

**MODELING THE WORLD HEROIN MARKET:  
ASSESSING THE CONSEQUENCES OF CHANGES  
IN AFGHANISTAN PRODUCTION**

Project Summary  
for The Netherlands Ministry of Justice  
and its Scientific Research and Documentation Centre (WODC)

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## **Introduction**

The operation funded by the Netherlands Ministry of Justice and its Scientific Research and Documentation Centre (known as WODC from its Dutch acronym) was part of a larger project, addressing the economics of the world opiate market and the consequences of changes in Afghan opium production, that was coordinated and conducted jointly by the Max Planck Institute for Foreign and International Criminal Law (MPI) in Freiburg, Germany and the RAND Drug Policy Research Center and Infrastructure, Safety, and Environment Public Division (RAND) in the United States.

Multiple sponsors contributed funding to the larger project. RAND secured financial support from a private foundation in the United States, the Smith Richardson Foundation. The overall project began on April 1, 2002, when the MPI obtained matching funds from the Netherlands Ministry of Justice and the WODC. In addition to the financial support of the Dutch ministry, the MPI also received funds from the United Kingdom Foreign and Commonwealth Office. The first phase of funding of the Dutch Ministry of Justice and the WODC ended on March 31, 2003. A second one-year funding began on October 1, 2003, which was subsequently extended up to December 31, 2004.

We gratefully acknowledge the financial support received by the Dutch Ministry of Justice, the WODC and the other sponsors as well as the advice, data and logistic assistance received from the representatives of these and other institutions, who were members of the project advisory board. Among the latter group of institutions there were Interpol, the German Bundeskriminalamt and GTZ (Gesellschaft für Technische Zusammenarbeit) and the U.S. Office of National Drug Control Policy.

The present document describes the project objectives and methods and summarizes its key findings. It has not been subject to RAND's regular research quality assurance process. Final editorial control rests with the MPI. A book presenting in detail the project findings will be published in the course of 2007 by Oxford University Press. The proposed book title is: *Can World Heroin Production Be Cut? Learning from the Taliban Opium Poppy Ban*. Until the book is published, any research findings related to the project, including those contained in this summary, should be considered preliminary.

## 1. Background

Throughout the twentieth century there has been a substantial global trade in prohibited drugs derived from the opium poppy, *papaver somniferum*. In the first half of the century the principal product consumed was opium and the trade was firmly centered on Asia, with China, Indonesia and Iran as the principal markets. After the Second World War China and Indonesia became quite small markets following the emergence of new nationalistic governments. By the last quarter of the century illegal opium, now mostly refined into the strong form of heroin, was being sold in many countries in all continents except Africa.

While the most striking change in the market was in the distribution of users across nations and in the forms of opiates used, there were also important changes in the geographic distribution of production. During the last quarter of the twentieth century some major producers gradually dropped out of the market, as the result of policy changes and/or of increasing wealth; Pakistan, Thailand and Turkey are the most prominent in this category. Production became increasingly concentrated in two Asian nations, Afghanistan and Burma (now officially called Myanmar).<sup>1</sup>

During the 1990s the concentration increased still further. In 1999, Afghanistan alone accounted for almost 80 percent of the global total. Moreover, whereas in earlier eras the producing countries exported primarily opium, with refining into morphine and heroin occurring further downstream, there was a shift to heroin production in Afghanistan and Burma, capturing more of the revenues and value added (though still less than five percent of the total) for those countries.

In July 2000, the Taliban regime announced, for the third time, a ban on opium poppy cultivation, rooted in its interpretation of Koranic teachings.<sup>2</sup> Initially greeted with skepticism (partly because it did not include trafficking or refining), by early 2001 there was considerable

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<sup>1</sup> In 1989 the military government changed the name of Burma to Myanmar. Using either Burma or Myanmar has since become a highly politicized issue. The UN system uses Myanmar, but for the sake of consistency, we have chosen to use Burma throughout the book, as many of the events referred predate 1989. Moreover, Burma is still the term most frequently used in the large majority of English-language press and other publications.

<sup>2</sup> A first ban on heroin and opium was promulgated by the Taliban in October 1997 apparently in exchange for an alternative development package promised by the UNDCP. It did not include explicit reference to religious doctrine and was never implemented. In September 1999, the Taliban issued a decree ordering all poppy farmers to reduce their cultivation by one third, which was put in force only very limitedly (UNDCP, 2001 and TNI, 2005).

evidence that Afghanistan's opium acreage had declined dramatically, to less than 10 percent of the 2000 figure. Total world opium production plummeted from 4,690 tons in 2000 to only 1,600 tons in 2001, a 65 percent drop. Prices for opium and heroin in Afghanistan and its near neighbors shot up in the twelve months following the ban.

The ban was kept in place even after the beginning of the American bombing campaign following the terrorist attacks of September 11, 2001. It is true that after those attacks wholesale opium prices in Afghanistan and its neighboring countries sharply fell. But, with the ban still in force, only limited amounts of poppies were sown in the chaotic weeks of the transition fostered by the American-led bombing campaign. The U.S. military attacks, which were particularly heavy around Kandahar, an important opium-growing region, further disrupted the business. Nonetheless, by 2002 Afghan production had recovered to mid-1990s levels and in 2004 it reached a level exceeded only by the record 1999 crop. Due to this growth and the parallel, sharp reduction of opium production in Burma, Afghanistan accounted for an astonishing 87 percent of global production in 2004.

## **2. Motivating Questions and Research Methods**

Understanding the consequences of the Afghan cutback was the initial motivation of the project underlying this book and it has remained one of its major goals. The ban now appears simply as a footnote in history; there are few notable differences between the world opiate market of 2004 and that of 2000, before the implementation of the ban. However there is potentially a great deal to be learned from analysis of how the market responded to the ban and accompanying reduction in output. For the Taliban accomplished what has been the goal of national and international drug policy agencies for many years, namely a very large, rapid and unanticipated reduction in world opium production. Ex post one can say that one year is not a long enough supply interruption to make a difference but that was certainly not the claim beforehand. Just as the oil shocks of the 1970s provided valuable insight into characteristics of demand and supply of the world energy market, so the cutback of opium production provides insights about the world opiate market.

The study aimed to learn more about the dynamics and patterns of the international market for heroin and other illicit opiates. In particular, we sought to answer three questions:

- (1) What are the patterns of consumption, trafficking and earnings of illicit opiates across nations?
- (2) How did the cutback affect the flow of illicit opiates throughout the world market?  
Were there particular markets which witnessed price spikes and/or availability

shortages? How are the various production and transit countries affected by the opiate trade, economically, socially and politically?

- (3) Are there any prospects for interventions aimed at production and trafficking that can reduce (global, national or regional) consumption of heroin and other opiates?

To provide even rough answers to these questions required collection of data beyond the very small amount currently available, principally from the United Nations Office on Drugs and Crime (UNODC). For example, annual data on the illicit opiate markets are restricted to two principal series: production and seizure estimates by country. Consumption data are available for only a few countries on a continuing basis and are of low quality; indeed, for almost all countries such estimates are restricted to prevalence (an estimate of the number of users) rather than quantity consumed and they are not updated on an annual basis. For no country except the United States is there an annual series for quantity consumed and even for the United States, the series is not updated annually and subject to large revisions as a result of changes in estimating methods. Price data are also available in a few nations but only on an occasional basis, usually without purity, though much of price variation may be reflected in purity changes.

We recruited collaborators in eight nations that are important to understanding the global production and trafficking of opium and its derivatives: China, Colombia, India, Iran, Pakistan, Tajikistan, Thailand and Turkey. The collaborators were asked to collect additional data on production, trafficking and consumption, including price and purity (at wholesale and retail levels). These are difficult subjects to study even in democratic nations with relatively open governments and sophisticated data collection systems. They are exceptionally difficult subjects in nations which are closed, have weak data collection systems and little tradition of publishing policy-relevant data. Some of these nations are also plagued by systemic corruption involving high levels of government; that creates still further obstacles. Thus, despite their best efforts, our collaborators produced reports of uneven quality. Nonetheless, these reports provided useful quantitative and qualitative data about some important aspects of the world opiate market. These permitted a tighter description of the response to the 2001 cutback.

The three principal investigators were largely in charge of a more limited data collection in Europe. In addition to collecting and analyzing all available official, grey and scientific sources, we visited several drug-related policy making, law enforcement and academic institutions in Germany, Italy, the Netherlands and the United Kingdom, to collect data on the European heroin markets. Priority was given to data on prevalence, addict

consumption levels and prices, which are necessary to produce estimates of consumption and expenditures. Similar data were collected in France under our guidance by Nacer Lalam.

By comparing our own and the collaborators' findings and triangulating them with information drawn from other sources and our previous studies, we were able to start a much needed, systematic analysis of the world opiate market. Drug market research has been very limited outside Western countries and even in Europe and the United States it has not been carried out in a systematic fashion, so much so that overarching comparisons and the generalization of findings are quite problematic. Papers in Hough and Natarjan (2000) provide a sense of its limits.

The United Nations Development Research Institute for Social Development (UNRISD) sponsored nine country studies in the mid-1990s, summarized in Tullis (1995). In the late 1990s the United Nations Drug Control Program (UNDCP, now part of UNODC) launched a study on local illegal drug markets in seventeen non-Western European and non-North American cities. However, though the fieldwork was carried out on the basis of the same research protocol and the findings were thus potentially comparable, practical and organizational problems hindered the whole study and no final comparative analysis was ever published. Though praiseworthy for their synthetic representation of key data, the *Global Illicit Drug Trends Reports* and *World Drug Reports*, which have been published regularly by the UNDCP/UNODC for the past several years, have a predominantly descriptive, albeit primarily statistical, nature and have made limited comparisons across countries.

Aware of these knowledge gaps, we decided to fully exploit the potential of our collaborators' reports and the more limited data collection carried out in Europe and thus began a comparison of the size and structure of national opiate markets in the countries selected, the behavior of their participants, and the general economic and political conditions within which the heroin exchanges take place. The data are incomplete, so the analysis is limited but we believe it adds useful insights.

In addition to these qualitative analyses, we developed a "flow model" of the world opiate market. One purpose of this model is to track the pattern of opiate flows across countries. It is impossible to analyze the behavior of the market without a benchmark quantitative description. The flow model, implemented first with data for the years 1996-2000 (the period preceding the effective ban), and second with data for 2001-2003 (the period including and immediately following the ban), imposes consistency on estimates of production, seizures and consumption and enables quantitative comparisons of the pre- and post-ban periods; it permits assessment of the potential for inventories. It also facilitates

estimation of the opiate trade's contributions to Gross Domestic Product. On the basis of the flow model, we offer an economically informed, but very speculative account of the behavior of the world market in heroin and other illicit opiates during and after the 2001 production ban.

### **3. Lessons and Policy Implications**

A number of broad conclusions emerge from our analysis; we have classified them into three categories; first, the world opiate market in general; second, the Taliban cutback; and third, the prospects for high-level supply-side policy interventions. These propositions address the three sets of questions that were raised at the beginning of the study.

#### ***Markets***

##### *1. The world opiate market is demand driven.*

The capacity to produce opium and to refine it is widely distributed even if actual production is not. The fact that just two countries— Afghanistan and Burma—dominate current production is no evidence that programs focused on those countries have much promise of reducing global production. The costs of production (both growing and refining) are a very small share of the retail price even in middle income countries and many countries have adequate growing conditions. Thus, distributors can offer higher prices to farmers in poor countries other than Afghanistan and Burma that will induce those nations to enter the opium production and refining business, with minimal long-term effect on retail price and availability. Only institutional constraints, and particularly the strength and effectiveness of the domestic state authorities, may prevent a country with adequate growing conditions from entering into this visible and bulky illegal activity. However, there are enough weak states in the world to hypothesize that a number of nations could in the medium-run substitute for Afghanistan and Burma, if these two manage to reduce substantially their illicit opium production. The cliché that so long as the demand for an addictive drug exists there will be a supply is thus reasonably accurate as a long-run condition.

##### *2. Opiate consumption is sticky downwards.*

There are no instances of a nation achieving sharp reductions in heroin consumption in a few years. At the level of the individual user, there is substantial evidence that those who have been addicted for a few years have difficulty sustaining long-term desistance. It is hard to find any nation that, after a major heroin epidemic, has reduced consumption by as much as one third in ten years, even where reasonable quality treatment is readily available.



A few Asian countries have had more success in curbing their opium consumption. However by doing so, many of them—with the notable exceptions of China and Indonesia—have inadvertently prompted a partial shift from opium to heroin. Pakistan, Iran and Thailand, but to a lesser extent also India, are the most significant examples of such a trend.

*3. Changes for the worse can take place very rapidly.*

Evidence shows that whereas changes for the better are difficult to achieve with democratic means, the market can change rapidly for the worse. In 1994 Colombia entered the world heroin market. Its production level in that year put it immediately among the second-tier producers (including Laos and Mexico), and it has maintained that status in the following ten years. Russia, a minor consumption market in 1995, became one of the largest in the world by 2000. Central Asia saw the emergence of a major heroin problem, both consumption and trafficking, at the same time.

Each of these events can be explained *ex post*. Colombia had excess capacity in drug smuggling as the U.S. cocaine market stagnated and also had a myriad of illegal enterprises with general smuggling capabilities. It took no great imagination to try poppy planting in various parts of the country. Russia was undergoing rapid and painful transition to a democratic market economy; an epidemic of illegal drug use is not historically rare at such times. Russia was most efficiently supplied through Central Asia, given migration patterns and the minimal border controls between the Central Asian republics and Russia; transshipment is a risk factor for a heroin epidemic.

However these explanations for the specific observations help make the general point. There are many countries that might enter the trade at short notice, whether in production, trafficking or consumption.

*4. The ineffectiveness of domestic state authorities in enforcing prohibition is the most important factor to explain where illicit opium production is located.*

Countries with little or no enforcement of prohibition or with (quasi-)state authorities supporting illegal business have a key competitive advantage in attracting the most visible and bulkiest phases of the illegal opiate trade. Afghanistan and Burma, which have since the early 1980s been responsible for 70 to 95 percent of the world opium supply, both fully meet this key condition.

*5. Proximity to major producing and consuming countries and strong commercial and demographic connections are key for determining which nations become the principal transit nations.*

As much as production, trafficking is strongly enhanced by state weakness and the non-enforcement of the global prohibition regime. However, other factors also need to be taken into account to determine which countries will become transit ones. Proximity to either key producing or consuming nations is an important factor as the examples of Thailand and—more recently—Tajikistan, on the one hand, and Mexico, on the other, indicate. Illicit trades in opiates (or other illegal commodities) are also strongly enhanced by the legitimate trade and/or migration flows in which they can merge and hide. Countries having such commercial or migratory ties with key consuming countries are at a competitive advantage in attracting trafficking in opiates. For example, Tajikistan's competitive advantage to service the expanding heroin market in Russia was further enhanced by the large diaspora of its citizens in that country (and by the weakness of its state authorities).

As the pipelines of regular commerce and traffic change, so do the channels of drug trafficking. For example, as a result of changes in immigration policies in Australia there is now a large population of Chinese and Vietnamese. This has created new routes of trafficking to the Australian heroin market. The relevance of geographical proximity and intense commercial and migratory ties with either producing or consuming countries is also confirmed by the case of Africa. Despite the weakness and ineffectiveness of most African governments, no African country has so far attracted substantial illicit opiate trafficking (though some African nationals, and particularly the Nigerians, are extensively involved in overseas trade).

*6. Trafficking is a risk factor for consumption but it is not a predictor of consumption.*

Though there are instances in which trafficking has generated large domestic consumption problems there are equally striking counter-examples. The nations of Central Asia, with limited traditions of opium consumption, have experienced near-catastrophic epidemics of heroin addiction and AIDS. On the other hand Mexico, though it has been for some decades the principal foreign source of heroin and three other drugs (cocaine [trafficking only], marijuana and methamphetamine) for the large U.S. market, has had quite a modest domestic consumption problem. Turkey, a nation with a long tradition of opium use and principal conduit of heroin to Western European markets, has never experienced a major heroin epidemic.

***The Taliban Cutback***

*1. The Taliban cutback effects on the international markets were modest and lagged.*

The sudden and unanticipated cutback in Afghanistan's opium production in 2001 initially appeared to be the shot that was not heard around the world that year. There was no discernible supply-side response, i.e., no other country increased production of heroin substantially and no new producer entered the market. There was little indication of substantial decline in consumption in 2001. Only a few regional markets saw price increases. Instead it appears that there was sufficient inventory to meet existing world demand and it did indeed enter the market.

A longer-term analysis yields a notably different picture. The effects of the cutback persisted long after the fall of the Taliban in late 2001. Opium prices in Afghanistan peaked not then but only in January 2003. Correspondingly, there are signs that in Western Europe, the consequences were felt only in 2002 and 2003. However these lagged effects were modest compared to the initial shock, consistent with a model in which inventories are large and raw material costs small.

*2. The Taliban cutback provided empirical evidence that the world opiate market is segmented.*

The dramatic reduction of Afghanistan's opium output in 2001 had no detectable effect in the large U.S. market and appears not to have influenced China or Thailand, two major destinations for Burma's production. The sharp decline in Australian heroin availability in early 2001 is so different in timing from that in any other downstream market that it cannot plausibly be attributed to the cutback in Afghanistan.

The 2001 sharp decline in Afghanistan production did not increase the demand for heroin from other markets. Certainly Latin American producers were unaffected by fluctuations in Asian production. Our analysis suggests that there may be links between Afghanistan and Burma/Laos but that they are most likely weak and lagged.

*3. Inventories were substantial.*

The only plausible explanation for the modest price increases and lack of substantial disruptions even in markets primarily serviced with Afghan heroin in 2001 is that there were very large inventories in Afghanistan at the time of the ban. There is no authoritative account of why inventories were so large or who was holding them; the claim that the ban was imposed by the Taliban as a way of propping up the price of their stockpile has not been supported by any documentation. Just as inventory depletion dampened the initial effects of the cutback, so rebuilding inventory may have led to a relatively slow decline in prices after production returned to peak levels in 2002 and 2003. It is, however, difficult to account for the fluctuations in opium prices in the post-2001 era with simple models.

The existence of large inventories complicates the task of creating short-term shortages through shock interventions.

### ***Policy***

*1. Effective long-term production interventions will be rare; to succeed they require a long-term perspective and the support of the international community.*

A conditioning reality for interventions in the world opiate market is that cultivating opium is entrenched in the normal life and legitimate economy of millions of people. Those few cases in which very substantial reductions in production have been achieved quickly (five years or less) involve high levels of coercion by an authoritarian regime or quasi-state. No matter how sensational the results of the one-year cutback engendered by the Taliban are, the circumstances under which they were able to reduce production by 90 percent in a year are not ones which responsible international agencies or democratic governments are willing, or ought to be willing, to encourage. The state must persuade a population of farmers to shift to other activities through a mixture of positive incentives and threats that fall within the framework of a transparent and honest system of criminal and civil sanctions. These are difficult objectives for the governments of impoverished nations, with weak institutions and claims to legitimacy. However, there are no democratic alternatives to this difficult and long-term path and international agencies and foreign governments should provide adequate and long-term support to countries involved, simultaneously fostering alternative development and law enforcement.

*2. Once it is established, drug trafficking is quite robust.*

The programmatic and rhetorical focus of supply-side international efforts has been on nations that grow poppies and refine opium. However trafficking nations are comparably important and in some of them the conditioning realities are the same. In a small number of countries, most prominently Tajikistan, trafficking involves large numbers of low-level participants for whom this activity is the best available economic pursuit, though leaving them little better off than their neighbors and with little sense of guilt since those that they are harming are far away in richer nations. In other, somewhat richer nations, such as Turkey, trafficking may be important in poor regions where economic opportunities are particularly weak.

Trafficking organizations can acquire specific expertise and relational capital that allows them to function more efficiently than potential competitors in other countries. The national industry may be advantaged relative to other newcomers.

Trafficking has also proven no more amenable to control than production. In some countries, Tajikistan again being the outstanding current example, there is no political will to crack down on the activity because of its importance to so many impoverished communities. Trafficking persists even in countries, such as Iran and China (both of which are major transshipment as well as consuming nations), that have aggressively attacked it.

*3. Policies can re-distribute the industry or at least production.*

Pessimism about the global effects of up-stream interventions aimed at production, refining and the early parts of the distribution chain, does not mean that individual producing and trafficking countries cannot benefit from them in the long run. As already mentioned, Thailand is an instance of a nation that has shifted from a substantial opium production to almost no production. However, strengthening the democratic institutions and the legitimate economy of a producing nation such as Afghanistan, Burma or Colombia could lead to a shift in production to other nations. Historically that may be the best interpretation of Thailand's success; Burma became a lower cost supplier even for Thailand's own opiates market.

*4. The segmentation of the world opiate market offers short to medium-term policy opportunities.*

Given the segmentation of the world opiate market, production cutbacks in one country can have large temporary effects in some markets even if global production is not much reduced. The ban on opium imposed by United Wa State Army in June 2005, following similar bans imposed by other, smaller, quasi-state authorities of northeastern Burma, may help China, Australia and other southeast Asian and Pacific market even if Afghanistan production expands.

The effects of such production cutbacks may not be long-lived, as new producers may spring up or trafficking routes may change within a few years. Nonetheless, for the time the market takes to adjust, there may be important windows of opportunity for consuming countries resulting from major supply disruptions, as indicated by the heroin drought in Australia since early 2001. Though heroin use is unlikely to be cut very substantially in the long run, the short term may record considerable reductions in heroin use and its related expenditure and harms as well as a converse increase in the number of users willing to enter treatment. However, the windows of opportunity opened by supply-side intervention must be weighted against the suffering and costs imposed on the farmers of opium-growing regions.

#### **4. Book Outline**

The book is organized in three parts. Part A discusses key facts and figures of the world opiate market. Part B presents seven studies of producing and transit countries and a major consuming one. Part C is devoted to theory, explanation and policy analysis.

Chapter II provides an overview of the world opiate market. In addition to a brief description of its historical evolution, several structural characteristics of the world opiate market are highlighted and the countries playing a key role in this industry—whether as producer, transit or consumer countries—are singled out.

Chapter III presents one of the main products of the study underlying this book: a model of the flow of drugs through the world opiate market. This is an accounting framework covering national and international transactions. We use the framework to compile and reconcile data on opiate cultivation and production, seizures, and consumption and to track opiate flows across countries and regions. It shows how much Asia dominates not just production but also global trafficking and consumption of opiates. It also shows how the immediate effects of the 2001 cutback were concentrated in Afghan's neighbors. The flow model analysis suggests that there may have been more than enough heroin/opium available to meet demand prior to 2001 and that market participants may have chosen to hold substantial inventory in the ordinary course of doing business. The model can also serve as a tool for assessing the effects of interventions in one country on others.

Chapter IV focuses on the market response to the dramatic cutback in Afghan opium production resulting from the Taliban ban. It shows that while the immediate effects of the cutback were moderate and largely limited to price increases in Afghanistan and the neighboring countries, there were unexpected longer-term effects in 2002 and 2003 in Europe. Such delayed reaction was most probably due to the presence of large inventories in Afghanistan: just as inventory depletion dampened the initial effects of the cutback, so rebuilding inventory may have prolonged those responses.

Part B includes studies of individual countries partially written by our collaborators. While interventions can be considered in general abstract terms, such as “alternative development” or “eradication”, these are programs and laws whose plausibility and effects depend on the specific context in which they operate. Producer and trafficking nations vary in many dimensions and it is that heterogeneity that is emphasized in the brief introductory essay for the section.

Chapter V and VI reconstruct how and why Afghanistan and Burma have achieved the current, unenviable, dominance in the world opiate industry. We stress the key and peculiar role played in the illicit drug economy of both countries by a variety of quasi-state authorities, such as the warlords fighting the Soviet invaders and then the Taliban in Afghanistan, as well as numerous rebel and government-sponsored militias in Burma. With their military means, these authorities have long forcefully promoted the expansion of the illegal opium industry. However in both contexts, quasi-state authorities have occasionally used their force and authority to engender dramatic reductions in opium production in the areas under their control. Besides the Taliban ban, similar prohibitions have been issued by several insurgent groups in Burma from the late 1990s onwards and most recently by the largest of them all, the United Wa State Army, and the effects and long-term sustainability of such initiatives are discussed in Chapter VI.

Chapter VII focuses on India, which might well be the third largest supplier to the world opiate market. The controls on its licit opium production, the largest in the world, are weak. We consider plausible, though conjectural, that as much as one third of officially sanctioned production seeps into the illicit market. Depending on the amount of licit production allowed, this would have generated 130 to 500 tons of illegally-traded opium in recent years, substantially more than any nation other than Afghanistan and Burma. The chapter has been written by Molly Charles, an Indian researcher, who carried out most of the primary data collection in India, together with Paoli.

Chapter VIII explains how, in less than a decade, Colombia has become a major producer of heroin and a major supplier of the North American heroin market. It is the only nation having entered the world opiate industry as a new supplier during the expansion of the heroin market in the late twentieth century and it did so without a tradition of opium production or consumption. The chapter was written by Sergio Uribe Ramirez.

After considering four major producers, we shift our attention to key transit and consumer countries in the second half of Part B. Chapter IX focuses on Tajikistan, reconstructing how and why this small landlocked country has become a key transit place for Afghan heroin. The three main factors are Tajikistan's long and ill-protected border with Afghanistan, its large immigrant population in Russia (the principal destination of its heroin exports) and the weakness of its state institutions. The chapter also investigates the impact of the drug trade on the legitimate economy and political system, concluding that it is central to both. Despite the limited number of convictions and scandals, both the government and the opposition are probably deeply involved in facilitating and taxing the smuggling trade. Their

extensive involvement coupled with the ineffectiveness of law enforcement agencies has made possible a rare event in the contemporary illicit drug industry: the emergence and consolidation of relatively large and integrated drug trafficking enterprises, which control an increasing share of the market. The chapter draws on the data and qualitative information ad hoc collected for the study by the Analytical Centre of the Tajik Drug Control Agency and a high-ranking Tajik law enforcement officer, who wishes to remain anonymous for security reasons. It has been drafted by Irina Rabkov and Paoli.

Chapter X constitutes an empirical application of the flow model to Central Asia, an area which has seen the emergence of a major heroin problem, both consumption and trafficking, since the collapse of the Soviet Union in 1991. By applying the framework presented in Chapter III we estimate the contribution of the drug trade to the Central Asian economy, arguing that Tajikistan rivals Afghanistan in being the country of the world most dependent on the drug trade. On the basis of our calculations, in fact, it is implausible that heroin trafficking accounts for less than 25 percent of recorded legitimate GDP and more likely that it accounts for one half.

Three chapters compose the last and more analytical Part C. Chapter XI, draws from the recognition that despite the worldwide prohibition regime, the production and trade in opiates (and in other illegal commodities as well) are subject to varying degrees of illegality, as the enforcement of prohibition is very different across countries. The chapter has two main theses, one factual and the other analytic. The factual thesis goes as follows: The effective degree of illegality to which opium and its derivatives are subject rises from producing areas in Asia — above all, Afghanistan and Burma but, to a lesser extent, also Laos and India — to the consumer markets in other Asian countries and in the developed world. The analytic thesis states: The effective degree of illegality to which illegal commodities are subject is the most important single factor to shape the organization of illegal markets and the behavior of their participants. It affects not only the a) sheer scale of the markets in a specific country and b) the location of their bulkiest and most visible operations, but also c) the risk assessments and thus the modus operandi of the entrepreneurs and d) the size and organization of the enterprises that are created.

Chapter XII presents in more detail the findings about the heroin market summarized in the previous section of this prospectus under the headings “Markets” and “Taliban cutback”. It draws on both the country studies presented in Part B, the other country studies (Iran, Pakistan, Thailand, Turkey) and material gathered from a broad array of sources.



The final chapter (XIII) presents the policy options resulting from our examination of the consequences of the Afghan opium cutback and, more generally, from our analysis of the dynamics and patterns of the world opiate market. The key policy implications have already been sketched in the previous section. In addition, the chapter stresses the need to improve data collection in at least the few countries that play a key role in this illicit drug industry.

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