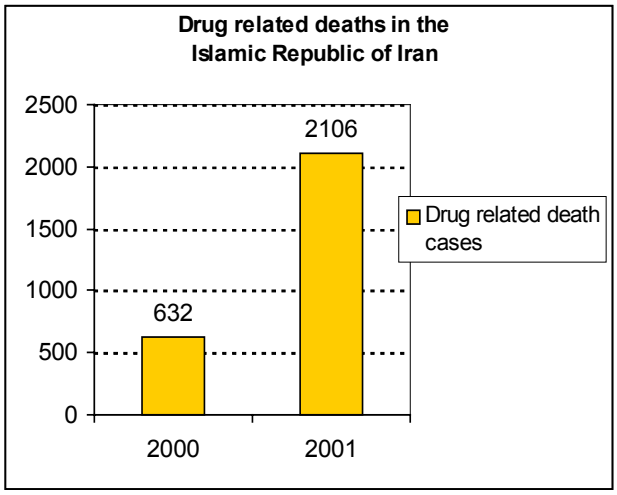


Figure 27
Source: UNODCCP, Country Profile 2000, Office for the I.R. of Iran.

Outpatient treatment centre records for 1998 showed that 10% of drug addicts treated had a history of drug injecting. Though the number of injecting drug users rose in absolute terms in subsequent years, the proportion of injecting drug users among addicts who were referred to outpatient treatment centres remained basically stable (9% in 2001).[22] However, people undergoing treatment do not seem to be fully representative of Iran's drug addict population. The 1999 Rapid Assessment found that 11.6% of the drug addicts surveyed from treatment centres had injected drugs (which was similar to the national proportion of 10%); but among all problem drug users investigated, which included drug addicts in prison and on the streets, the proportion of addicts who had injected in the month prior to the survey was 16%. The proportion of those who had ever injected a drug at least once in their lifetime was 22%.[23]

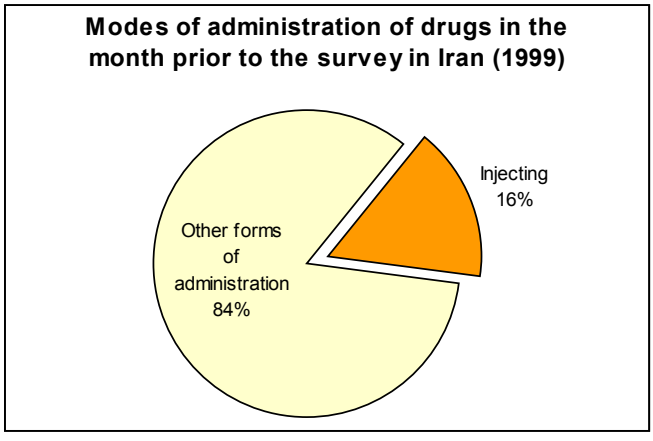


Figure 28
Source: Iranian Ministry of Health and UNDCP, *Rapid Situation Assessment on Drug Abuse in Iran*, Tehran 2000.

Drug injecting was common for heroin, but less so for opium or opium residue. As only about 40% of the sample of chronic drug users actually consumed heroin (most of the chronic drug users were still using opium), the proportion of injectors among heroin users may well have been twice as high as the figures mentioned above. About half of those injecting said they shared syringes. Among drug injectors surveyed on the streets, the proportion sharing injecting equipment was as high as 70%.

Against this background, it is not surprising that 67% of HIV/AIDS cases in Iran were related to drug injecting (1032 out of 1533 identified up to March 2001). Zero point seven per cent of drug injectors tested positive for HIV/AIDS (1032 out of 147,077 drug injectors tested) while overall only 0.02% of all people tested in Iran were found to be infected by HIV/AIDS, suggesting that the risk of HIV/AIDS is more than 30 times higher for injecting drug users than for the population at large. In addition, chronic drug users faced a number of additional health problems: 27.3% of them reported sexually transmitted diseases and 17.7% of them reported diseases such as hepatitis and tuberculosis.

Police arrest data suggest that most drug addicts (145,000 persons were arrested for drug possession in the year 2000) are found in Teheran (18% of all arrests), followed by the province of Khorassan (15%), which borders Afghanistan. The overwhelming majority of people were arrested for abuse of opiates (75% for opium alone). Teheran and Khorassan were responsible for a third of all identified cases of drug addiction. The same two provinces also led the list of people arrested for drug trafficking, indicating the significance of spill-overs from trafficking to supply the local market. The two provinces accounted for more than half of all people arrested for drug trafficking in the year 2000. In total 125,000 persons were arrested for trafficking in Iran in 2000[24], a more than five-fold increase compared to the early 1990s[25]

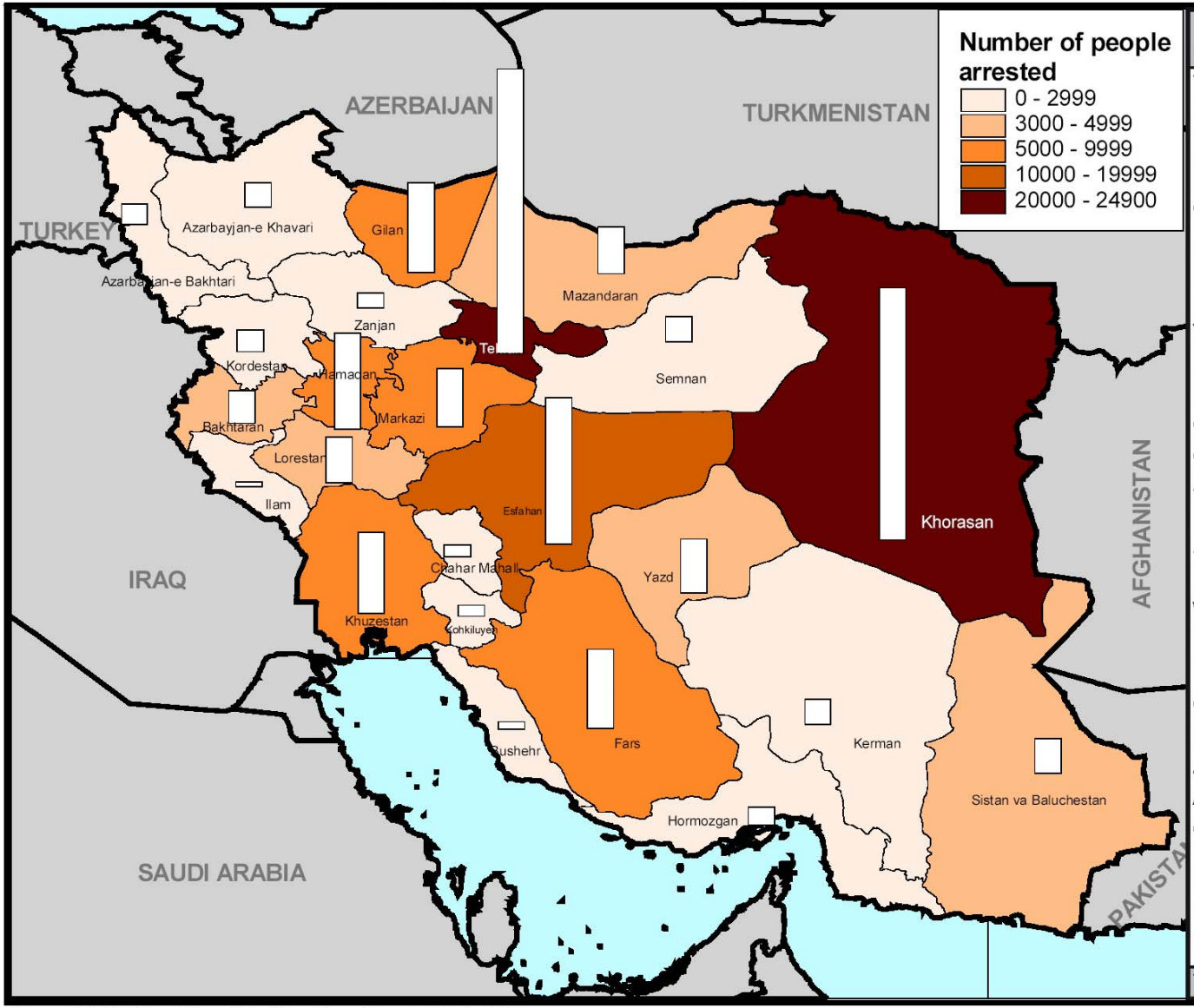
Taking data for possession and trafficking together, about 270,000[s] persons were arrested on drug-related charges in Iran in 2000 and 306,000 persons in 2001[t]. These are very large numbers compared to other countries. In the UK and Italy, which have among the most severe drug problems of western Europe[26] and populations roughly the size of Iran[u], the number of people arrested for drug related charges was 104,000 (UK) and 34,000 (Italy) in the year 2000.[27] The drug related arrests made in the UK were thus some 60% less than in Iran and those in Italy were almost 90% less than in Iran. In Italy all of the 34,000 people were arrested for trafficking. In the UK 15,000 people were arrested for trafficking and 93,000 for possession.[28] The number of people arrested for possession was thus about a third less in the UK than in Iran. If the analysis focuses on opiate users, the difference between Iran and the UK becomes even more pronounced. The total number of people arrested for opiate (mainly heroin) related charges (trafficking and possession) in the UK was 12,300 in 2000 while in Iran 109,000 persons were arrested for opium abuse. The total number of people arrested for opiate abuse was some 90% less in the UK than in Iran, reflecting both the severity of the drug abuse problem in Iran as well as the strong enforcement efforts in the country.

[s] The precise figure was 269,259 persons arrested on drug related charges. Of these, 121,742 Iranians and 2,939 foreigners were indicted for trafficking. The number of people arrested for consumption-related crimes was 144,578. Of these, 75% were involved in opium related crimes. Three per cent of the total were women. (Source: Government statistics cited in UNDCP, Country Office for the I.R. of Iran, Country profile – 2002).

[t] UNDCP Field Office – information from Deputy Police Chief for Intelligence, 8 October 2002.

[u] The population of the UK was 59.4 million in 2000 and the population of Italy was 57.5 million people in 2000 according to UN estimates. The population of Iran – according to the *Human Development Report of the Islamic Republic of Iran*, 1999, was 60.1 million, and thus almost identical with the size of the population of the UK, though based on UN estimates, Iran's population reached 69.4 million in 1999 and 70.3 million in 2000.

Map 7. Iran: Number of people arrested for drug abuse in 2000



Province	No. of arrests	in %
Tehran	24,900	20.5%
Khorasan	22,066	18.1%
Esfahan	12,925	10.6%
Hamedan	8,542	7.0%
Gilan	7,942	6.5%
Khozestan	7,171	5.9%
Fars	7,072	5.8%
Markazi	5,243	4.3%
Yazd	4,853	4.0%
Mazandaran	4,230	3.5%
Lorestan	4,128	3.4%
Gazvin	3,946	3.2%
Golestan	3,340	2.7%
S.Baluchestan	3,190	2.6%
Kermanshah	3,024	2.5%
Semnan	2,362	1.9%
Kerman	2,322	1.9%
W. Azerbaijan	2,270	1.9%
Kordestan	2,021	1.7%
E. Azerbaijan	1,950	1.6%
Qom	1,772	1.5%
Hormozgan	1,733	1.4%
Zanjan	1,395	1.1%
Ardebil	1,381	1.1%
Chaharmahal	1,198	1.0%
Kohkiloyeh	1,102	0.9%
Boshehr	772	0.6%
Ilam	522	0.4%
Basij Forces	234	0.2%
Total	**121,742**	**100.0%**

Source: UNODCCP, Office of the I.R. of Iran, Country Profile 2002.

6.4.3. Central Asia

The strongest increases in opiate abuse have, in recent years, taken place in the countries of Central Asia[v]. The increases can be linked to the northern route for trafficking opiates from Afghanistan to the Russian Federation, and other countries. The number of drug users registered with the health authorities showed an exponential growth, more than tripling between 1992 and 2000. If the 1990-2000 period is considered, available data show a six-fold increase. In contrast to Iran, drug abuse in the Central Asia is, in general (except Kyrgyzstan)[29] largely linked to abuse of heroin. In the four Central Asian countries studied, opiate use, mostly intravenously administered heroin, appears to be even more widespread than cannabis use[30], the traditional drug of choice in the region.

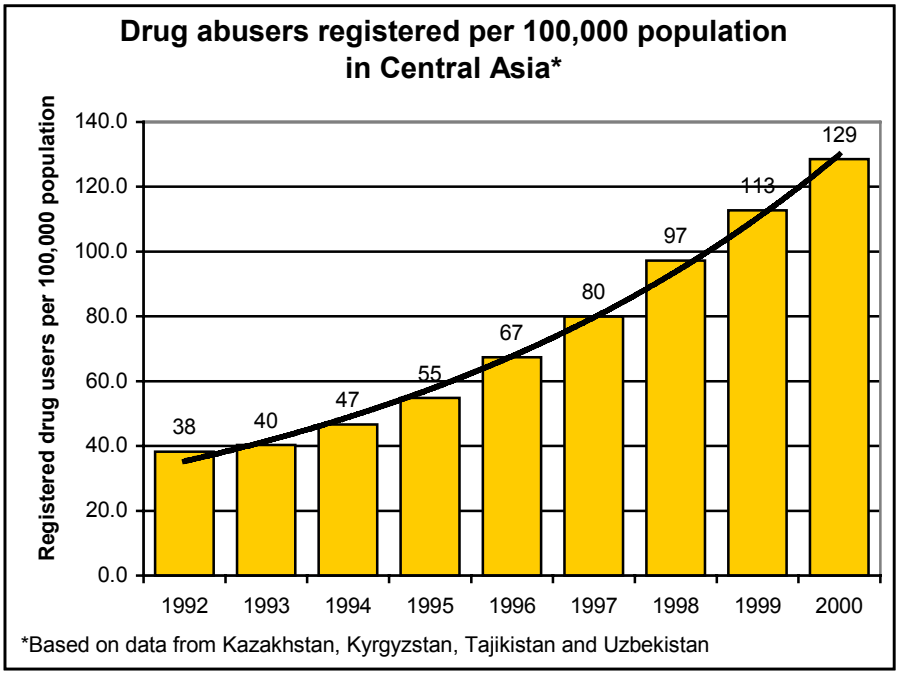


Figure 29
Sources: Annual Report of the Agency of the Republic of Kazakhstan for Drug and Drug Business Prevention, 2000; Agency for Drug Control under the President of the Republic of Tajikistan; State Commission on Drug Control under the Government of the Kyrgyz Republic; Government of Uzbekistan, National Information and Analytical Centre on Drug Control.

Based on the number of registered drug abusers, Tajikistan showed a seven-fold increase of drug abuse over the 1992-2000 period (28% per year). This went in parallel with dramatically increasing levels of trafficking. The other central Asian countries reported a tripling in the number of registered drug abusers over the same period, equivalent to an average annual growth rate of 16% to 17%. If the numbers of registered drug abusers per 100,000 inhabitants are compared, data show the highest rates for Kazakhstan, followed by Kyrgyzstan. Rates for Kazakhstan are more than twice as high as the Central Asian average and even exceed those reported from the Russian Federation.

[v] The following discussion on Central Asia is based on data from Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan. Data on Turkmenistan were not available at the time of writing.

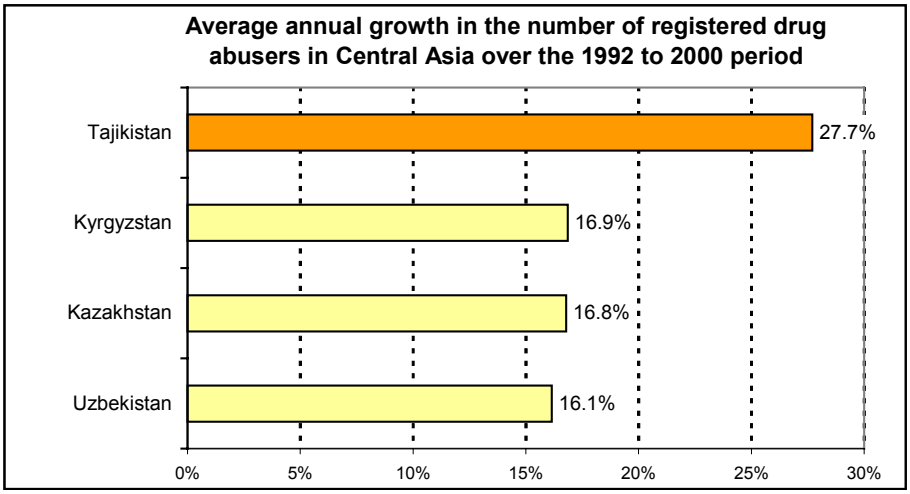


Figure 30
Sources: Annual Report of the Agency of the Republic of Kazakhstan for Drug and Drug Business Prevention, 2000; Agency for Drug Control under the President of the Republic of Tajikistan; State Commission on Drug Control under the Government of the Kyrgyz Republic; Government of Uzbekistan, National Information and Analytical Centre on Drug Control; Ministry of Health of the Russian Federation.

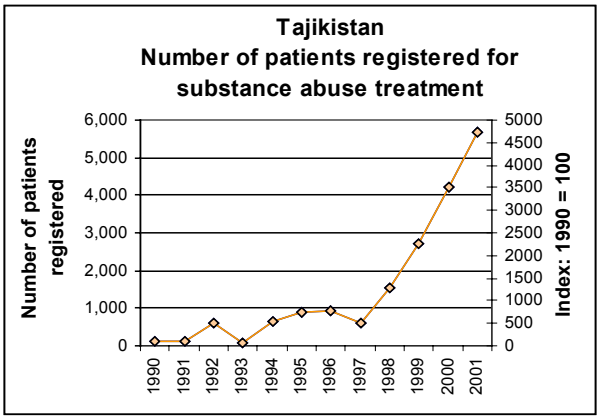


Figure 31
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

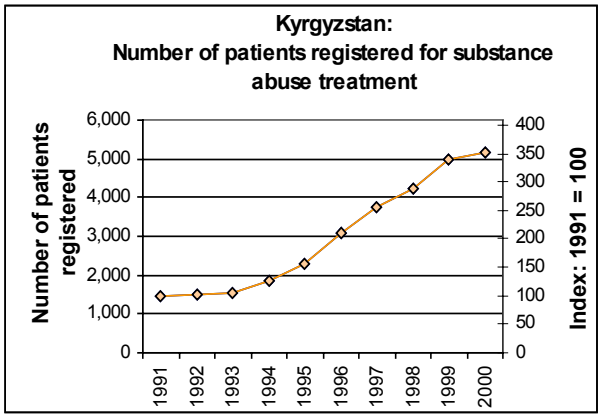


Figure 32
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

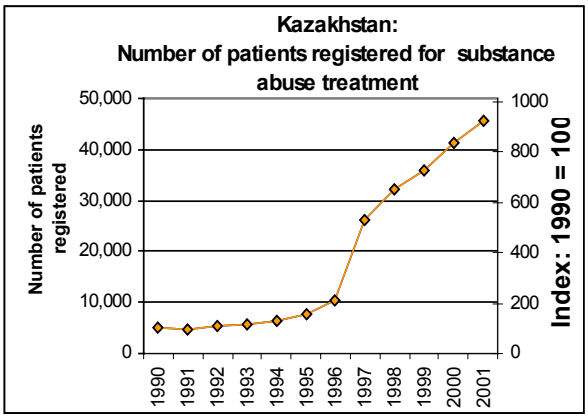


Figure 33
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

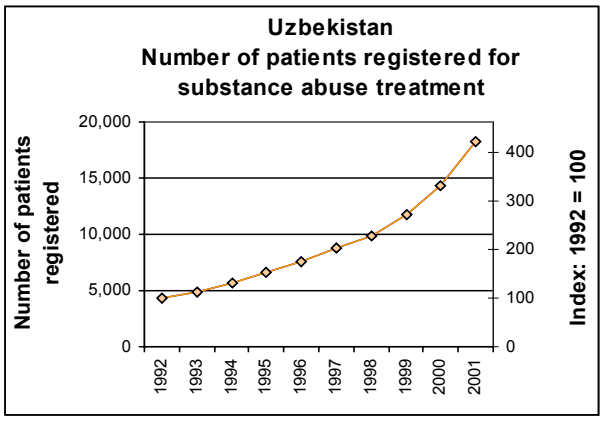
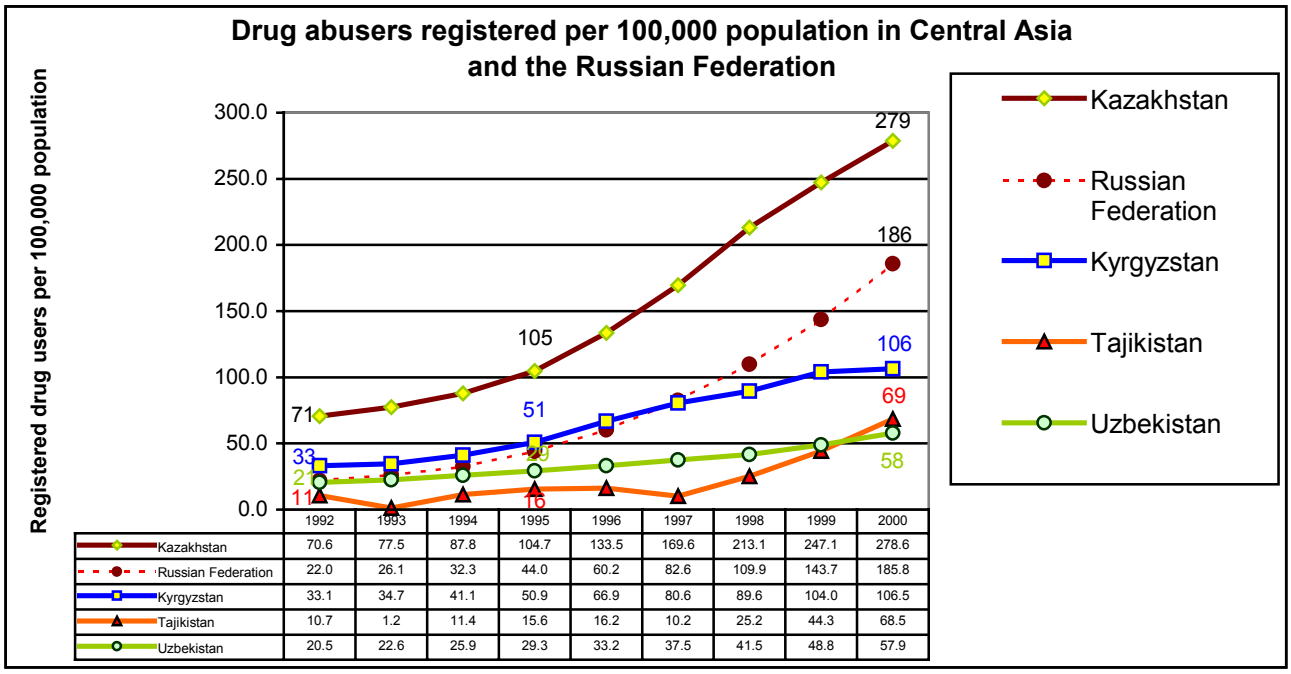


Figure 34
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.



	1992	1993	1994	1995	1996	1997	1998	1999	2000
Kazakhstan	70.6	77.5	87.8	104.7	133.5	169.6	213.1	247.1	278.6
Russian Federation	22.0	26.1	32.3	44.0	60.2	82.6	109.9	143.7	185.8
Kyrgyzstan	33.1	34.7	41.1	50.9	66.9	80.6	89.6	104.0	106.5
Tajikistan	10.7	1.2	11.4	15.6	16.2	10.2	25.2	44.3	68.5
Uzbekistan	20.5	22.6	25.9	29.3	33.2	37.5	41.5	48.8	57.9

Figure 35
Sources: Annual Report of the Agency of the Republic of Kazakhstan for Drug and Drug Business Prevention, 2000; Agency for Drug Control under the President of the Republic of Tajikistan; State Commission on Drug Control under the Government of the Kyrgyz Republic; Government of Uzbekistan, National Information and Analytical Centre on Drug Control; Ministry of Health of the Russian Federation.

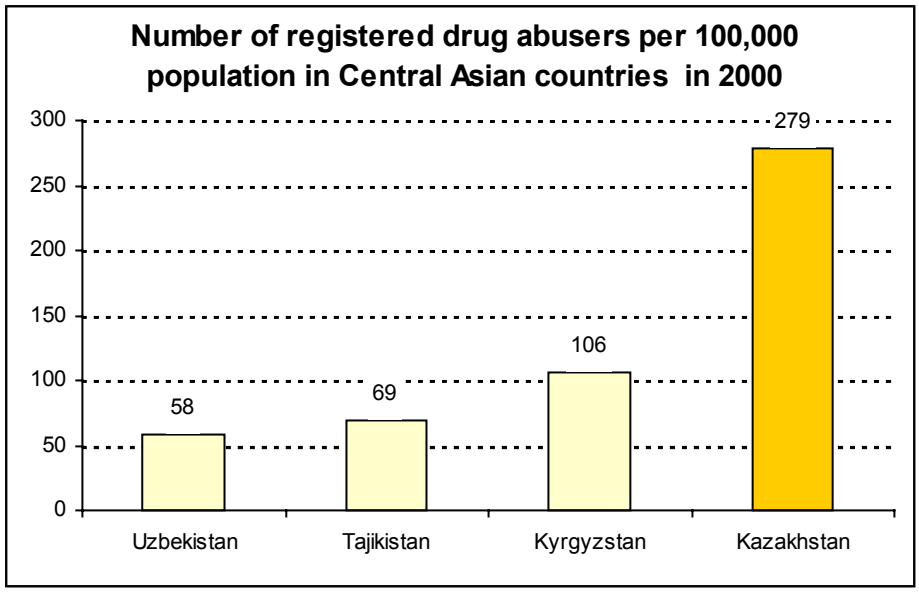


Figure 36
Sources: Annual Report of the Agency of the Republic of Kazakhstan for Drug and Drug Business Prevention, 2000; Agency for Drug Control under the President of the Republic of Tajikistan; State Commission on Drug Control under the Government of the Kyrgyz Republic; Government of Uzbekistan, National Information and Analytical Centre on Drug Control.

The number of registered drug abusers identified by the authorities in Turkmenistan also increased strongly, from 13 per 100,000 inhabitants in 1995 to 53 per 100,000 in 1998. This was less than the corresponding figure for Kazakhstan but (slightly) more than the corresponding ratios in the other Central Asian countries. Between 1998 and 2000, the total number of registered drug abusers more than doubled, from around 5,800 to 13,000.

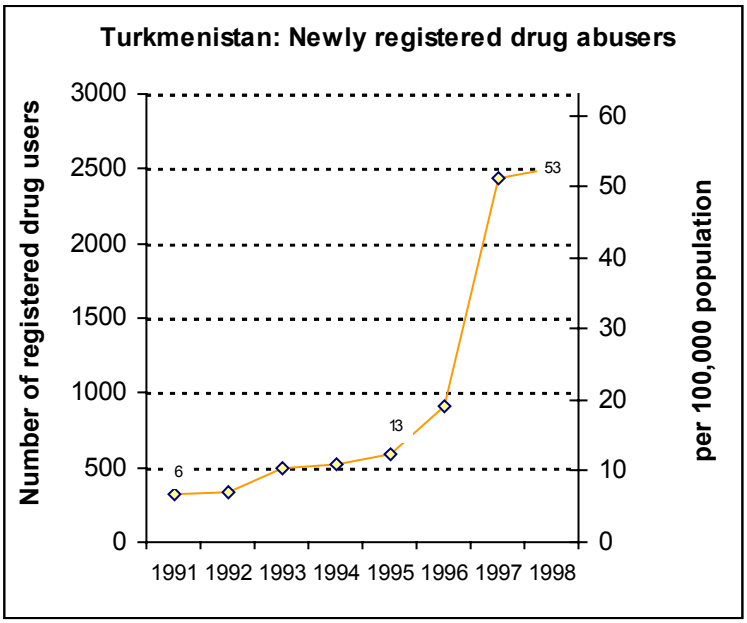


Figure 37
Source: UNODCCP, Turkmenistan – Country Profile 2002.

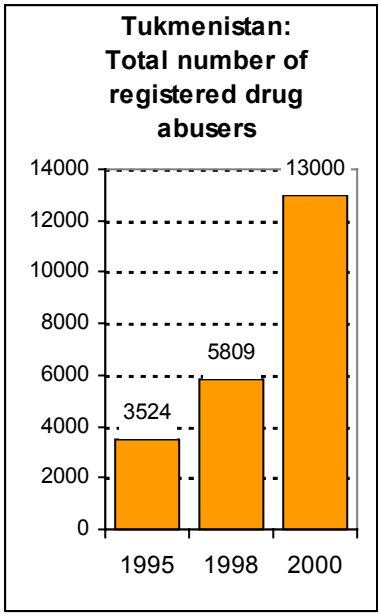


Figure 38
Source: UNODCCP, Turkmenistan Country Profile 2002.

Some work has been done on estimating the size of the drug abusing population. First results of an on-going Rapid Situation Assessment of Drug Abuse in the Central Asian Countries, conducted by teams working within national institutions, trained and equipped by UNODC, found that the largest numbers of problem drug users are in Kazakhstan. When the size of the population is taken into account, the highest prevalence rates are found in Kyrgyzstan. Within that country, the concentration of drug abuse is particularly strong in Bishkek, Osh and the Chuy region. The next highest prevalence rates are found in Kazakhstan, Tajikistan and Uzbekistan. The overall rate of problem drug use in Central Asia is 0.8% of the total population or 1.1% of the population age 15 and above. The estimates for the four Central Asian countries suggest that slightly less than 400,000 people are addicted to drugs, mainly heroin. Assuming that Turkmenistan, which was not included in the calculations, has an addiction level comparable to that of neighbouring Uzbekistan, the total number of problem drug users in Central Asia could amount to some 410,000 people (+/- 50,000).

These estimates are based on the total number of people in treatment and the establishment of 'multipliers'[w] for each country, which was done as part of the study. The multiplier provides a measure of the relationship between the number of people in treatment to the total addict population[x]. The lower the multiplier, the better equipped the health system is equipped to deal with the problem of drug addiction. The average multiplier for Central Asia as a whole was found to be 6. The lowest multipliers were identified for Kazakhstan (4) and Uzbekistan (5½); the highest for Tajikistan (12) and Kyrgyzstan (17). This suggests that the latter two countries will have to expand their treatment infrastructure over the next few years.

[w] If, in a particular location, one out of five drug addicts has undergone treatment, then the multiplier for the location is 5.

[x] A special approach was developed for the countries of Central Asia. For each country multipliers were established for two locations (cities). With the help of information obtained from drug users, identified through the 'snow-ball' technique, the total number of drug users in a specific location was estimated ('nomination method'). This, together with the number of people in treatment locally, enabled establishing the proportion of people treated as a percentage of the total number of drug users in a specific location. Two locations per country were investigated in–depth. This formed the basis for an estimate of the national multiplier. The multiplier was then applied to the overall number of people in treatment in 2000 in that country. The following locations were selected (the number of interviews with drug addicts are in parentheses): Kazakhstan: Almaty (43) and Pavlodar (50); Kyrgyzstan: Bishkek (52) and Jaylil of Chuiy Province (47); Tajikistan: Dushanbe (53) and Kurgantubeh (42); Uzbekistan: Tashkent (50) and Urgut City of Samarkand Province (50).

Table 19. Assessment of drug abuse in Central Asian countries (2001)						
	Total numbers			As a percentage of total population		
	min	*max*	*mid-point estimate*	*min*	*max*	*mid-point*
Kazakhstan	165,000	186,000	175,500	1.1%	1.3%	1.2%
Kyrgyzstan	80,000	100,000	90,000	1.6%	2.1%	1.8%
Tajikistan	45,000	55,000	50,000	0.7%	0.9%	0.8%
Uzbekistan	66,000	91,000	78,500	0.3%	0.4%	0.3%
Sub-total	**356,000**	**432,000**	**394,000**	**0.7%**	**0.9%**	**0.8%**
Source: UNODCCP, "Rapid Situation Assessment (RSA) on Drug Abuse in the Central Asian Countries, Regional Report (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan), Provisional Executive Summary.						

All Central Asian countries suffered from increasing levels of injecting drug use (IDU), and thus increasing risk of blood borne diseases. In Kyrgyzstan, for instance, the number of injecting drug addicts registered with treatment institutions rose from 14% in 1993 to 65% in 2001.

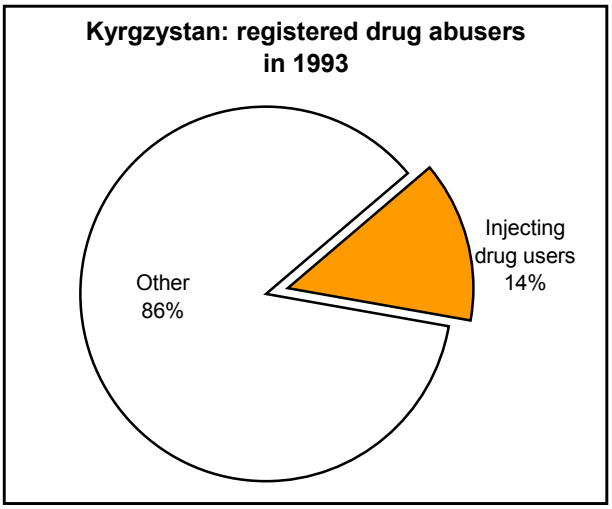


Figure 39
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

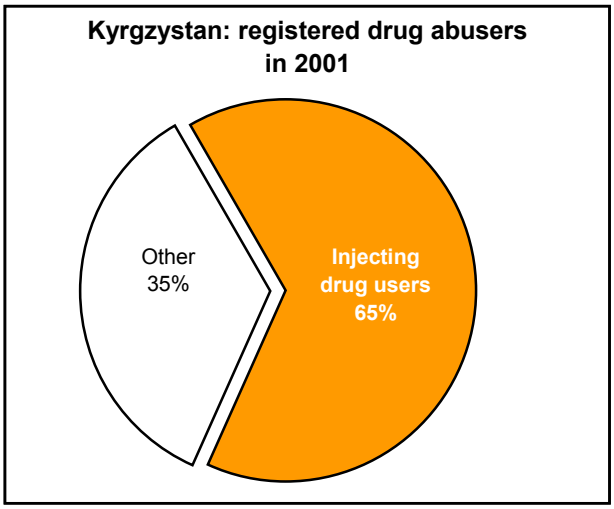


Figure 40
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

In 2000, 41,400 persons were treated for substance abuse in Kazakhstan (more than in Iran or Pakistan), 14,300 in Uzbekistan, 5,200 in Kyrgyzstan and 4,200 in Tajikistan.[31] Data for both Kyrgyzstan and Tajikistan show that more than 80% of drug treatment is related to abuse of opiates, a higher percentage than in Kazakhstan (75%). While in Tajikistan and in Kazakhstan the bulk of opiate treatment is related to heroin, the opposite is true for Kyrgyzstan. This probably reflects the fact that Kyrgyzstan used to be the largest licit opium producing area of the Soviet Union. Until production stopped in 1973 [32]Kyrgyzstan was responsible for about 85% of the total licit opium production of the Soviet Union and 16% of world production. Heroin, by contrast, is a relatively new drug in Kyrgyzstan. The first case of heroin addiction was officially registered in 1988[33].

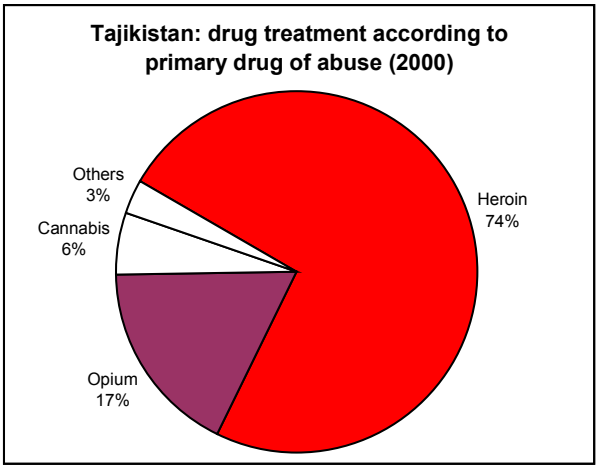


Figure 41
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

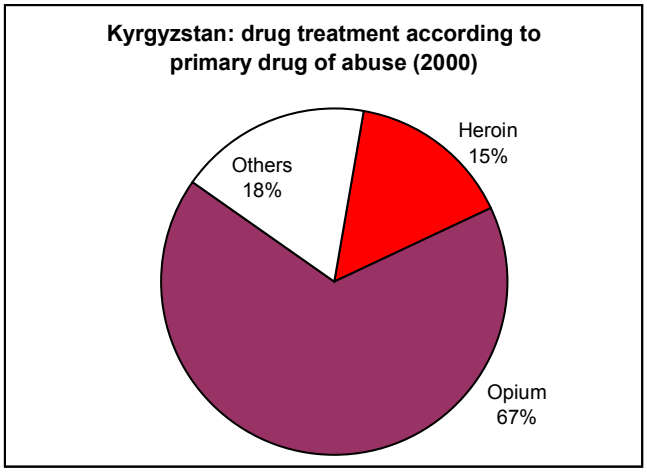


Figure 42
Source: UNODCCP, Rapid Situation Assessment on Drug Abuse in the Central Asian Countries, 2002.

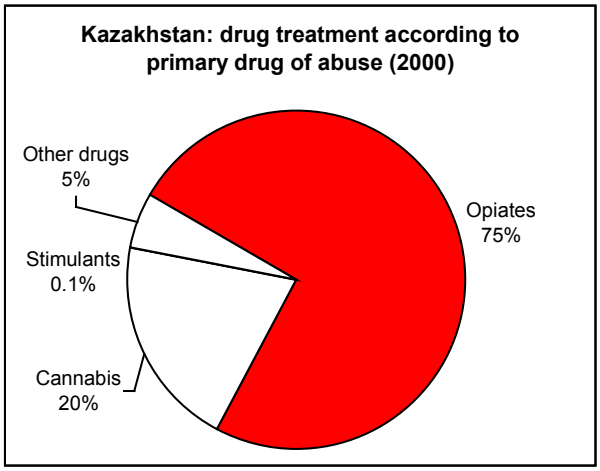


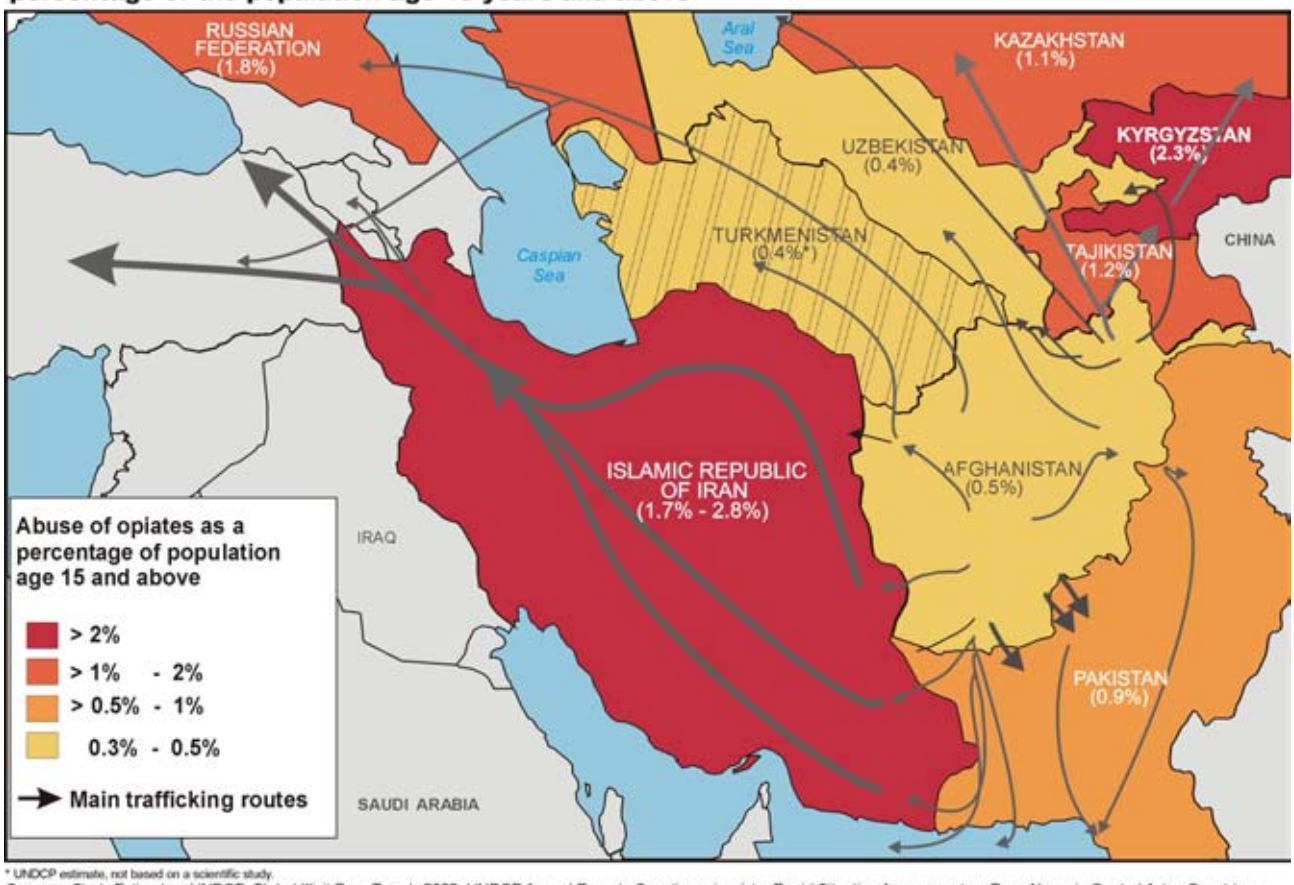
Figure 43
UNDOCCP, Rapid Situation Assessment (RSA) on Drug Abuse in the Central Asian Countries, Tashkent, 2002.

Considering the proportions of people in treatment for opiate abuse it can be estimated that about 0.6% of the total population or 0.9% of the population age 15 and above in Central Asia consume opiates. This is three times the corresponding ratio for western Europe. Including estimates for Turkmenistan, the total number of people taking opiates in Central Asia is likely to be around 325,000 people (+/- 50,000). Most opiate users in the Central Asian countries are found in Kazakhstan, followed by Kyrgyzstan. Taking differences of the size of the population into account, Kyrgyzstan has the highest opiate prevalence rate, followed by Kazakhstan. However, if the prevalence estimates are compared to the size of the population age 15 and above – the usual measure of comparison internationally - the second highest rate among the Central Asian countries is in Tajikistan (1.2%), ahead of Kazakhstan (1.1%). This reversal in the ranking is a reflection of the higher proportion of the population under the age of 15 in Tajikistan as compared to Kazaksthan. The highest rate is still found in Kyrgyzstan (2.3%) and the lowest in Uzbekistan.

Table 20. Assessment of opiate abuse in Central Asian countries (2001)					
	Total numbers			as a percentage of population	
	Drug abuse mid-point estimate	*% opiates*	*Opiate abuse estimate*	*total*	*age 15 and above*
Kazakhstan	175,500	75%	131,600	0.9%	1.1%
Kyrgyzstan	90,000	82%	73,800	1.5%	2.3%
Tajikistan	50,000	91%	45,500	0.7%	1.2%
Uzbekistan	78,500	80%*	62,800	0.3%	0.4%
Sub-total	**394,000**	**80%**	**313,700**	**0.6%**	**0.9%**

* assumed proportion (estimates provided in interviews in Uzbekistan ranged from 68% in Margelan to 90% in Tashkent and 95% in Samarkand and Urgut).
Source: UNODCCP, "Rapid Situation Assessment (RSA) on Drug Abuse in the Central Asian Countries, Regional Report (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan), Provisional Executive Summary.

Map 8. Abuse of opiates in countries neighbouring Afghanistan in 2000, expressed as a percentage of the population age 15 years and above



* UNDCP estimate, not based on a scientific study.
Sources: Study Estimates, UNDCP, Global Illicit Drug Trends 2002, UNDCP Annual Reports Questionnaire data, Rapid Situation Assessment on Drug Abuse in Central Asian Countries

Economic factors have played a role in the massive spread of opiate abuse in Central Asia. As a consequence of rising opium production in Afghanistan in the 1990s and the increasing use of the Central Asian trafficking route, opiate prices dropped significantly in Central Asia in the second half of the 1990s.

The lower prices made opiates affordable to ever larger sections of society. In Tajikistan, for instance, heroin prices were reported to have declined to such an extent that the price for a shot of heroin was about the same as a bottle of beer. The reaction of consumers to falling drug prices, measured in Central Asia through official registration systems (usually based on treatment) tend to show abuse trends with some delay. Thus the strong declines of prices in Tajikistan, for instance, only led to a rapid rise in the number of registered drug abusers two years later. Moreover, the rapid increase in the number of registered drug abusers continued even though the decline in prices became less pronounced in subsequent years. Similarly, the first signs of a stabilization of opiate retail prices in Kyrgyzstan were reported from 1998. This resulted, two years later, in some deceleration of the upward trend in the number of registered drug abusers. Thus, it is likely that the rising opiate prices across Central Asia in 2001/2002 will not immediately lead to a decline in drug abuse, but only to a gradual stabilisation. Afghanistan's large harvest in 2002 means that prices are again likely to fall, which will, in turn, increase consumption.

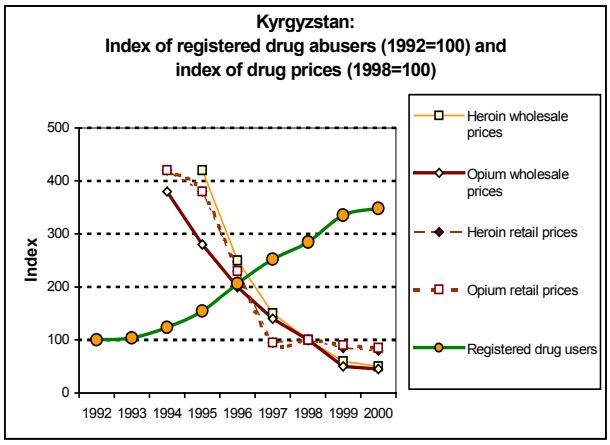


Figure 44
Source: UNODCCP, "Rapid Situation Assessment on Drug Abuse in the Central Asian countries", Regional Report, Draft.

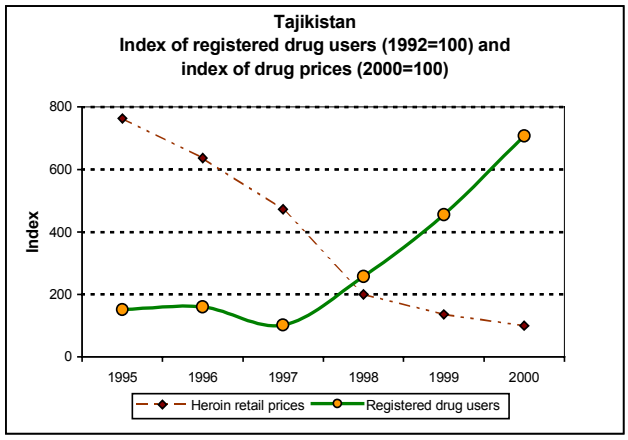


Figure 45
Source: UNODCCP, "Rapid Situation Assessment on Drug Abuse in the Central Asian countries", Regional Report, Draft.

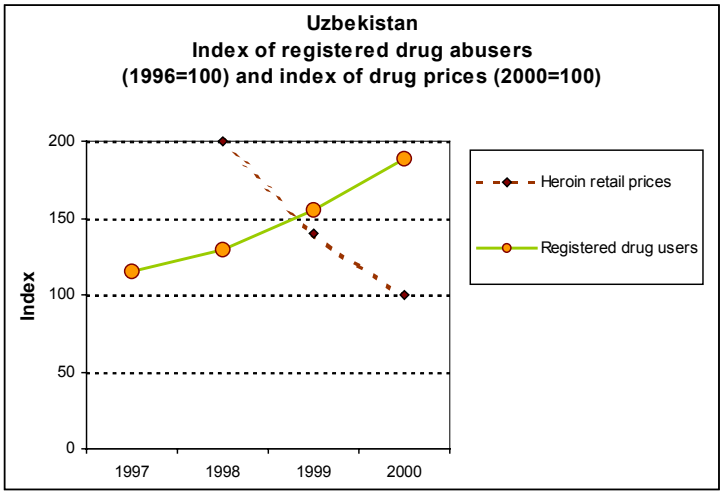


Figure 46
Source: UNODCCP, "Rapid Situation Assessment on Drug Abuse in the Central Asian countries", Regional Report, Draft.

Therefore, countries neighbouring Afghanistan will suffer some time to come from the consequences of Afghanistan's opium bumper harvests. The reaction to rising drug prices is slower than to falling drug prices, because once a drug epidemic has started, it tends to fuel itself for a considerable period of time. Drug users, in order to finance their habit, become increasingly engaged in local drug trafficking activities, over time contributing to a further spread of drug abuse, even though drug prices may already have started to rise.

Tajikistan, which showed the strongest increases in the abuse rates in recent years, is particularly vulnerable to further rises in drug abuse. Treatment could help to break the vicious circle. However, treatment is rather expensive for countries which have only very limited funds at their disposal.

One estimate made for Tajikistan suggests that a basic three-week treatment episode for a drug addict in a 'narcological' hospital costs, on average, US-$380 per client[34]. Though this may seem to be a rather small amount by western standards, it is a significant amount for a country which has a per capita income of just $164 (unadjusted for purchasing power parities)[y]. In other words, the most basic treatment of a drug addict in Tajikistan costs more than twice the average annual GDP per capita.

Given the scarcity of funds available in Tajikistan, the government was only able to finance 1.2% of this amount or $4.5 per patient. The rest had to be financed from private sources. But this limited both the availability and the demand for such services, and – indirectly – contributed to the further rise of the country's drug epidemic.

Based on the above mentioned estimate, the 4200 people treated in Tajikistan in 2000 costs around $1.6 million, rising to about $2.2 million in 2001 (based on 5700 people treated). The actual treatment requirements, as indicated by the 'multiplier' would be substantially larger. The multiplier for Tajikistan, as noted above, was found to be around 12. If the target were to reduce the multiplier to that found in Kazakhstan (multiplier of close to 4), treatment services in Tajikistan would have to triple. If the objective were to stabilize substance abuse at current levels, an even lower multiplier would have to be aimed at. In contrast to rapid growth in Central Asia, opiate abuse in Western Europe remained basically stable over the last couple of years, notably in countries which had a multiplier close to or below the West European average of 2½[z]. If such a multiplier were aimed at, costs in Tajikistan for basic detoxification and rudimentary treatment would have to quintuple from current levels to around $11 million p.a. The already very tight health budget of the country (public and private) amounted to just $61 million in 2000 (6.1% of GDP)[aa].

Applying the same logic to Kyrgyzstan, treatment of drug addicts – in order to reach the multiplier of Kazakhstan – would have to quadruple. If the West European average were the ultimate target, treatment in Kyrgyzstan would even have to rise 7-fold.

Table 21. Problem drug use, treatment and opiate abuse trends (2000/2001)

Region	*Countries*	*Problem drug use in % of population age 15-64*	*Number of problem drug users (mid-point estimates)*	*People treated:*	*Multiplier*	*Reported abuse trends of opiates in 2000 and 2001*
CENTRAL ASIAN COUNTRIES	Kazakhstan	1.6	175,500	41,356	4.2	strong increase
	Uzbekistan	0.5	78,000	14,279	5.5	strong increase
	Tajikistan	1.5	50,000	4,200	11.9	very strong increase
	Kyrgyzstan	3.0	90,000	5,183	17.4	strong increase
	SUBTOTAL	**1.2**	**393,500**	**65,018**	**6.1**	**strong increase**
WEST EUROPEAN AVERAGE*	**SUBTOTAL**	**0.5**	**1,255,000**	**513,406**	**2.4**	**stable**

* Data for West Europe refer to 14 EU countries. Definition of 'people treated' differs among countries. Results must therefore be interpreted with caution.

Sources: UNODCDP, Rapid Situation Assessment (RSA), EMCDDA, statistical annex to its '2002 Annual Report on the State of the Drugs Problem in the European Union and Norway' , Lisbon 2002 as well as National Reports, UNDCP, Annual Reports Questionnaire Data.

[y] Based on a GDP – according to UNDP – of $1 billion and a population – according to UNDP - of 6.1 million. (Source: UNDP, *Human Development Report 2002,* pp. 162 and 192.*)*.

[z] Calculated on the basis of estimates of the number of problem drug users and the total number of people treated. (Source: EMCDDA, statistical annex to its '2002 Annual Report on the State of the Drugs Problem in the European Union and Norway' , Lisbon 2002 as well as National Reports).

[aa] Based on a GDP of 1 billion and a health budget reported to amount to 6.1% of GDP according to UNDP (Source*: UNDP, Human Development Report 2002*, p. 168 and 192).

6.5. The spread of HIV/AIDS

Apart from drug abuse as such, Afghanistan's opium production has also caused a number of related problems. One of the most serious of these, entailing long-term consequences that go beyond drug abusers, is the spread of HIV/AIDS. Based on estimates made by UNAIDS, more than 100,000 people in the countries neighbouring Afghanistan are already infected by the HIV virus, and the number is rising rapidly. Most of the spread was, and continues to be, related to heroin injectors sharing needles.

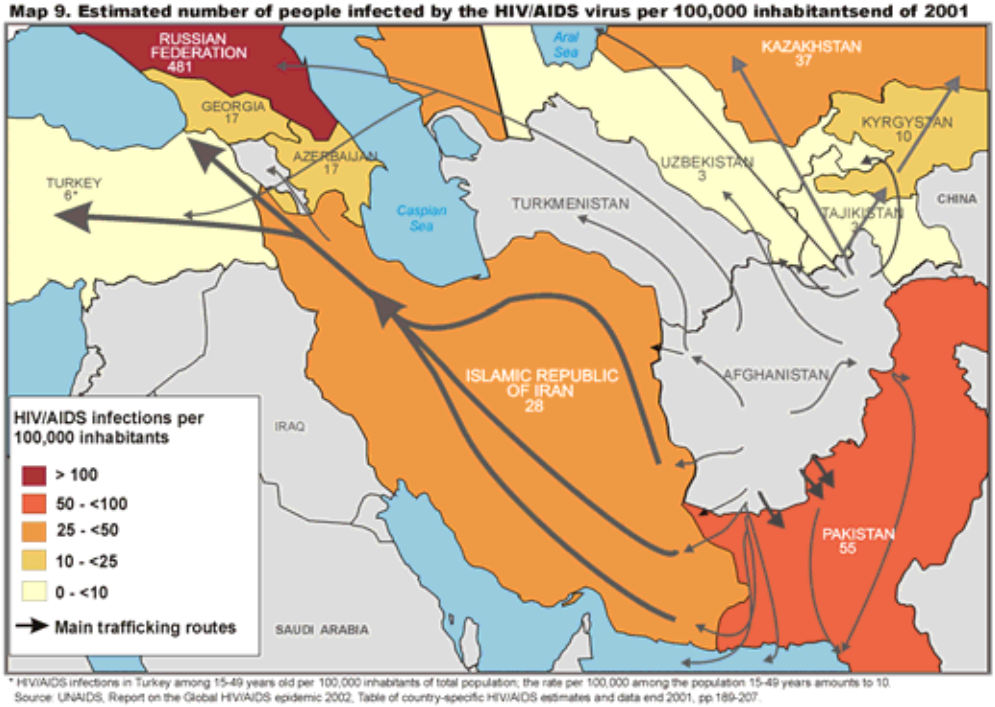
Among Afghanistan's neighbours, the country most affected by HIV/AIDS is Pakistan, followed, in absolute numbers, by Iran. If a rate of HIV/AIDS cases per 100,000 inhabitants is considered, Pakistan has the highest rate, followed by Kazakhstan, Iran and Kyrgyzstan. Significantly higher rates of HIV/AIDS infections have been calculated for the Russian Federation. These high figures are also largely due to the injection of opiates of Afghan origin. About 40 of every 100,000 inhabitants in the countries neighbouring Afghanistan are affected by HIV/AIDS. The corresponding rate for the Russian Federation exceeded 480 in 2001. In recent years, however, several of the countries neighbouring Afghanistan have shown even stronger growth rates in the spread of HIV/AIDS than the Russian Federation.

Table 22. Number of people with HIV/AIDS in countries neighbouring Afghanistan as of the end of 2001, based on UNAIDS estimates

	Estimated numbers	per 100,000 people
Pakistan	78,000	55
Iran	20,000	28
Kazakhstan	6,000	37
Uzbekistan	740	3
Kyrgyzstan	500	10
Tajikistan	200	3
Turkmenistan	n.a.	n.a.
Total	105,440	40

Source: UNAIDS, *Report on the Global HIV/AIDS Epidemic 2002 (*Table of country-specific HIV/AIDS estimates and data, end 2001), pp. 189 207.

Map 9. Estimated number of people infected by the HIV/AIDS virus per 100,000 inhabitantsend of 2001



* HIV/AIDS infections in Turkey among 15-49 years old per 100,000 inhabitants of total population; the rate per 100,000 among the population 15-49 years amounts to 10.
Source: UNAIDS, Report on the Global HIV/AIDS epidemic 2002, Table of country-specific HIV/AIDS estimates and data end 2001, pp.189-207.

6.5.1 Pakistan

Pakistan contains nearly three-quarters of all people infected by HIV in the neighbouring countries of Afghanistan. This reflects Pakistan's long-term exposure to heroin. UNAIDS estimates that out of 78,000 people infected by the HIV/AIDS virus in Pakistan, about 4,500 people died of AIDS in 2001[35]. This is more than the total number of AIDS related deaths in the whole of Western Europe in the same year (2,651 people in 21 countries)[bb].

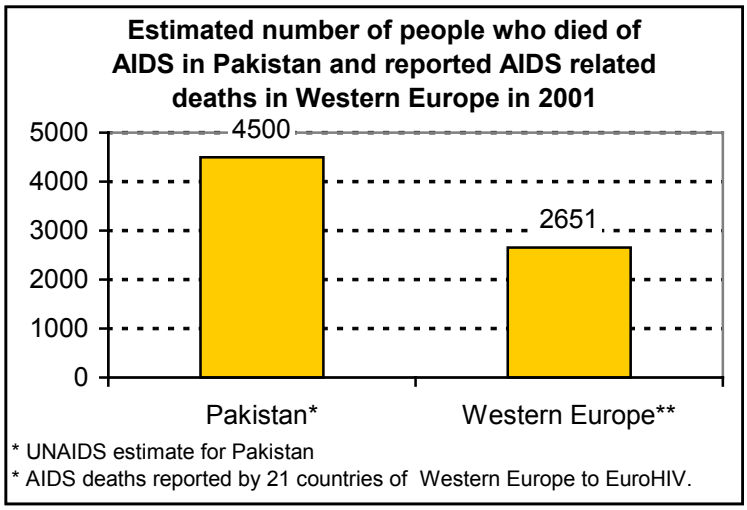


Figure 47
Sources: UNAIDS, *Epidemiological Fact Sheets on HIV/AIDS and Sexually Transmitted Infections – Pakistan*, 2002 Update and EuroHIV*, HIV/AIDS Surveillance in Europe*, June 2002.

UNAIDS, in its 2002 update on HIV/AIDS and sexually transmitted infections, notes: "*The vast majority of all detected HIV infections in Pakistan have been found among IDUs (injecting drug users)….There are no data to indicate that, aside from IDU (injecting drug use) transmission, there is any other significant transmission of HIV occurring in Pakistan at the present time*." Nonetheless, it is probably only a matter of time before HIV spreads from drug abusers to the population at large. Given the small health budget in the country (see section on Abuse above), this will pose a serious challenge in the near future.

Most of the increase in HIV/AIDS appears to have taken place in the early to mid 1990s. A survey conducted among injecting drug abusers outside major urban areas found an HIV infection rate of 5.4% in Pakistan in 1995, up from 0.3% only two years earlier. For comparison, the HIV prevalence rate among sex workers was 0.7% in the same year. By the end of 2001, the overall HIV prevalence rate in the general population (age 15-49 years) was estimated to have amounted to 0.1%[36]. This suggests that HIV/AIDS is still concentrated among injecting drug users.

While injecting heroin was practically unknown in Pakistan in 1988, the proportion of injecting heroin abusers rose to 1.8% in 1993[37]. By 2000, 15% of heroin abusers reported that they usually injected; 31% had injected at some stage in their drug careers. This rate was particularly high in Karachi where 55% of the heroin abusers had injected heroin at least once. Most injectors (68%) reported that they usually used drugs with other injectors; 53% of them reported using a needle after someone else had used it; and 72% of them reported passing on a syringe after having used it. Of all injectors, 23% said they had used other users injecting equipment more than 20 times and 42% reported passing on their injecting equipment to other users more than 20 times. [38]

[bb] Comparing AIDS deaths estimates for Pakistan with AIDS deaths reported from Western Europe it should be noted that the number of AIDS deaths in Western Europe has declined strongly in recent years, from 18,658 persons in 1995 to 2,651 persons in 2001. (Sources: EuroHIV, *HIV/AIDS Surveillance in Europe, End-year Report 2001*, June 2002, p. 23 and EuroHIV, *HIV/AIDS Surveillance in Europe, End-year Report 1999*, June 2000, p. 20.) This decline was the result of the development and application of modern medication that helped to delay the outbreak of AIDS among HIV infected persons as well as death once a person acquired AIDS and a decline in IDU (injecting drug use) related HIV cases in Western Europe in the 1990s, contributing to an overall stabilisation in the number of new HIV infections.

6.5.2 Iran

UNAIDS estimates Iran to have about 20,000 people infected by HIV. In 2001, 290 persons died from AIDS in Iran[39]. For comparison, this is more than the officially reported numbers of AIDS related deaths in the UK (201) or Germany (177), though less than those reported from Spain (559), France (520) or Italy (458) in 2001.[40]

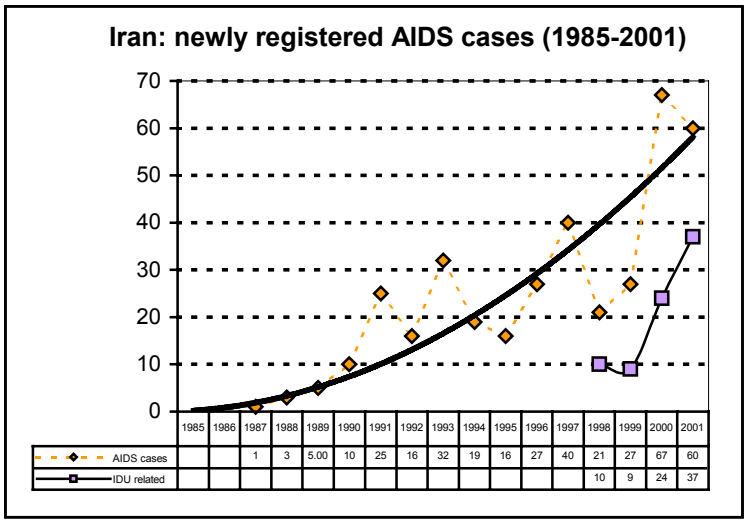


Figure 48
Source: UNAIDS.

The number of officially reported AIDS cases in Iran has shown an upward trend over the last decade. This is even more pronounced with regard to newly diagnosed HIV infections. Though a rising trend of HIV infections is observed throughout the 1990s, a massive increase was only reported in recent years. In 2001 UNAIDS reported 1159 newly identified HIV cases, a three-fold increase compared to 2000 or 1999.[41] For comparison, till 1997 the accumulated number of HIV infections, reported by the Iranian National Committee on AIDS was just 1473 cases. In over two thirds of the cases, injecting drug use was cited as the likely route of infection. Data on recorded cases of HIV/AIDS and the mode of transmission, up to March, 2001 indicate that 67% of all transmissions were caused by drug injecting. Out of 147,077 injecting drug users tested by March 2001, 0.7% tested positive for HIV. This proportion is still higher than the 0.02% of the general population which tested positive for HIV. Thus, as noted by UNAIDS, Iran's HIV/AIDS epidemic is driven by its drug problem.[42]

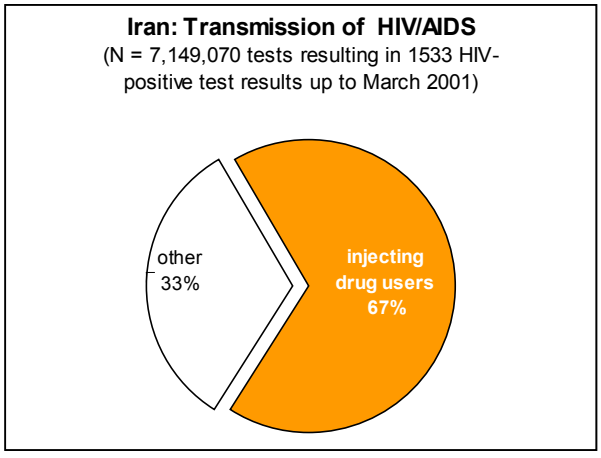


Figure 49
Source: UNODCCP, Iran Country Profile 2002.

HIV sentinel surveillance data also confirm this. The only group which had a sizeable number of HIV positive cases over the last decade was injecting drug users. In 1996, 5.7% of the injecting drug users in prisons tested HIV positive. By 1998, this proportion had gone down to 0.5%. The decline was not due to a decline in the absolute number of those testing positive but to an increase in the number of injectors.

The 1999 Rapid Assessment of Drug Abuse in Iran revealed that over 16% of the respondents (problem drug users) had injected during the previous month, a far higher proportion than had been reported before. The figures were particularly high for Mazandaran (31%), the province to the north of Tehran, in Tehran province (27%) and in Khorasan (20%) the province bordering Afghanistan. Twenty two per cent of the respondents reported injecting drugs at least once in their life-time. More than half of the injecting users injected 2-3 times a day. Typically syringes were used more than once and about half of the injectors shared needles.[43]

6.5.3 Central Asia

Data for 2001 suggest that 88% of all newly recorded HIV cases in Central Asia were related to injecting drug use (IDU). Transmission of HIV by IDU is thus by far the most important route of HIV transmission in Central Asia. The IDU related HIV transmission expressed as a proportion of total HIV transmission in Central Asia (88% in 2001) is significantly higher than in Iran (67%), the Russian Federation (54%) or Western Europe.

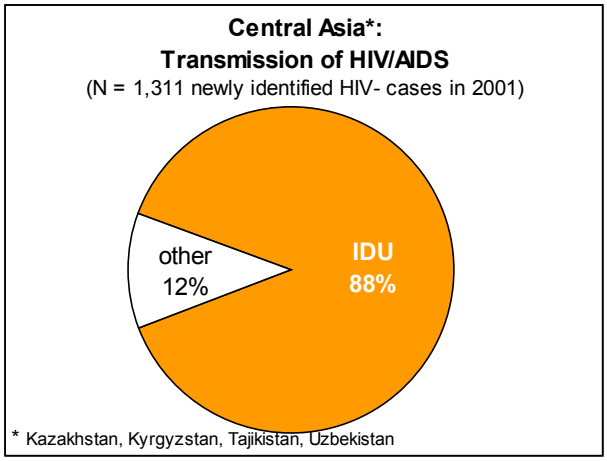


Figure 50
Source: UNODC, Calculations based on Euro-HIV data.

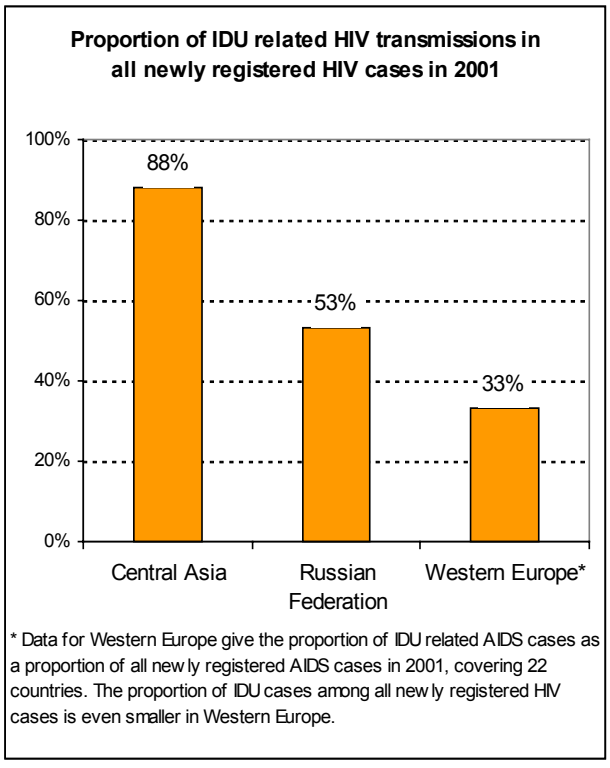


Figure 51
Source: EuroHIV *HIV/AIDS Surveillance in Europe*, End Year Report 2001, June 2002

Except for Kazakhstan, the number of HIV/AIDS cases in Central Asia is still relatively modest. However, the growth rates of HIV infection are alarming. In the four countries for which information is available – Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan – HIV infection rates have shown dramatic increases in recent years.

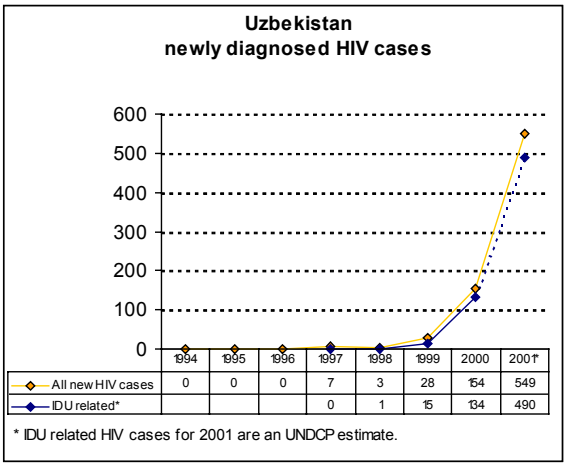


Figure 52
Source: EuroHIV, *HIV/AIDS Surveillance in Europe*, End Year Report 2001, June 2002

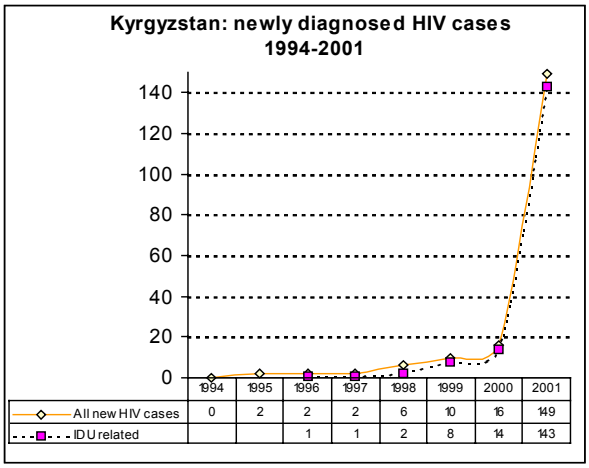


Figure 53
Source: EuroHIV, *HIV/AIDS Surveillance in Europe*, End Year Report 2001, June 2002

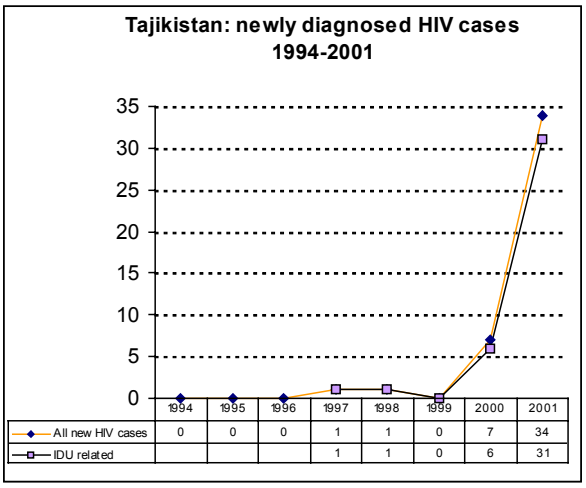


Figure 54
Source: EuroHIV, *HIV/AIDS Surveillance in Europe*, End Year Report 2001, June 2002

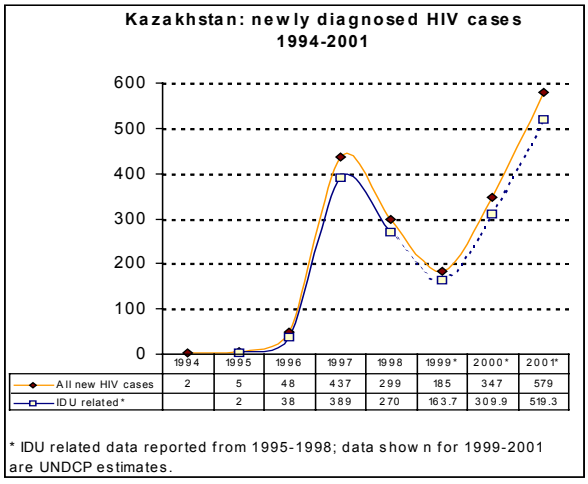


Figure 55
Source: EuroHIV, *HIV/AIDS Surveillance in Europe*, End Year Report 2001, June 2002

The results of the Rapid Assessment on Drug Abuse in the Central Asian countries show that the massive spread of HIV among injecting drug users is predictable. Rising levels of opiate abuse went hand in hand with ever larger proportions of drug users switching to injecting opiates, thus increasing the risk of HIV infection. Combining data on problem drug use and IDU from the Central Asian countries, 66% of the drug users in the subregion inject drugs. This proportion is significantly higher than in Iran or Pakistan. Moreover, many drug users reported unprotected sex with multiple partners, a further risk factor for the spread of HIV/AIDS from injecting drug users to the general population.

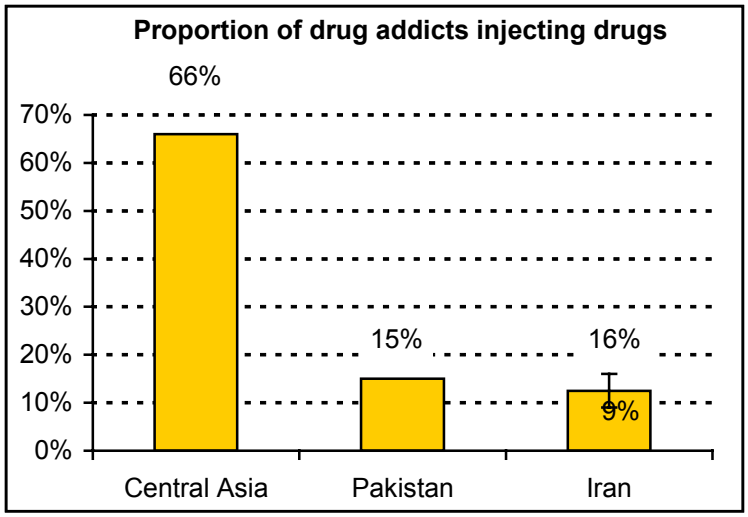


Figure 56
Source: UNODC, Rapid Situation Assessment studies in Pakistan, Iran and in the Central Asian Countries.

In Kazkahstan, a majority of key respondents confirmed that injecting was widely practiced in the country. The study found that 70%-80% of drug addicts inject their drug. Among drug injectors, 73% in Almaty and 60% in Pavlodar shared needles at least once in their lives. The overall proportion of drug injectors sharing needles falls within the range of 60%-70%. More than half of the IDUs practiced unprotected sex; about 60% of them had had sexual contact with people other than their permanent partners in the last 12 months.[44] Drug abusers in Kazakhstan thus have the most risky behaviour among Central Asian countries. Kazakhstan also happens to have, in both absolute and in per capita terms, the highest IDU related HIV cases among all central Asian countries.

In Kyrgyzstan, 65% of drug addicts registered by the “narcological” institutions of the country were injecting drug users in 2001, up from 14% in 1993. The study additionally found that 80% of the drug addicts interviewed injected drugs. Among current injectors in Bishkek, 40% regularly shared needles without disinfecting them. In other parts of the country, the proportions were lower. In Jaylil district, for instance, the proportion of injecting drug users sharing needles was 21%. There is a particularly dangerous and widespread tradition in Kyrgyzstan: adding blood to powdered heroin/opium when preparing a drug solution, so as to ‘‘purify” it. [45] In the country as a whole, the proportion of injecting drug users sharing needles falls within the range of 20%-40% and is thus lower than in Kazakhstan. Kyrgyzstan, however, still has the second highest per capita rate of IDU related HIV in Central Asia.

Uzbekistan has the third highest per capita rate of HIV in Central Asia. The study found that among the drug addicts interviewed, 88% had injected drugs at least once. In Tashkent, 82% of the drug addicts interviewed had injected in the last 30 days. Key informants (91%) also reported a massive increase in IDU in Tashkent over the last couple of years, exceeding the increase at the national level. In other parts of the country, however, the proportions are significantly lower. In the Urgut area, for instance, the proportion of respondents injecting drugs was half of that reported from Tashkent. Among the respondents who injected drugs in Uzbekistan, 71% admitted to having shared needles during the previous months. In short, the risk behaviour of sharing needles is already very widespread in Uzbekistan, but, except for Tashkent, injecting drugs is still less common than in Kazakstan or Kyrgyzstan. The risks of sexual transmission of HIV from IDUs to the general population are significant.[46]

In Tajikistan more than half of the respondent drug addicts said they had injected at least once in their lives; 44% of the respondents were currently injecting drug users and the overwhelming majority of them shared needles.[47] The proportion of people injecting drugs among drug addicts is thus higher in Tajikistan than in Pakistan (15%) or Iran (16%), but lower than in most other Central Asian countries, possibly a reflection of lower heroin prices in Tajikistan. The trend, however, is towards increased risk taking and is thus a matter of concern. Tajikistan still has the lowest IDU related HIV rates among the Central Asian countries, but the numbers are rising rapidly. Moreover, the risk of sexual transmission is significant. More than half of the respondent drug addicts said that they had sex with injecting drug users; 29% of them had unprotected sex with 'occasional' partners and 58% with their regular partners.

Table 23. Risk behavior among drug addicts in counties neighbouring Afghanistan (rounded proportions)

	Central Asia				Pakistan	Iran
	Kazakhstan	Kyrgyzstan	Uzekistan	Tajikistan		
Injecting	70%-80%	65%	40%-80%	45%	15%	9%-16%
Needles & syringes sharing among injectors:	60%-70%	53%-72%	70%	30%	53%-72%	50%

Sources: UNODCCP, "Rapid Situation Assessment (RSA) on Drug Abuse in the Central Asian countries", (draft), 2002, p. 63, Islamic Republic of Iran, Ministry of Health, and UNDCP, Rapid Situation Assessment of Drug Abuse in Iran, Tehran 2000, . Islamic Republic of Iran, Drug Control Headquarters , National Drug Control Report 2001, and UNODCCP, *Drug Abuse in Pakistan – Results from the year 2000 National Assessment Study,* Islamabad 2002.

Against this background it is not surprising that according to IDU related HIV registry data, several Central Asian countries already have per capita rates that exceed those of many Central and West European countries. This is particularly the case for Kazakhstan and Kyrgyzstan, the two Central Asian countries which were also found to have the highest opiate abuse levels.

IDU related HIV rates in the Russian Federation and some other countries of the former Soviet Union, notably the Baltic states and the Ukraine, are still substantially higher than in the countries of Central Asia (see Map 10). Nearly 100,000 newly registered HIV cases were reported from the countries of the former Soviet Union in 2001. This is equivalent to the total number of HIV/AIDS cases estimated for all of the countries neighbouring Afghanistan.

Data for the Russian Federation and for all of the countries of the former Soviet Union also show that the HIV epidemic, which began amongst injecting drug users, continues expanding dramatically in the overall population. In 1996, 67% of all new HIV cases were IDU related; by 2001 the rate fell to 54%, though in absolute terms the number of IDU related HIV cases increased 25-fold over the 1996-2001 period.

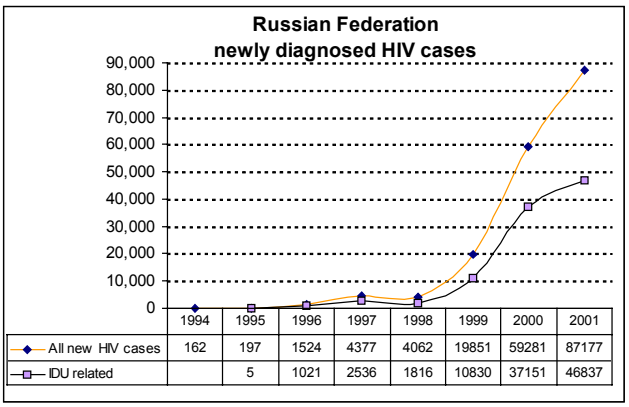


Figure 57
Source: EuroHIV, *HIV/AIDS Surveillance in Europe, End-year report 2001*, June 2002 (and previous years).

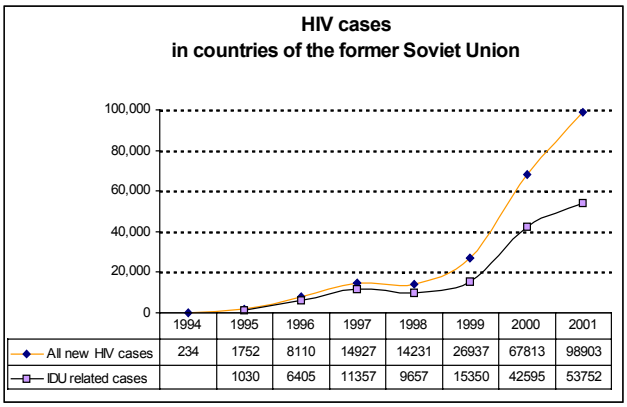
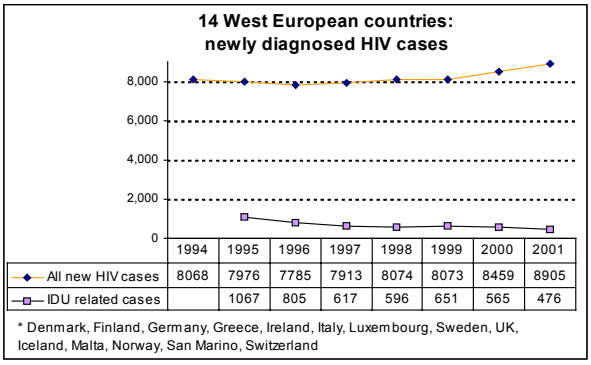


Figure 58
Source: EuroHIV, *HIV/AIDS Surveillance in Europe, End-year report 2001*, June 2002 (and previous years).

Even in Western Europe, where government policies in several countries succeeded in stabilising or reducing the number of new IDU related HIV infections in recent years, the number of newly registered HIV cases has started rising again. This has important policy implications. While the spread of HIV in Central Asia is still concentrated among injecting drug users there could still be a chance to arrest the HIV epidemic. This opportunity will not last for long. At a later stage, even if interventions were to succeed in levelling off or reducing the IDU related spread of HIV, the likelihood that the HIV epidemic would spread to other sections of society will remain.

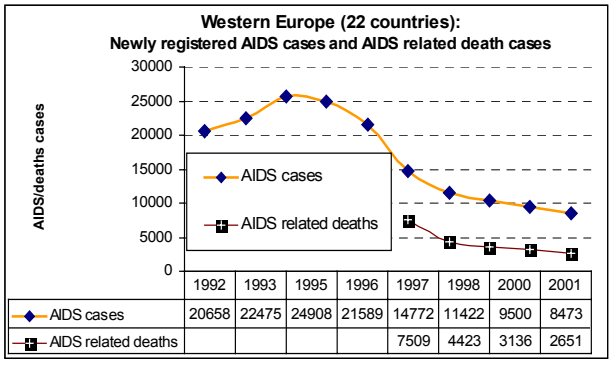
Today there is medication available to delay the onset of AIDS among HIV infected persons. It has already shown positive results in North America and Western Europe. Such medication and the attendant treatment costs, however, will be difficult to finance in the Central Asian countries.



	1994	1995	1996	1997	1998	1999	2000	2001
All new HIV cases	8068	7976	7785	7913	8074	8073	8459	8905
IDU related cases		1067	805	617	596	651	565	476

* Denmark, Finland, Germany, Greece, Ireland, Italy, Luxembourg, Sweden, UK, Iceland, Malta, Norway, San Marino, Switzerland

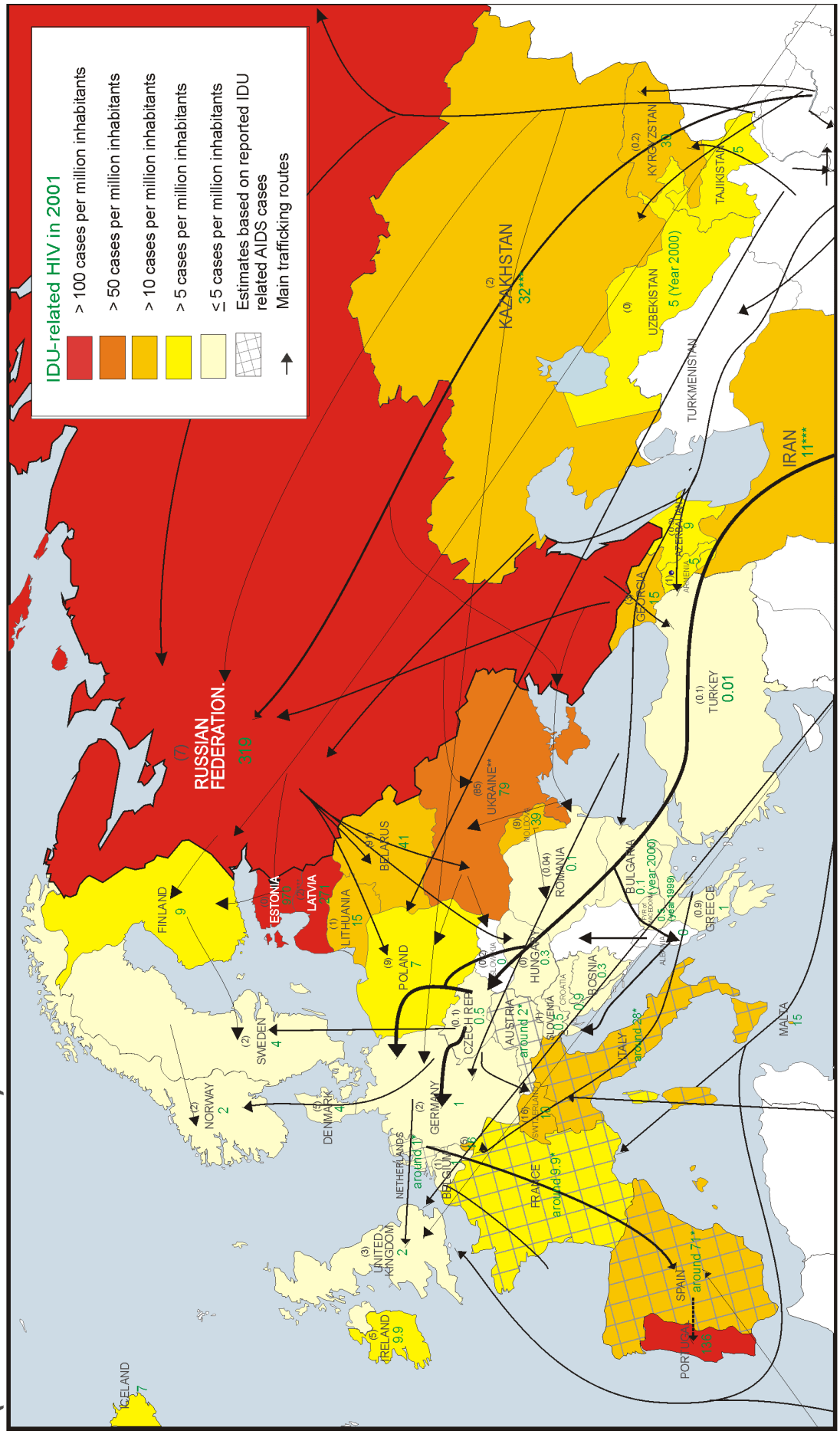
Figure 59
Source: EuroHIV, *HIV/AIDS Surveillance in Europe, End-year report 2001*, June 2002 (and previous years).



	1992	1993	1995	1996	1997	1998	2000	2001
AIDS cases	20658	22475	24908	21589	14772	11422	9500	8473
AIDS related deaths					7509	4423	3136	2651

Figure 60
Source: EuroHIV, *HIV/AIDS Surveillance in Europe, End-year report 2001*, June 2002 (and previous years).

Map 10. Newly diagnosed injecting drug use related HIV infections per million inhabitants in 2001 (data for 1996 in brackets)



* UNDCP estimate based on regression analysis ** Lower number for 2001 is not due to a decline in IDU related HIV but due to changes in registration system.
*** UNDCP estimate based on total number of newly reported HIV cases in 2001.
Sources: EuroHIV, HIV/AIDS Surveillance in Europe End-year report 2001, June 2002 and previous years.

6.6. Economic vulnerability

Thus far the discussion has noted the vulnerability of Afghanistan's neighbours to increasing trafficking, abuse and HIV/AIDS. The consequences of being an opiate transit country, however, go well beyond these obvious implications. The funds generated from drug trafficking have an inherent potential to destabilize the state, civil society and the economy.

Estimation of the likely magnitudes of funds generated from trafficking revealed that the largest profits among Afghanistan's neighbours are apparently being made in Central Asia: $2.2 billion, equivalent to 7% of GDP. Gross trafficking profits in Iran were estimated to range from $1 to $1.3 billion, equivalent to 1% to 1.3% of GDP. Gross profits for Pakistan were conservatively estimated at $400 million, equivalent to 0.7% of GDP, but could go up to 800 million or 1.3% of GDP. In total about $4 billion is generated from drug trafficking in countries neighbouring Afghanistan. In contrast to the popular perception that an inflow of such funds must be positive for an economy, the opposite seems to be true. Funds as large as these, in criminal hands, obviously destabilize the state, civil society as well as the economy. The smaller countries of Central Asia are particularly vulnerable in this regard. Corruption, violence and 'dirty money', including financial support for terrorist organisations, have negative repercussions for legitimate investment and thus compromise economic growth in the long run.

The destabilization of the state is usually the most serious potential consequence of the existence of large drug trafficking networks in a country. While funds generated from trafficking may not be large enough to create an economic boom, they are usually enough to corrupt the political system, particularly at the local level. This can start with bribes to local politicians, often disguised as electoral donations. Unless a firm stand is taken (which is still the case in all of Afghanistan's neighbours) this could lead to full-scale electoral fraud perpetrated to install administrations that are acceptable to major trafficking networks. Another danger of the availability of such large funds is that insurgency groups or incipient political movements could try and take command of the activities that generate them. There is no better example of this than Afghanistan itself.

The drug problem destabilizes civil society by eroding social capital and community cohesion. It leads to widespread corruption, increasing levels of crime, and a compromised rule of law. The most basic fabric of a society is weakened when illegal activities become the norm. In addition, the quick income to be made from drug trafficking creates incentives for young people to deviate from the laborious path of education and legitimate employment. Drug-related crime does not end with trafficking activities *per se*, but also takes the form of acquisitive crime, gang warfare, extortion and kidnapping.

Drug trafficking and the funds generated by it can also destabilize the economy directly. The direct impact can be felt in several ways. Governments, particularly of small countries, may find it increasingly difficult to pursue sound macro-economic policies when large funds of criminal origin enter the economy. There is a constant problem that macro-economic interventions will not lead to the desired effects if important sections of the economy have alternative sources of finance at their disposal. Under such conditions, the result of any restrictive monetary policy, for instance, may be simply a crowding out of legitimate businesses.

Criminal enterprises, when they operate on a larger scale, usually require a legal shell to camouflage the illegal activities. For example, transport companies as well as companies operating in industrial sectors that need chemicals may be used to camouflage drug manufacture and trafficking operations. Businesses that have large cash transactions may be chosen because they allow criminal money to be laundered easily. Since the 'front' businesses do not really have to earn money, they can crowd out legitimate businesses from the market by selling below cost, and/or use intimidation against competitors. Moreover, such businesses do not generally undertake productive investments that would be beneficial to the community at large. Allocative inefficiencies thus become the rule rather than the exception.

The conspicuous consumption of criminal entrepreneurs also causes an economic problem. In developing countries, conspicuous consumption often translates into high imports, which can endanger the trade balance. Once a large trade deficit develops, foreign investors and financial institutions lower the credit rating of the country. Higher interest on loans, in turn, weakens investment and thus economic growth. Even more serious, drug-related income is often used to purchase arms and weapons. This contributes to a further spread of violence and insecurity in the country, and the investment climate deteriorates even further.

There is some empirical evidence which seems to support the arguments covered so far. Gross capital formation data from the Asian Development Bank show, for instance, that investment activities,

expressed as a percentage of GDP, declined substantially over the 1990-2000 period in practically all of the countries neighbouring Afghanistan. World Bank data for the year 2001 show that capital formation in the countries neighbouring Afghanistan amounted to, on average, 15% of GDP. This is significantly less than the global average (22%) and less than capital formation among low & middle income countries (25%). Similarly, gross private capital flows (i.e. direct, portfolio and other investment inflows recorded in the balance of payments) into the countries neighbouring Afghanistan[cc] amounted to, on average, 7% of GDP in 2000. This was relatively low compared to, on average, 11% of GDP for low & middle income countries and 34% for high-income countries. In terms of direct foreign investment, Afghanistan's neighbours were also worse off than developing countries in general.

Table 24: Gross capital formation (gross domestic investment) in % of GDP

	Asian Development Bank data		World Bank data
	1990	2000	2001
Iran	n.a.	18.4%*	19.8%
Pakistan	18.9%	14.7%	15.6%
Kyrzystan	24.3%	16.4%	15.5%
Kazakhstan	35.0%	25.8%	12.8%
Uzbekistan	32.2%	20.2%	11.1%
Tajikistan	n.a.	11.6%	n.a.
Unweighted average of countries neighbouring Afghanistan**	**27.6%**	**17.7%**	**14.9%**
Lower & middle income Countries **			25.4%
World**			22.2%

* based on World Bank
** year 2000.
Sources: Asian Development Bank and World Bank Indicators.

Lower investment usually means lower economic growth. The average growth rate of GDP per capita (unweighted) declined by 4% p.a. over the 1990-2000 period in the countries neighbouring Afghanistan. This result was mainly due to strong declines reported from Central Asian countries. GDP per capita fell in Central Asia (unweighted average) by 6.3% p.a. over the 1990-2000 period. Most of the decline had to do with the difficult transformation from a centrally planned to a market economy. Nonetheless, it is interesting that the decline was stronger in Central Asia than in the Russian Federation (-4.6% p.a.) or the average (unweighted) of all former Soviet republics (-5.5% p.a.). The strongest decline in GDP per capita over the 1990-2000 period was reported from Tajikistan, a country seriously affected by civil war and drug trafficking.

Table 25: Annual growth of GDP per capita over the 1990-2000 period

Iran	1.9%
Pakistan	1.2%
Uzbekistan	-2.4%
Kazakhstan	-4.1%
Kyrzystan	-5.1%
Turkmenistan	-8.0%
Tajikistan	-11.8%
Unweighted average	-4.0%
Low income countries	1.2%
Middle income countries	2.4%
High income countries	1.7%

Source: World Bank, quoted in UNDCP, *Human Development Report 2002*, pp. 190-193.

GDP per capita showed positive growth rates over the 1990-2000 period in Iran, which has undertaken the strongest drug control efforts in the last decade, as well as in Pakistan. In both these countries, however, growth was still less than the average growth of 2.4% p.a. reported from middle income countries. Many factors other than drug trafficking played a role here. Nonetheless, it is likely that drug trafficking compromised economic development.

[cc] World Bank data were available for these calculations from Iran , Kazakhstan, Kyrgyzstan and Pakistan. (World Bank, World Development Indicators 2002).

ENDNOTES

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[5] Islamic Republic of Iran, *The National Drug Control Report 2000*, p. 25..
[6] Islamic Republic of Iran, *The National Drug Control Report 2000*, p. 23.
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[47] *ibid*., pp. 39-41.

CONCLUSION: THE WAY FOWARD

Conclusion: The way forward

Afghanistan's opium economy grew as a consequence of the degradation of agricultural and economic infrastructure due to more than twenty years of war, the acceptance of opium as a livelihood strategy by many rural households, and the failure of the state. For more than two hundred years, the international geo-political situation has worked against the consolidation of an effective central government in Afghanistan, because it has exacerbated the country's endemic problems of regional warlordism and particularistic nationalism. Today, there is a window of opportunity for the state to consolidate because the collective force of the international community has superseded the particularist interests of major powers and of Afghanistan's neighbours. That window must be kept open by means of continuous international support for Afghanistan's Transitional Government.

Afghanistan's opium economy has also affected its neighbours. Despite ever increasing efforts to fight drug trafficking, the territories of these countries continue to be exploited to traffic Afghan opiates to the lucrative markets of Europe and the CIS. The consequences have been rising levels of abuse, a dramatic spread of HIV/AIDS and compromised economic growth. As long as large-scale opium production exists in Afghanistan, the threat to the security of neighbouring countries will remain. Thus, Afghanistan's neighbours, the European countries which consume Afghan opiates, and, of course, Afghanistan itself, all have a common and shared interest in solving Afghanistan's opium problem.

The international support will have to be targeted at solving the problems, documented in this book, which created the opium economy in the first place. Supporting the central institutions of the state within Afghanistan to establish effective government control over the opium producing areas appears as a pre-requisite for any drug elimination strategy. Other interventions should aim at re-establishing a sustainable rural economy, particularly in the opium producing regions of the country, based *inter alia* on the existence of credit schemes for farmers; sources of income for the land-less labour; macro-economic structures within which commodity markets can grow free from the perverse incentives provided by opium and other forms of contraband; a functioning banking system and a stable currency; and effective law enforcement against opium markets within the country and against the trafficking of opiates outwith.

Given the large-scale destruction of agricultural infrastructure, even small efforts can dramatically increase the yields of legal crops. The infrastructure necessary to transport legal crops to markets will have to be restored. Emergency food programmes, which were needed to avoid large-scale starvation, will have to be gradually reduced in order to increase incentives for farmers to grow legal crops. Currently, for instance, farmers have little incentive to grow wheat because wheat prices are relatively low.

Efforts to assist farmers will have to go hand in hand with the maintenance and strengthening of the opium monitoring system established in the country over the last few years. This not only includes information on areas under cultivation and on yields, but also on developments in local opiate markets (including development of opium prices) in order to be able to measure the effectiveness of interventions.

In parallel, there is a particular need to strengthen efforts to interdict illegal heroin laboratories in the country. This can only be accomplished with strong public support because the laboratories are carefully guarded and often exist under the patronage of former commanders and/or warlords.

Finally, there is also a need to change the image of opium traders. They cannot be perceived any longer as local heroes who supply their villages with income, but as criminals who cause misery to many people across the world and prevent the village from securing rehabilitation and development assistance.

The analysis presented in this book has also shown that the timing of interventions is crucial. There is, for instance, a need to syphon-off itinerant labour at the opium harvest time. Thus, public works should be timed in a way that the most labour intensive operations take part at harvest time. Quite apart from the issue of itinerant labor, there is a need for women being re-integrated into Afghan society, including into the labour market. The work of women in opium harvesting was not costed as an input because women were not allowed to work outside the household. Once this is changed some of the structural advantages of labour intensive opium production will disappear.

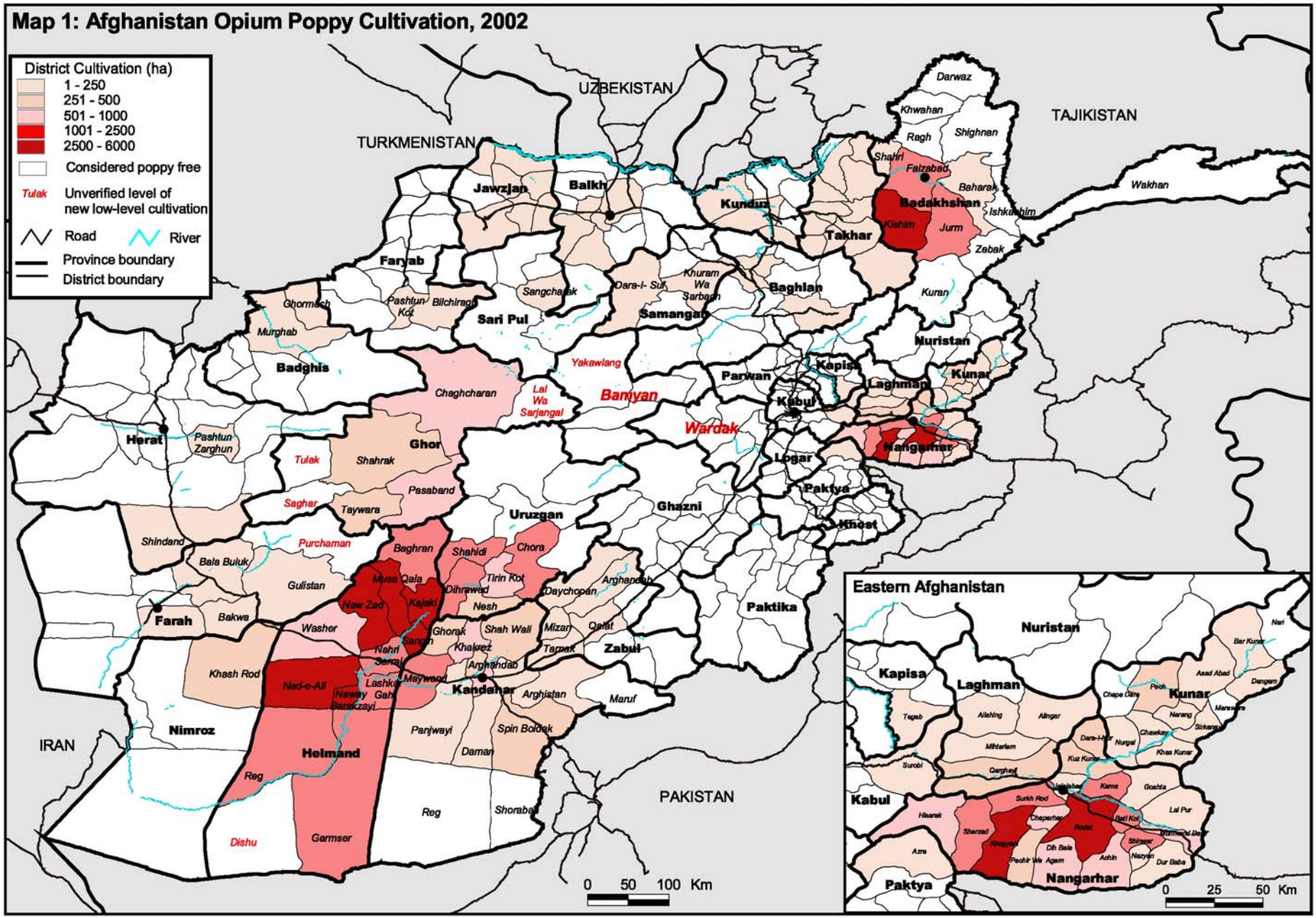
The improvement of interdiction capacities along the Afghan borders, and where ever possible around the main drug producing provinces, can play an essential role in bringing opium prices down in Afghanistan, so that incentives of farmers to grow opium are reduced**.** This may be crucial as otherwise the

deterrence effect on farmers created by the risk of eradication can be considerably reduced if high opium prices create a powerful incentive to defy the cultivation ban and expand cultivation. Given the current opium prices within Afghanistan, it is also clear that no other crop can compete with opium poppy as a source of income. This considerably hampers alternative development interventions, making the establishment of successful interdiction capacities a *sine-qua-non* for successful alternative development efforts. Although finding the right mix of measures and implementing them in the right sequence presents a conceptual and technical challenge to policy makers, it is essential to understand that the illegal opium economy is an evolving system. Its various dimensions and dynamics must be tackled through a carefully crafted approach which integrates and links key factors such as risks, incentives and feedback effects.

This approach must extend far beyond the borders of Afghanistan. Demand is an integral part of the illegal opiate market. The effectiveness of interventions to reduce the supply push is largely dependent on the impact of measures to reduce the demand pull. In other words, there is a compelling need to reduce demand for opiates in Afghanistan, in its neighbouring countries, as well as in the main overseas markets.

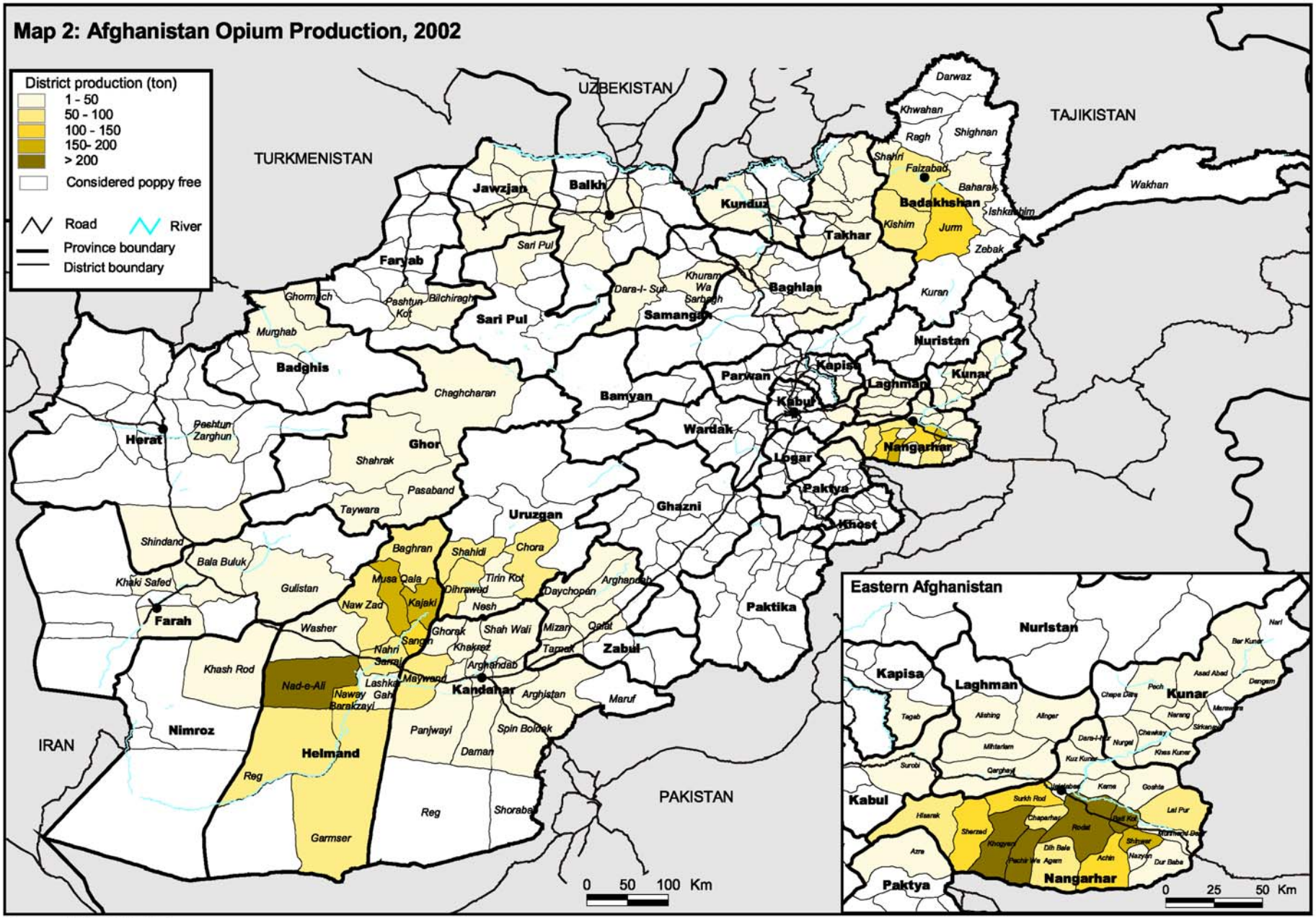
These measures translate into the mix of what the United Nations *Office on Drugs and Crime* advocates as the balanced approach. At the international level, it is also reflected in the concept of shared responsibility. Since the problems faced by Afghanistan are more than those created by the opium economy, an integrated drug control approach will have to be linked into the mainstream of all the other development efforts to re-build Afghanistan. It is equally clear, and documented in this book, that unless the drug problem is solved, there will be no sustainable development for Afghanistan.

Annex 1



Source: UNDCP/ICMP

Annex 2



Source: UNDCP/ICMP

Annex 3 (Page 1 of 3)
Afghanistan opium poppy cultivation estimates (ha), 2002

Province	District	Former district reference	Previous UNDCP survey estimates								2002		
			1994	1995	1996	1997	1998	1999	2000	2001	Low	Avg	High
Badakhshan	Baharak	*Baharak*	111	64	116	9	202	23	86	345	*170*	180	*190*
	Fayzabad	*Faizabad*	77	2,344	1,592	1,634	1,282	906	1,073	868	*2,070*	2,370	*2,660*
	Ishkashim	*Eshkashem*	0	0	3	0	0	0	0	0	-	-	-
	Jurm	*Jurm*	433	555	1,326	1,051	1,198	1,249	773	2,897	*2,300*	2,690	*3,070*
	Khwahan	*Khvahan*								0	-	-	-
	Kishim	*Keshem*	1,093	3	177	62	62	385	507	2,191	*2,570*	2,840	*3,120*
	Ragh	*Ragh*	0	0	8	31	2	8	0	0	-	-	-
	Shahri Buzurg	*Shahr-e-Bozorg*	0	0	0	0	71	113	19	41	*160*	170	*180*
	Zebak	*Zebak*	0	4	8	115	0	0	0			-	
Badakhshan Total			**1,714**	**2,970**	**3,230**	**2,902**	**2,817**	**2,684**	**2,458**	**6,342**	***7,270***	**8,250**	***9,220***
Badghis	Ghormach	*Ghowrmach*							20	0	*3*	4	*5*
	Murghab	*Morghab*							21	0	*21*	22	*23*
Badghis Total			**0**	**0**	**0**	**0**	**0**	**0**	**41**	**0**	***25***	**26**	***28***
Baghlan	Andarab	*Anderab*								81	*30*	31	*31*
	Baghlan	*Baghlan*							152	0	*115*	120	*124*
	Dahana-I- Ghori	*Dahaneh-e-Ghowri*				328	929	967	27	0	*0*	0	*0*
	Nahrin	*Nahrin*								1	-	-	-
	Puli Khumri	*Pul-e-Khumri*						38	20	0	*1*	1	*2*
Baghlan Total			**0**	**0**	**0**	**328**	**929**	**1,005**	**199**	**82**	***147***	**152**	***157***
Balkh	Balkh	*Balkh*				13	29	29	82	1	*21*	22	*23*
	Chahar Bolak	*Char Bulaq*				165	530	2,600	53	0	*0*	0	*0*
	Chimtal	*Chemtal*			1,065	532	485	1,428	2,451	0	*152*	153	*154*
	Dawlat Abad	*Dowlatabad*								3	-	-	-
	Dihdadi	*Dehdadi*							22	0	*7*	8	*8*
	Nahri Shahi	*Naher Shahi*							33	0	*14*	14	*15*
	Sholgara	*Shulgarah*							28	0	*19*	19	*20*
Balkh Total			**0**	**0**	**1,065**	**710**	**1,044**	**4,057**	**2,669**	**4**	***214***	**217**	***219***
Farah	Anar Dara	*Anar Darreh*								0	-	-	-
	Bakwa	*Bakwah*		1	13	129	31	129	259	0	-	-	-
	Bala Buluk	*Bala Balok*		8	19	169	36	186	183	0	-	-	-
	Farah	*Farah*			18	18	10	44	73	0	-	-	-
	Gulistan	*Gulestan*			581	252	94	428	849	0	-	-	-
	Khaki Safed	*Khak-e Safid*							0	0	-	-	-
	Lash Wa Juwayn	*Lash-e Joveyn*								0	-	-	-
	Pur Chaman	*Purchaman*								0	-	-	-
	Qalay-I-Kah	*Qalae Koh*								0	-	-	-
Farah Total			**0**	**9**	**631**	**568**	**171**	**787**	**1,364**	**0**	***300***	**500**	***700***
Faryab	Bilchiragh	*Belcheragh*							6	0	*19*	26	*33*
	Maymana	*Meymaneh*							1	0	*0*	0	*0*
	Pashtun Kot	*Pashtun Kowt*							11	0	*1*	1	*2*
	Qaysar	*Qeysar*							16	0	-	-	-
	Shirin Tagab	*Shirin Tagab*							3	0	-	-	-
Faryab Total			**0**	**0**	**0**	**0**	**0**	**0**	**36**	**0**	***20***	**28**	***35***
Ghazni	Ajristan	*Ajristan*	313	0	0	0	0	0	0	0	-	-	-
Ghazni Total			**313**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	***0***	**0**	***0***
Ghor	Chaghcharan										*630*	700	*770*
	Pasaband										*630*	700	*770*
	Shahrak										*270*	300	*330*
	Taywara										*450*	500	*550*
Ghor Total											***1,980***	**2,200**	***2,420***
Helmand	Baghran	*Baghran*		2,519	1,267	2,754	2,910	2,794	2,653	0	*1,660*	1,800	*1,930*
	Dishu	*Deh Shu*								0		-	
	Garmser	*Garmser*	786	725	942	1,993	1,205	2,643	2,765	0	*1,900*	2,020	*2,140*
	Kajaki	*Kajaki*	979	4,087	2,814	3,904	3,959	5,746	4,625	0	*2,500*	2,640	*2,780*
	Lashkar Gah	*Bust*	2,256	885	1,054	1,325	1,869	2,528	3,145	0	*1,070*	1,140	*1,220*
	Musa Qala	*Musa Qala*	1,154	5,137	3,924	4,360	5,574	7,013	5,686	0	*3,500*	3,690	*3,890*
	Nad-e-Ali	*Nad-e-Ali*	12,529	5,983	4,035	5,102	5,156	8,667	8,323	0	*5,690*	5,880	*6,080*
	Nahri Sarraj	*Nahr-e-Saraj*	590	4,716	4,309	4,807	2,426	4,041	4,378	0	*1,720*	1,850	*1,980*
	Naw Zad	*Naw Zad*	2,345	2,799	3,596	1,585	3,605	4,424	5,085	0	*2,550*	2,650	*2,780*
	Naway Barakzayi	*Nawa Barakzai*	6,074	1,254	505	722	1,150	2,581	3,246	0	*2,540*	2,730	*2,910*
	Reg	*Khan Neshin*							222	0	*1,810*	1,940	*2,070*
	Sangin	*Sarban Qala*	2,866	973	1,909	1,971	1,734	2,646	1,711	0	*2,650*	2,810	*2,960*
	Washer	*Washir*		676	555	877	1,084	1,469	1,014	0	*780*	800	*820*
Helmand Total			**29,579**	**29,754**	**24,910**	**29,400**	**30,672**	**44,552**	**42,853**	**0**	***28,370***	**29,950**	***31,560***

Source: UNDCP/ICMP Afghanistan Opium Survey 2002

Annex 3 (Page 2 of 3)
Afghanistan opium poppy cultivation estimates (ha), 2002

Province	District	Former district reference	Previous UNDCP survey estimates								2002		
			1994	1995	1996	1997	1998	1999	2000	2001	Low	Avg	High
Herat	Obe	*Obey*								0	-	-	-
	Pashtun Zarghun	*Pashtun Zarghun*	0	0	0	38	0	0	38	0	-	-	-
	Shindand	*Shindand*							146	0	-	-	-
	Zinda Jan	*Zendeh Jan*								0	-	-	-
Herat Total			**0**	**0**	**0**	**38**	**0**	**0**	**184**	**0**	***30***	**50**	***70***
Jawzjan	Aqcha	*Aqchah*						532	208	0	*46*	47	*47*
	Faysabad	*Faizabad*						43	105	0	*23*	24	*25*
	Khamyab	*Khamyab*							6		*29*	30	*31*
	Mardyan	*Mardian*						43	111	0	*4*	4	*4*
	Mingajik	*Manga Jek*						1,789	141	0	*7*	7	*7*
	Qarqin	*Qarqin*						186	10	0	*24*	24	*24*
	Shibirghan	*Sheberghan*							19	0	*1*	1	*1*
Jawzjan Total			**0**	**0**	**0**	**0**	**0**	**2,593**	**600**	**0**	***134***	**137**	***139***
Kabul	Surobi	*Sarobi*						132	340	29	*57*	58	*59*
Kabul Total			**0**	**0**	**0**	**0**	**0**	**132**	**340**	**29**	***57***	**58**	***59***
Kandahar	Arghandab	*Arghandab*	211	87	331	561	399	750	459	0	*320*	330	*340*
	Arghistan	*Arghistan*						38	13	0	*70*	80	*90*
	Daman	*Daman*						110	50	0	*170*	190	*210*
	Ghorak	*Ghorak*	347	803	692	1,503	1,126	1,109	574	0	*270*	380	*320*
	Kandahar	*Qandahar+Dand*	320	53	234	21	73	227	156	0	*480*	640	*810*
	Khakrez	*Khakrez*	362	274	627	286	518	632	320	0	*520*	560	*610*
	Maruf	*Maruf*	30	16	1	0	3	5	17	0	-	-	-
	Maywand	*Maiwand*	256	333	618	1,278	2,497	2,022	995	0	*950*	1,090	*1,240*
	Panjwayi	*Panjwai*	250	357	266	255	134	132	184	0	*140*	150	*170*
	Shah Wali Kot	*Shah Wali Kot*	678	97	94	127	162	236	238	0	*240*	260	*290*
	Spin Boldak	*Spin Boldak*	1,170	107	194	91	317	261	26	0	*260*	290	*320*
Kandahar Total			**3,624**	**2,127**	**3,057**	**4,122**	**5,229**	**5,522**	**3,034**	**0**	***3,420***	**3,970**	***4,400***
Kapisa	Tagab	*Tagab*						5	104	0	*206*	207	*208*
Kapisa Total			**0**	**0**	**0**	**0**	**0**	**5**	**104**	**0**	***206***	**207**	***208***
Khost	Spera	*Speyrah*								0	-	-	-
	Tani	*Tani*								6	-	-	-
Khost Total			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	***0***	**0**	***0***
Kunar	Asad Abad	*Asadabad*						73	239	1	*120*	140	*150*
	Bar Kunar	*Bar Kunar*						47	72	31	*40*	40	*50*
	Chawkay	*Chawki*	13	11	0	0	8	9	50	8	*120*	140	*160*
	Dangam	*Dangam*								4	*46*	49	*52*
	Khas Kunar	*Khas Kunar*	75	82	10	0	12	50	173	0	*60*	70	*80*
	Narang	*Narang*		15	1	0	13	27	84	10	*90*	100	*120*
	Nari	*Naray*								1		-	
	Nurgal	*Mazar (Nur Gul)*	27	19	5	0	8	28	98	9	*60*	70	*80*
	Pech	*Peche*								11	*260*	263	*266*
	Sirkanay	*Sarkani*		25	2	0	34	54	71	8	*90*	100	*110*
Kunar Total			**115**	**152**	**18**	**0**	**75**	**288**	**786**	**82**	***886***	**972**	***1,068***
Kunduz	Ali Abad	*Aliabad*						5	51	0	*2*	3	*3*
	Chahar Dara	*Chahar Darreh*						8	30	0	*6*	6	*7*
	Imam Sahib	*Emam Saheb*						3	0			-	
	Khan Abad	*Khanabad*						2	36	0		-	
	Kunduz	*Kunduz*						9	51	0	*3*	3	*3*
	Qalay-I- Zal	*Qala-e Zal*						11	321	0	*4*	5	*5*
Kunduz Total			**0**	**0**	**0**	**0**	**0**	**38**	**489**	**0**	***16***	**16**	***17***
Laghman	Alingar	*Alingar*	0	0	0	0	2	71	131	3	*142*	146	*150*
	Alishing	*Alishang*	0	0	0	0	3	26	88	0	*101*	104	*107*
	Dawlat Shah	*Dowlat Shah*								12		-	
	Mihtarlam	*Metarlam*	0	0	0	0	14	72	190	0	*190*	240	*290*
	Qarghayi	*Qarghai*	0	0	0	0	58	128	298	0	*300*	460	*610*
Laghman Total			**0**	**0**	**0**	**0**	**77**	**297**	**707**	**15**	***733***	**950**	***1,157***
Nangarhar	Achin	*Achin*	5,354	2,187	2,315	1,640	1,693	2,209	1,317	1	*920*	940	*960*
	Bati Kot	*Bati Kot*	3,797	529	392	1,013	2,034	603	535	0	*2,210*	2,390	*2,570*
	Chaparhar	*Chaparhar*	1,089	1,377	1,750	1,234	1,365	977	832	2	*970*	990	*1,010*
	Dara-I-Nur	*Darae Noor*	1,302	392	199	73	199	734	421	0	*370*	380	*400*
	Dih Bala	*Deh Bala*	307	646	354	569	511	468	439	11	*640*	650	*660*
	Dur Baba	*Durbaba*	29	78	38	39	56	50	33	0	*40*	40	*40*
	Goshta	*Goshta*	1,249	467	116	77	122	240	238	99	*150*	150	*160*
	Hisarak	*Hesarak*	202	453	253	370	436	741	541	2	*600*	620	*650*

Annex 3 (Page 3 of 3)
Afghanistan opium poppy cultivation estimates (ha), 2002

Province	District	Former district reference	Previous UNDCP survey estimates								2002		
			1994	1995	1996	1997	1998	1999	2000	2001	Low	Avg	High
	Jalalabad	*Behsud+Jalalabad*	458	31	51	123	397	979	1,021	0	*89*	90	*90*
	Kama	*Kama*	0	18	0	0	198	389	589	0	*1,080*	1,120	*1,170*
	Khogyani	*Khogiani*	4,347	2,577	2,628	3,385	3,808	5,338	4,913	3	*2,630*	2,640	*2,650*
	Kuz Kunar	*Kuz Kunar*	293	233	115	15	105	236	399	0	*490*	500	*520*
	Lal Pur	*La'lpur*	302	267	79	66	137	270	248	95	*240*	250	*260*
	Muhmand Dara	*Mohmand Dara*	1,630	0	156	83	125	290	255	0	*690*	720	*750*
	Nazyan	*Nazian*	343	138	251	111	252	184	177	0	*150*	150	*150*
	Pachir Wa Agam	*Pachier wa Agam*	768	571	681	400	488	731	630	3	*400*	420	*430*
	Rodat	*Rodat*	1,026	2,038	1,959	1,583	2,147	3,649	2,302	0	*2,760*	2,760	*2,760*
	Sherzad	*Sherzad*	1,954	2,351	1,646	1,689	1,302	1,741	1,719	2	*1,470*	1,470	*1,470*
	Shinwar	*Shinwar*	3,884	1,265	2,075	1,478	1,374	1,559	1,300	0	*2,060*	2,060	*2,060*
	Surkh Rod	*Sorkh Rod*	747	106	587	619	1,072	1,602	1,840	0	*1,340*	1,440	*1,540*
Nangarhar Total			**29,081**	**15,724**	**15,645**	**14,567**	**17,821**	**22,990**	**19,747**	**218**	***19,299***	**19,780**	***20,300***
Nimroz	Chahar Burjak	*Char Borjak*								0	-	-	-
	Kang	*Kang*	10	2	1	107	5	2	0	0	-	-	-
	Khash Rod	*Khash Rud*	672	117	135	535	6	201	219	0	-	-	-
Nimroz Total			**682**	**119**	**136**	**642**	**11**	**203**	**219**	**0**	***180***	**300**	***420***
Paktya	Azra	*Azro*					4	29	46	1	*37*	38	*39*
	Chamkani	*Chamkani*								0		-	
	Jaji	*Jaji*								0		-	
	Lija Mangal	*Hasan Kheyl*								0		-	
	Sayid Karam	*Seyed Karam*								0		-	
Paktya Total			**0**	**0**	**0**	**0**	**4**	**29**	**46**	**1**	***37***	**38**	***39***
Samangan	Dara-I- Suf	*Darae Souf*								614	-	-	-
	Khuram Wa Sarbagh	*Khuram+Samangan*							54	0	-	-	-
Samangan Total			**0**	**0**	**0**	**0**	**0**	**0**	**54**	**614**	***60***	**100**	***140***
Sari Pul	Sangcharak	*Sar-e Pol*							146	0	*57*	57	*57*
Sari Pul Total			**0**	**0**	**0**	**0**	**0**	**0**	**146**	**0**	***57***	**57**	***57***
Takhar	Bangi	*Bangi*							8	0		-	
	Chah Ab	*Chah Ab*						17	45	19		-	
	Chal	*Chal*						8	17	20		-	
	Farkhar	*Farkhar*						6	6	26		-	
	Ishkamish	*Eshkamesh*							10	19		-	
	Kalafgan	*Kalafgan*						101	93	27		-	
	Khwaja Ghar	*Khvajeh Ghar*						9	57	32		-	
	Rustaq	*Rostaq*						10	151	24		-	
	Taluqan	*Taloqan*						16	97	16		-	
	Warsaj	*Warsaj*						12	9	10		-	
	Yangi Qala	*Yangi Qala*						22	154	20		-	
Takhar Total			**0**	**0**	**0**	**0**	**0**	**201**	**647**	**211**	***782***	**788**	***794***
Uruzgan	Chora	*Chora*	694	424	1,574	233	652	932	1,179	0	*1,220*	1,330	*1,330*
	Day Kundi	*Dai Kundi*								0		-	
	Dihrawud	*Dehrawud*	909	938	2,923	1,870	1,033	1,243	726	0	*1,250*	1,340	*1,420*
	Gizab	*Gezab*	1,476	16	8	0	0	0	0	0		-	
	Khas Uruzgan	*Khas Oruzgan*	0	4	0	0	0	0	130	0		-	
	Kijran	*Kajran*								0		-	
	Nesh	*Nesh*	410	334	104	399	373	510	394	0	*460*	490	*520*
	Shahidi Hassas	*Char Chashma*	1,337	12	0	0	1,158	1,110	802	0	*1,130*	1,190	*1,240*
	Shahristan	*Shahrestan*								1		-	
	Tirin Kot	*Tirin Kot*	1,428	1,180	3,271	2,484	1,445	1,194	1,494	0	*680*	750	*830*
Uruzgan Total			**6,254**	**2,908**	**7,880**	**4,986**	**4,661**	**4,989**	**4,725**	**1**	***4,740***	**5,100**	***5,340***
Zabul	Arghandab	*Arghandab*	0	0	0	0	0	74	139	0	-	-	-
	Daychopan	*Dai Chopan*	0	0	0	0	0	41	114	0	-	-	-
	Mizan	*Mizan*	54	0	255	154	160	373	383	0	-	-	-
	Qalat	*Qalat*	0	0	0	0	1	46	40	0	-	-	-
	Shahjoy	*Shah Juy*								0	-	-	-
	Tarnak Wa Jaldak	*Jaldak*	0	0	0	0	0	77	48	1	-	-	-
Zabul Total			**54**	**0**	**255**	**154**	**161**	**611**	**725**	**1**	***120***	**200**	***280***
TOTAL			71,416	53,763	56,827	58,417	63,672	90,983	82,172	7,606	*69,082*	*74,045*	*78,827*

ROUNDED TOTAL			**71,000**	**54,000**	**57,000**	**58,000**	**64,000**	**91,000**	**82,000**	**8,000**	***69,000***	***74,000***	***79,000***

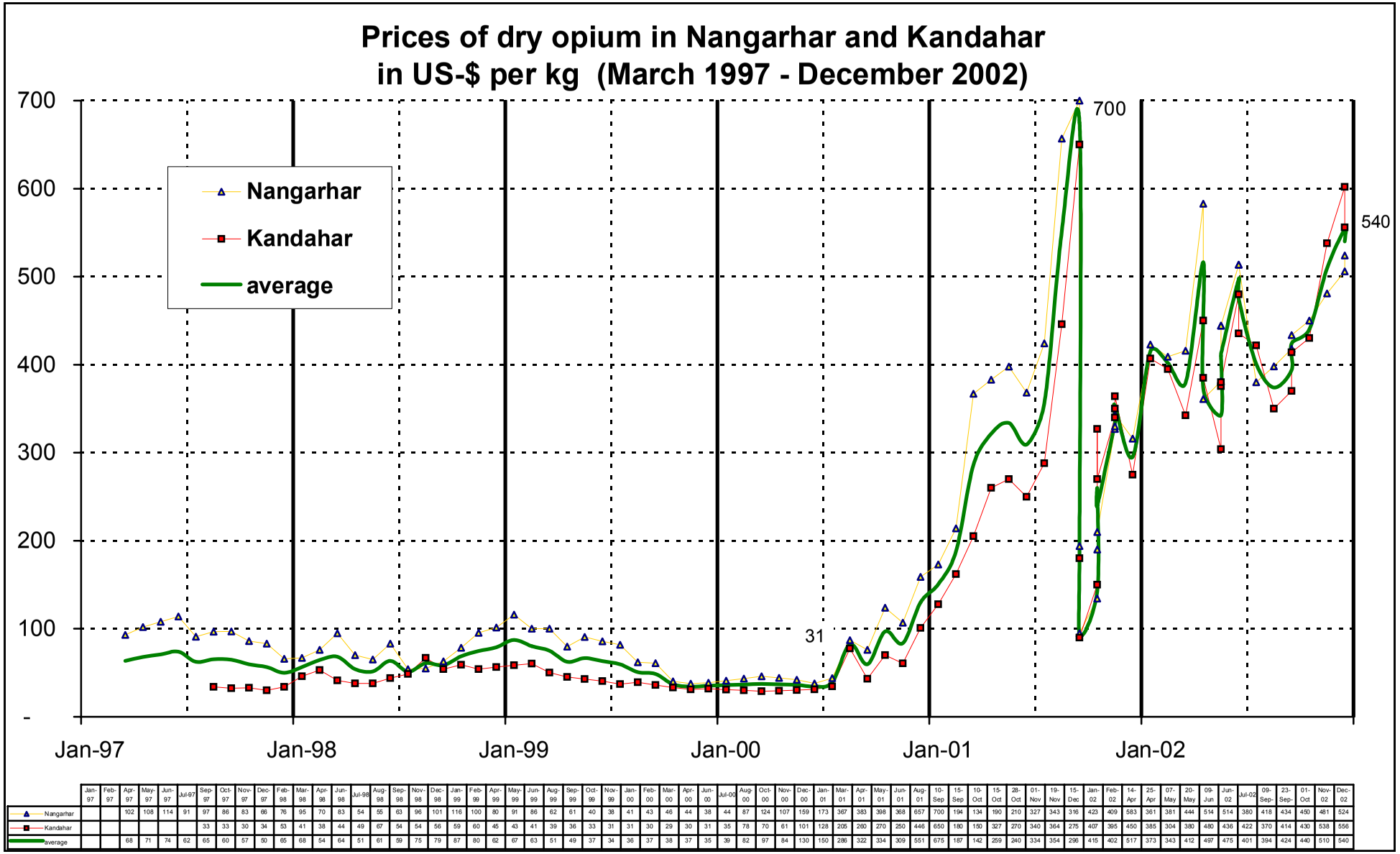
Annex 4

Afghanistan opium production estimates, 2002

PROVINCE	DISTRICT	SAMPLE YIELD AVERAGE IRRIGATED Avg kg/ha	+/-	n	RAINFED Avg kg/ha	+/-	n	CULTIVATION Irrigated Avg ha	+/-	Rainfed Avg ha	+/-	Total ha	PRODUCTION Lower kg	Average kg	Higher kg
Badakhshan	Baharak	34	5	10			0	180	10			180	5,780	6,120	6,460
	Faizabad	51	6	11	32	3	11	430	60	1,940	240	2,370	73,270	84,010	104,160
	Jurm	43	8	10	29	4	10	2450	350	240	40	2,690	96,100	112,310	128,230
	Kishim	39	4	5	32	2	9	180	20	2,660	250	2,840	83,360	92,140	101,240
	Shahri Buzurg			0			0	No yield data				n.a.			
Badakhshan surveyed Total								**3,240**	**440**	**4,840**	**530**	**8,080**	**258,510**	**294,600**	**340,090**
Helmand	Baghran	34	3	20				1,800	140			1,800	56,440	61,200	65,620
	Garmser	43	5	10				2,020	120			2,020	81,700	86,860	92,020
	Lashkar Gah	33	9	6				1,140	70			1,140	35,310	37,620	40,260
	Kajaki	64	12	10				2,640	140			2,640	160,000	168,960	177,920
	Khan Neshin	48	5	10				1,940	130			1,940	86,880	93,120	99,360
	Musa Qala	53	6	10				3,690	190			3,690	185,500	195,570	206,170
	Nad-e-Ali	41	8	10				5,880	190			5,880	233,290	241,080	249,280
	Nahr-e-Seraj	29	6	10				1,850	130			1,850	49,880	53,650	57,420
	Naw Zad	37	4	10				2,650	100			2,650	94,350	98,050	102,860
	Nawa Barakzai	52	6	10				2,730	190			2,730	132,080	141,960	151,320
	Sarban Qala	49	10	10				2,810	160			2,810	129,850	137,690	145,040
	Washir	36	5	10				800	20			800	28,080	28,800	29,520
Helmand surveyed Total								**29,950**	**1,580**			**29,950**	**1,273,360**	**1,344,560**	**1,416,790**
Nangarhar	Achin	72	4	10				940	20			940	66,240	67,680	69,120
	Bati Kot	69	8	20				2,390	180			2,390	152,490	164,910	177,330
	Jalalabad	13	2	10				90	1			90	1,157	1,170	1,170
	Chaparhar	29	28	10				990	20			990	28,130	28,710	29,290
	Darae Noor	25	4	7				380	10			380	9,250	9,500	10,000
	Deh Bala	49	8	10				650	10			650	31,360	31,850	32,340
	Durbaba	49	12	8				40	0			40	1,960	1,960	1,960
	Goshta	22	5	9				150	10			150	3,080	3,300	3,520
	Hisarak			2				No yield data				n.a.			
	Kama	14	2	10				1,120	40			1,120	15,120	15,680	16,380
	Khogiani	49	12	10				2,640	10			2,640	128,870	129,360	129,850
	Kuz Kunar	13	2	10				500	10			500	6,370	6,500	6,760
	Lal Pur			0				No yield data				n.a.			
	Mohmand Dara	54	10	10				720	30			720	37,260	38,880	40,500
	Nazian	56	7	10				150	0			150	8,400	8,400	8,400
	Pachier Wa Agam	46	8	10				420	320			420	4,600	19,320	19,780
	Rodat	72	4	9				2,760	0			2,760	198,720	198,720	198,720
	Sherzad			0				No yield data				n.a.			
	Shinwar	64	8	10				2,060	0			2,060	131,840	131,840	131,840
	Surkh Rod			2				No yield data				n.a			
Nangarhar surveyedTotal								**16,000**	**661**			**16,000**	**824,847**	**857,780**	**876,960**
Total surveyed areas				**329**			**30**	**49,190**	**2,681**	**4,840**	**530**	**54,030**	**2,356,717**	**2,496,940**	**2,633,840**
													Opium Yield (kg/ha, 3 provinces)		
													44	**46**	**49**
													Estimated opium production (kg)		
Other areas												**20,015**	**873,028**	**924,972**	**975,686**
Country Total												**74,045**	**3,229,745**	**3,421,912**	**3,609,526**

	Estimated opium production (tons)		
ROUNDED COUNTRY TOTAL OPIUM PRODUCTION (tons)	**3,200**	**3,400**	**3,600**

Annex 5



	Jan-97	Feb-97	Apr-97	May-97	Jun-97	Jul-97	Sep-97	Oct-97	Nov-97	Dec-97	Feb-98	Mar-98	Apr-98	Jun-98	Jul-98	Aug-98	Sep-98	Nov-98	Dec-98	Jan-99	Feb-99	Apr-99	May-99	Jun-99	Aug-99	Sep-99	Oct-99	Nov-99	Jan-00	Feb-00	Mar-00	Apr-00	Jun-00	Jul-00	Aug-00	Oct-00	Nov-00	Dec-00	Jan-01	Mar-01	Apr-01	May-01	Jun-01	Aug-01	10-Sep	15-Sep	10-Oct	15-Oct	28-Oct	01-Nov	19-Nov	15-Dec	Jan-02	Feb-02	14-Apr	25-Apr	07-May	20-May	09-Jun	Jun-02	Jul-02	09-Sep	23-Sep	01-Oct	Nov-02	Dec-02
Nangarhar			102	108	114	91	97	86	83	66	76	95	70	83	54	55	63	96	101	116	100	80	91	86	62	61	40	38	41	43	46	44	38	44	87	124	107	159	173	367	383	398	368	657	700	194	134	190	210	327	343	316	423	409	583	361	381	444	514	514	380	418	434	450	481	524
Kandahar							33	33	30	34	53	41	38	44	49	67	54	54	56	59	60	45	43	41	39	36	33	31	31	30	29	30	31	35	78	70	61	101	128	205	260	270	250	446	650	180	150	327	270	340	364	275	407	395	450	385	304	380	480	436	422	370	414	430	538	556
average			68	71	74	62	65	60	57	50	65	68	54	64	51	61	59	75	79	87	80	62	67	63	51	49	37	34	36	37	38	37	35	39	82	97	84	130	150	286	322	334	309	551	675	187	142	259	240	334	354	296	415	402	517	373	343	412	497	475	401	394	424	440	510	540

Sources: UNODC Field Office, ICMP.

Annex 6 (Page 1 of 3)
2002 Afghanistan opium prices (US$/kg)

Province	District	*Former district reference*	2001 Dry	2001 Fresh		2002 Dry	2002 Fresh	2002 Dry	2002 Fresh
						May		July-August	
Badakhshan	Baharak	*Baharak*	397	238		274		250	200
	Fayzabad	*Faizabad*	353	281		230		260	210
	Ishkashim	*Eshkashem*						220	190
	Jurm	*Jurm*	398	327		207	80	297	228
	Kishim	*Keshem*	392	326		275			
	Shahri Buzurg	*Shahr-e-Bozorg*	286	339		270			
Badakhshan average			**365**	**302**		**238**	**80**	**257**	**207**
Badghis	Ghormach	*Ghowrmach*	174			514			
	Murghab	*Morghab*	174			649	431		
Badghis average			**174**			**595**	**431**		
Baghlan	Andarab	*Anderab*	242	201		327			
	Baghlan	*Baghlan*	206				202		
	Dahana-I- Ghori	*Dahaneh-e-Ghowri*	197						
	Puli Khumri	*Pul-e-Khumri*	205			274	215		
Baghlan average			**212**	**201**		**312**	**208**		
Balkh	Balkh	*Balkh*	237	201		137	103		
	Chahar Bolak	*Char Bulaq*	235			172			
	Chimtal	*Chemtal*	239			158	98		
	Dihdadi	*Dehdadi*				236	176		
	Nahri Shahi	*Naher Shahi*	250			210	145		
	Sholgara	*Shulgarah*	213			200	151		
Balkh average			**235**	**201**		**179**	**123**		
Faryab	Bilchiragh	*Belcheragh*	180			346			
	Maymana	*Meymaneh*	175						
	Pashtun Kot	*Pashtun Kowt*	186						
	Qaysar	*Qeysar*	161						
	Shirin Tagab	*Shirin Tagab*	164						
Faryab average			**173**						
Ghazni	Ajristan	*Ajristan*	360						
Ghazni average			**360**						
Ghor	Chaghcharan							349	331
	Pasaband							352	331
	Shahrak							353	332
	Taywara							346	321
Ghor average								**349**	**328**
Helmand	Baghran	*Baghran*	237					394	370
	Dishu	*Deh Shu*							
	Garmser	*Garmser*	259					437	396
	Kajaki	*Kajaki*	257					407	370
	Lashkar Gah	*Bust*	234					426	389
	Musa Qala	*Musa Qala*	236					437	400
	Nad-e-Ali	*Nad-e-Ali*	268					426	389
	Nahri Sarraj	*Nahr-e-Saraj*	242					426	389
	Naw Zad	*Naw Zad*	265					433	385
	Naway Barakzayi	*Nawa Barakzai*	277					437	396
	Reg	*Khan Neshin*						437	396
	Sangin	*Sarban Qala*	247					407	370
	Washer	*Washir*						407	370
Helmand average			**252**					**423**	**385**
Herat	Obe	*Obey*	335						
	Pashtun Zarghun	*Pashtun Zarghun*	331						
	Shindand	*Shindand*	342						
	Zinda Jan	*Zendeh Jan*	314						
Herat average			**327**						
Jawzjan	Aqcha	*Aqchah*	169			88	68		
	Faysabad	*Faizabad*	230			152	108		
	Khamyab	*Khamyab*	194			56	44		
	Mardyan	*Mardian*	217			42	43		
	Mingajik	*Manga Jek*	198			92	66		
	Qarqin	*Qarqin*	195			76	46		

Source: UNDCP/ICMP Afghanistan Opium Survey 2002

Annex 6 (Page 2 of 3)
2002 Afghanistan opium prices (US$/kg)

Province	District	*Former district reference*	2001 Dry	2001 Fresh		2002 Dry	2002 Fresh	2002 Dry	2002 Fresh
						May		July-August	
	Shibirghan	*Sheberghan*	176			41	41		
Jawzjan average			**194**			**100**	**61**		
Kabul	Surobi	*Sarobi*	362						
Kabul average			**362**						
Kandahar	Arghandab	*Arghandab*	316						
	Ghorak	*Ghorak*	234						
	Kandahar	*Qandahar+Dand*	245						
	Khakrez	*Khakrez*	262						
	Maywand	*Maiwand*	288						
	Panjwayi	*Panjwai*	257						
Kandahar average			**270**						
Kapisa	Tagab	*Tagab*	403						
Kapisa average			**403**						
Khost	Tani	*Tani*	325	291					
Khost average				**291**					
Kunar	Bar Kunar	*Bar Kunar*	302	155					
	Chawkay	*Chawki*	370	200					
	Narang	*Narang*	301	187					
	Nurgal	*Mazar (Nur Gul)*	354	188					
	Pech	*Peche*	373	268					
Kunar average			**339**	**200**					
Kunduz	Ali Abad	*Aliabad*	210			243	118		
	Chahar Dara	*Chahar Darreh*	234			250	107		
	Kunduz	*Kunduz*	219			263	149		
	Qalay-I- Zal	*Qala-e Zal*	236			225	112		
Kunduz average			**229**			**247**	**125**		
Laghman	Alingar	*Alingar*	404						
	Alishing	*Alishang*	318						
	Dawlat Shah	*Dowlat Shah*	365						
	Mihtarlam	*Metarlam*	336						
	Qarghayi	*Qarghai*	350						
Laghman average			**354**						
Nangarhar	Achin	*Achin*	330					388	341
	Bati Kot	*Bati Kot*	331					410	336
	Chaparhar	*Chaparhar*	317					385	344
	Dara-I-Nur	*Darae Noor*	282					378	334
	Dih Bala	*Deh Bala*	335					378	332
	Dur Baba	*Durbaba*	329					388	340
	Goshta	*Goshta*	350					391	343
	Hisarak	*Hesarak*	297					340	240
	Jalalabad	*Behsud+Jalalabad*	355					385	344
	Kama	*Kama*	348					385	338
	Khogyani	*Khogiani*	301					490	350
	Kuz Kunar	*Kuz Kunar*	303					378	334
	Lal Pur	*La'lpur*	346	188					
	Muhmand Dara	*Mohmand Dara*	379					422	337
	Nazyan	*Nazian*	396					378	341
	Pachir Wa Agam	*Pachier wa Agam*	315					398	344
	Rodat	*Rodat*	347					385	337
	Sherzad	*Sherzad*	304						
	Shinwar	*Shinwar*	321					478	351
	Surkh Rod	*Sorkh Rod*	312					390	310
Nangarhar average			**330**	**188**				**397**	**333**
Nimroz	Chahar Burjak	*Char Borjak*							
	Kang	*Kang*							
	Khash Rod	*Khash Rud*	378						
Nimroz average			**378**						
Paktya	Azra	*Azro*	389	292					
Paktya average			**389**	**292**					
Samangan	Dara-I- Suf	*Darae Souf*	240	207		386			

Annex 6 (Page 3 of 3)
2002 Afghanistan opium prices (US$/kg)

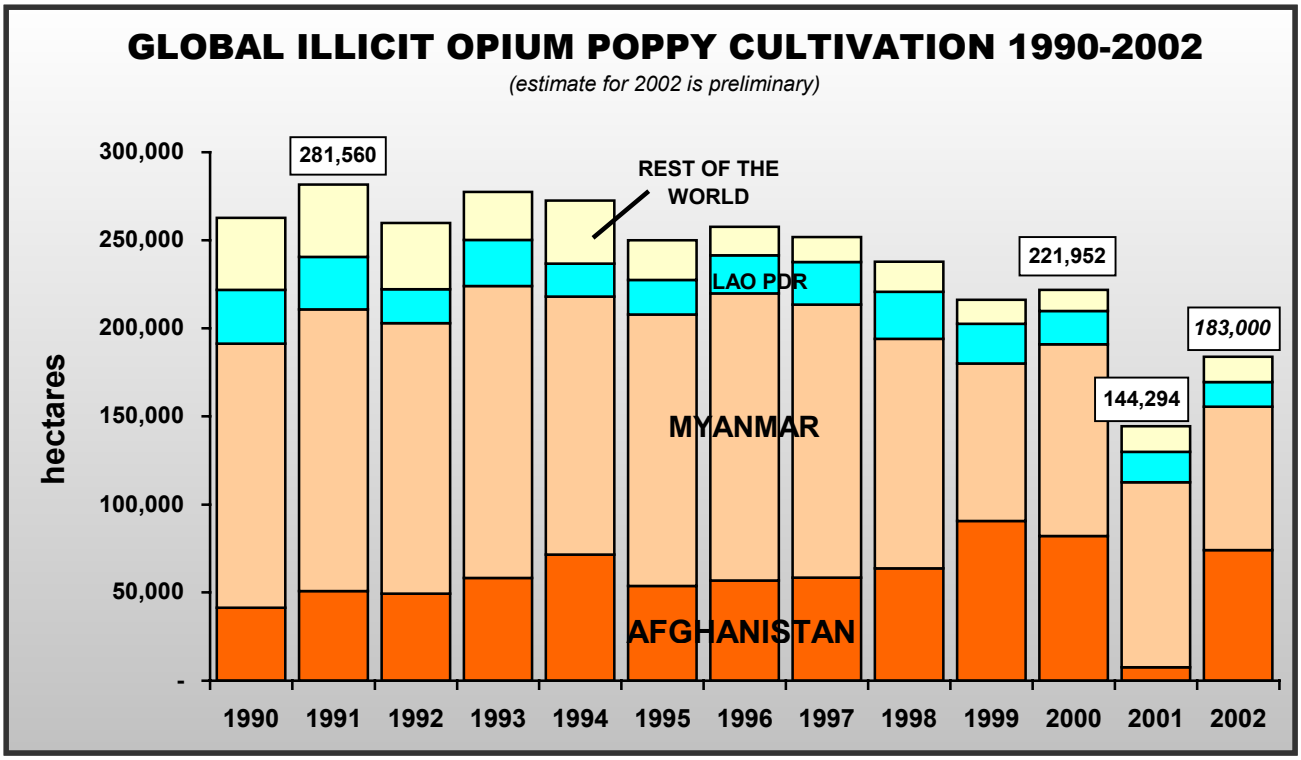
Province	District	*Former district reference*	2001 Dry	2001 Fresh		2002 Dry	2002 Fresh	2002 Dry	2002 Fresh
						May		July-August	
	Khuram Wa Sarbagh	*Khuram+Samanga*	339			299			
Samangan average			**290**	**207**		**328**			
Sari Pul	Sangcharak	*Sar-e Pol*	175			169	125		
Sari Pul average			**175**			**169**	**125**		
Takhar	Bangi	*Bangi*	235						
	Chah Ab	*Chah Ab*	246	100					
	Chal	*Chal*	223	151					
	Farkhar	*Farkhar*	251	113					
	Ishkamish	*Eshkamesh*	222	73					
	Kalafgan	*Kalafgan*	232	141		223	171		
	Khwaja Ghar	*Khvajeh Ghar*	233	110		202	185		
	Rustaq	*Rostaq*	253	141					
	Taluqan	*Taloqan*	235	90					
	Warsaj	*Warsaj*	238	100					
	Yangi Qala	*Yangi Qala*	251	111					
Takhar average			**238**	**113**		**216**	**176**		
Uruzgan	Chora	*Chora*	307						
	Day Kundi	*Dai Kundi*							
	Dihrawud	*Dehrawud*	259						
	Gizab	*Gezab*	292						
	Khas Uruzgan	*Khas Oruzgan*	254						
	Kijran	*Kajran*	269						
	Nesh	*Nesh*	291						
	Shahidi Hassas	*Char Chashma*	262						
	Shahristan	*Shahrestan*	271						
	Tirin Kot	*Tirin Kot*	248						
Uruzgan average			**280**						
Zabul	Arghandab	*Arghandab*	276						
	Daychopan	*Dai Chopan*	274						
	Mizan	*Mizan*	253						
	Qalat	*Qalat*	258						
	Shahjoy	*Shah Juy*	264						
	Tarnak Wa Jaldak	*Jaldak*	255						
Zabul average			**264**						

Annex 7

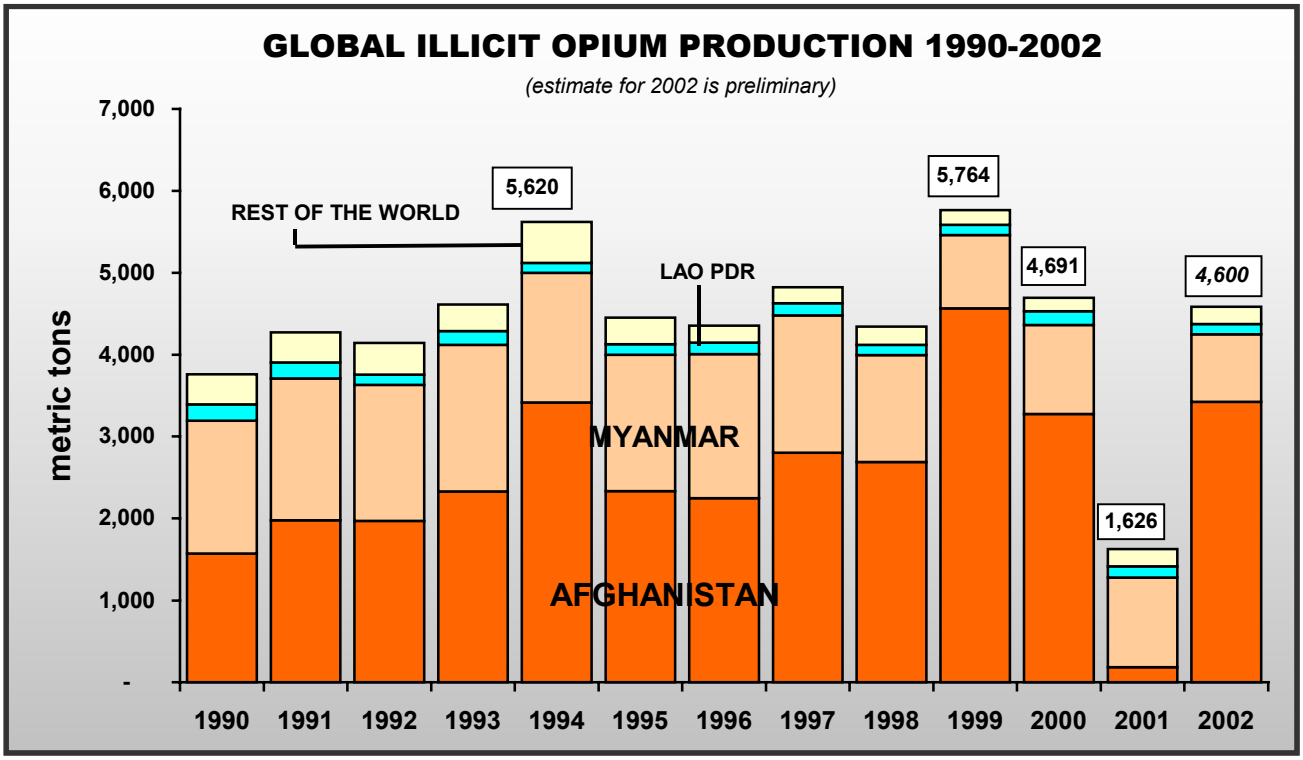
Heroin prices per gram in Afghanistan, neigbouring countries and Europe in US dollars in 2001																	
		Retail Level								Wholesale Level							
		Min	Max	Ave.	Price	P.min	P.max.	Ave.	Purity	Min	Max	Ave.	Price	P.min	P.max.	Ave.	Purity
Afghanistan (2001-Field office)	**Heroin**									**0.7**	**0.9**	**0.8**	**0.8**				
Afghanistan (2002)	***brown***									*1.4*	*2.6*	*2.0*	*2.0*				
Afghanistan (2002)	***white***											*3.9*	*3.9*				
Pakistan	Heroin No. 3	1.0	1.3	1.2						0.9	1.1	1.0					
	Heroin No. 4	1.5	2.0	1.8	**1.5**					3.9	4.7	4.3	**2.7**				
Iran (ARQ/Field Office)	Heroin			2.3	**2.3**	5.0	10.0	7.5	**7.5**	2.9	3.8	3.3	**3.3**	60.0	70.0	65.0	**65.0**
India (R2000-W2001)	Heroin	2.7	7.3	5.0	**5.0**					2.2	8.6	5.4	**5.4**				
Tajikistan	Heroin	5.0	9.0	7.0	**7.0**					1.0	5.0	3.0	**3.0**				
Uzbekistan (2000)	Heroin	5.0	10.0	7.5	**7.5**					1.5	5.0	3.3	**3.3**				
Kyrgyzstan	Heroin	4.0	6.0	5.0	**5.0**	4.0	6.0	5.0	**5.0**	3.2	4.5	3.9	**3.9**				
Turkmenistan (Field office)	Heroin	9.0	18.0	13.5	**13.5**					9.0	18.0	13.5	**13.5**				
Kazakhstan (R.UN source/W. Field office)	Heroin	17.0	20.0	18.5	**18.5**							8.0	**8.0**				
Countries neighbouring Afghanistan (average)		**5.7**	**9.2**		**7.5**	**4.5**	**8.0**		**6.3**	**3.1**	**6.3**		**5.4**	**60.0**	**70.0**		**65.0**
Turkey	Heroin	15.0	20.0	17.5	**17.5**					4.5	7.0	5.8	**5.8**				
Bulgaria	Heroin			9.2	**9.2**	12.0	18.0	15.0	**15.0**	5.5	6.9	6.2	**6.2**	55.0	72.0	63.5	**63.5**
Romania	Heroin			14.0	**14.0**							8.0	**8.0**	15.0	50.0	32.5	**32.5**
Yugoslavia	Heroin	24.7	44.8	34.8	**34.8**	5.0	15.0	10.0	**10.0**	16.1	30.5	23.3	**23.3**				
Croatia	Heroin	41.5	53.3	47.4	**47.4**	10.0	15.0	12.5	**12.5**	16.0	17.8	16.9	**16.9**	50.0	80.0	65.0	**65.0**
Slovenia	Heroin			44.0	**44.0**							12.6	**12.6**				
Hungary	Heroin	20.5	30.7	25.6	**25.6**	0.4	60.0	30.2	**30.2**	8.5	11.9	10.2	**10.2**	7.0	75.0	60.0	**60.0**
Slovak Rep. (R2000-W2001)	Heroin	17.3	26.2	21.8	**21.8**	5.0	12.0	8.5	**8.5**	8.3	12.5	10.4	**10.4**	20.0	90.0	55.0	**55.0**
Czech Rep.	Heroin	20.7	25.9	23.3	**23.3**	10.0	40.0	25.0	**25.0**	15.5	20.7	18.1	**18.1**	45.0	75.0	60.0	**60.0**
Balkan-route countries (average)		**23.3**	**33.5**		**26.4**	**7.1**	**26.7**		**16.9**	**10.6**	**15.3**		**12.4**	**32.0**	**73.7**		**56.0**
Russia	Heroin	25.0	30.0	27.5	**27.5**	6.0	12.0	9.0	**9.0**	20.0	25.0	22.5	**22.5**				
Belarus (2000)	Heroin	30.0	40.0	35.0	**35.0**	30.0	60.0	45.0	**45.0**	20.0	25.0	22.5	**22.5**				
Estonia	Heroin	45.6	85.6	65.6	**65.6**	3.0	100.0	12.5	**12.5**	4.6	8.6	6.6	**6.6**	3.0	100.0	51.5	**51.5**
Latvia	Heroin	32.1	80.4	56.2	**56.2**					3.2	8.0	5.6	**5.6**				
Lithuania	Heroin	35.0	45.0	40.0	**40.0**	0.1	10.0	4.0	**4.0**	20.0	35.0	27.5	**27.5**	40.0	89.0	60.0	**60.0**
Poland	Heroin	50.4	75.6	63.0	**63.0**					25.2	30.3	27.7	**27.7**				
Moldova	Heroin			30.0	**30.0**			80.0	**80.0**			30.0	**30.0**			60.0	**60.0**
Ukraine	Heroin	60.0	100.0	80.0	**80.0**	3.0	75.0	12.5	**12.5**	32.0	152.0	92.0	**92.0**	3.0	75.0	39.0	**39.0**
Other East European countries (average)		**39.7**	**65.2**		**49.7**	**8.4**	**51.4**		**27.2**	**17.9**	**40.5**		**29.3**	**15.3**	**88.0**		**52.6**
Italy	Heroin No. 3	54.7	68.3	61.5						25.2	29.6	27.4				35.0	**35.0**
	Heroin No. 4	70.4	80.1	75.3	**68.4**					36.4	40.7	38.5	**33.0**				
UK	Heroin	57.6	115.2	86.4	**86.4**	43.0	51.8	47.4	**47.4**	23.0	28.8	25.9	**25.9**	38.2	53.8	46.0	**46.0**
Germany	Heroin	21.4	54.8	38.1	**38.1**			19.0	**19.0**	11.9	23.8	17.8	**17.8**				
Austria	Heroin	38.6	52.0	45.3	**45.3**	1.0	55.0	20.0	**20.0**	13.0	26.1	19.6	**19.6**	20.0	83.0	51.5	**51.5**
Switzerland	Heroin	17.5	128.7	73.1	**73.1**	3.0	52.0	27.5	**27.5**	11.7	20.5	16.1	**16.1**	11.0	65.0	38.0	**38.0**
France	Heroin	26.9	40.4	33.6	**33.6**			21.0	**21.0**	13.5	40.4	26.9	**26.9**				
Belgium	Heroin	19.0	35.7	27.3	**27.3**	2.0	65.0	21.9	**21.9**	16.7	23.9	20.3	**20.3**				
Denmark	Heroin No. 3	35.9	119.6	77.7						17.9	47.8	32.9					
	Heroin No. 4	95.7	191.4	143.5	**110.6**					59.8	95.7	77.7	**55.3**	10.0	82.0	48.5	**48.5**
Sweden	Heroin No. 3	99.1	148.7	123.9						19.8	29.7	24.8					
	Heroin No. 4	99.1	198.2	148.7	**136.3**					59.5	79.3	69.4	**47.1**				
Finland	Heroin No. 4	89.7	152.5	121.1	**121.1**			20.0	**20.0**			44.8	**44.8**				
Norway	Heroin	89.7	224.2	157.0	**157.0**	10.0	80.0	45.0	**45.0**	26.9	44.8	35.9	**35.9**	10.0	80.0	45.0	**45.0**
Spain	Heroin			56.7	**56.7**			34.0	**34.0**			32.0	**32.0**			71.0	**71.0**
Portugal	Heroin			45.1	**45.1**	10.3	63.7	37.0	**37.0**			31.3	**31.3**				
Greece	Heroin No. 3									10.8	18.8	14.8					
	Heroin No. 4	39.5	67.3	53.4	**53.4**	8.0	35.0	21.5	**21.5**	13.5	23.3	18.4	**16.6**	65.0	81.0	73.0	**73.0**
Cyprus	Heroin	92.9	154.9	123.9	**123.9**					31.0	38.7	34.9	**34.9**				
Malta	Heroin			67.8	**67.8**			20.0	**20.0**			45.2	**45.2**			60.0	**60.0**
West European countries (average)		**59.2**	**114.5**		**77.8**	**11.0**	**57.5**		**27.9**	**24.4**	**38.2**		**31.4**	**25.7**	**74.1**		**52.0**

Sources: UNDCP, Annual Reports Questionnaire, UNODC Field Offices, Govt. Reports.

Annex 8



Source: UNDCP, *Global Illicit Drug Trends 2002*, for years 1990-2001; Lao/UNDCP 2002 opium survey report for 2002 data on Lao PDR, Myanmar/UNDCP 2002 opium survey report for data on Myanmar. Data for the rest of the World is based on 2001 estimates as 2002 estimates are not yet available.



Source: UNDCP, *Global Illicit Drug Trends 2002*, for years 1990-2001; Lao/UNDCP 2002 opium survey report for 2002 data on Lao PDR, Myanmar/UNDCP 2002 opium survey report for data on Myanmar. Data for the rest of the World is based on 2001 estimates as 2002 estimates are not yet available.