Chapter 3

RESPONDING TO THE CHALLENGE OF DIVERSITY IN OPIUM POPPY CULTIVATION IN AFGHANISTAN

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I. INTRODUCTION

This chapter provides an overview of what has been learned about the role of opium poppy in rural livelihoods in Afghanistan over the last decade. It charts both the development in our own understanding of what influences households in their decisions on cultivation of opium poppy, and the evolution of the role of opium in rural livelihoods, particularly in the wake of the Taliban prohibition on opium poppy cultivation in 2000 and concerted efforts to reduce cultivation in Nangarhar province in 2005.

In documenting these shifts in both the situation on the ground and our analysis of it, this chapter highlights the move by commentators away from a narrow economic rationalist model in which opium poppy cultivation is seen as simply a function of price, toward understanding a more complex picture in which the motivations and factors governing decisions on opium poppy cultivation differ by location and socio-economic group. In this latter model, the focus is on the multi-functional role opium plays in rural livelihood strategies and how a household's dependency on opium poppy cultivation varies according to its access to assets, including local public goods like governance and security. This evolution in our understanding of what influences households' decisions on whether to engage in opium poppy cultivation, and to what degree, is critical for developing both drug control and development polices that are more appropriate to the different actors involved in opium production.

The focus of the chapter is very much on the rural household. While any illicit economy presents fundamental research problems, currently the rural household continues to be the most accessible unit of analysis when looking at the opium economy in Afghanistan and offers a wide range of literature and research for cross referencing findings.[2] Debates regarding the previous collapse of governance in Afghanistan and how it allowed traffickers to operate without restraint and has allowed corruption to flourish, though important for understanding the wider environment in which opium poppy cultivation occurs, are not discussed here (see in particular Chapters 6 and 7).

It is important to note that this chapter does not seek to offer a definitive account of opium poppy cultivation in Afghanistan, as the situation is far too dynamic for that. Instead it presents the current state of knowledge regarding opium poppy cultivation and how different types of households have responded to the evolving environment in their particular regions and settings.

The overall theme of the chapter is diversity. The next section provides an overview of diversity in the incidence of opium poppy cultivation across provinces, regions, and districts, emphasizing its localised nature. The third section discusses diversity in rural livelihood strategies in Afghanistan and how these vary based on the different assets and capabilities rural households are able to draw upon. The fourth section documents diversity in

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[2] See, in particular, Pain (2004), Mansfield (2002, 2004a, 2004b, 2005a, 2006), Ward and Byrd (2004), Byrd and Ward (2004), and Mansfield and Pain (2005).

motivations and factors that influence households in their decision to produce opium and how this differs by socio-economic group. It outlines a broad typology of households engaged in opium poppy cultivation and shows an inverse relationship between the level of dependency on opium production and an individual household's access to assets. The fifth section uses this typology to sketch out the diversity in the responses households have adopted in reaction to efforts to curb opium poppy cultivation, drawing heavily from detailed fieldwork carried out by the author in Nangarhar province in eastern Afghanistan. The final section looks at the diversity in policy and operational responses required to address the complex nature of illicit opium poppy cultivation in Afghanistan if a sustainable solution is to be found.

The chapter concludes that there is a need for policy makers and development practitioners to better recognise in their work the diversity that is so evident both among opium poppy cultivators and across rural Afghanistan. To do otherwise would not only undermine the basic principles of equitable development but could work against the wider state-building and security efforts. For households with diverse livelihood opportunities and who are not dependent on opium production, eradication or the threat of it, combined with the establishment of the necessary governance and security conditions needed for longer-term economic growth, can raise the opportunity cost of opium poppy cultivation and facilitate its abandonment. However, in areas where opium poppy cultivation is most concentrated and where legal livelihoods are limited, eradication can serve to further marginalise already vulnerable socio-economic groups, resulting in pauperisation, migration, and damage to the nascent relationship between citizen and state. Based on the analysis presented in this chapter, it is evident that it would be an error to pursue a uniform approach, either in development or in drug control work, which ignores the realities faced by particular socio-economic groups involved in opium poppy cultivation and the varying degrees of their dependency on the crop.

II. LEVELS OF OPIUM POPPY CULTIVATION: DIVERSITY AND CONTRASTS IN PROVINCIAL AND DISTRICT TRENDS

Afghanistan has proven to be a favourable environment for opium poppy cultivation. In 2004, UNODC estimated that 131,000 ha of opium poppy was cultivated in Afghanistan, representing almost 90% of total global cultivation of illicit opium, and significantly more than the previous peak in cultivation of 91,000 ha in 1999.[3] While in 2005 cultivation was reported to have fallen by 21% to 104,000 ha, it was still the second highest level ever recorded in the country. Furthermore, over the last decade opium poppy has spread geographically from 54 districts in 1994 to 194 districts in 2005 (out of a total of 364 districts in Afghanistan). It is now present in all 34 of Afghanistan's provinces, compared with only eight in 1994.

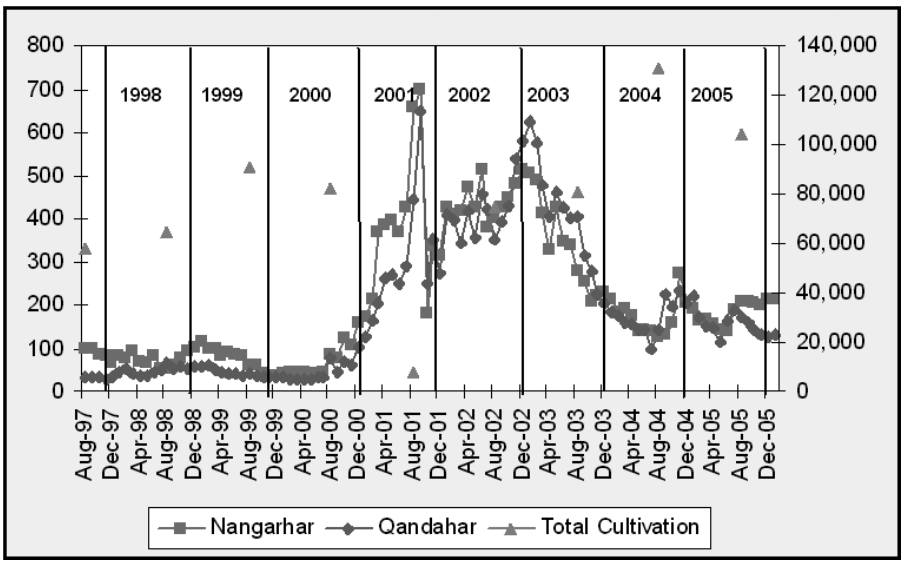
Yet opium poppy is still very much a minor crop in terms of overall cultivated area, trailing behind wheat, barley, rice, and even maize. For example, in 2002/03 29% of cultivable land was dedicated to wheat and only 1% to poppy.[4] Even in 2004, the peak year of cultivation, opium poppy only occupied 2.9% of total agricultural land. If opium poppy is as profitable as many suggest, why is it not more popular and why is cultivation not more uniform across the country?

[3] The United States Government also produces an estimate of opium poppy cultivation in Afghanistan. For convenience the statistics referred to in this chapter are UNODC estimates.

[4] These figures are derived from the Food and Agriculture Organization (FAO) assessment that only 12% of Afghanistan's 652,000 sq km of land area is arable. In 2003, FAO/WFP estimated that 22,940 sq km was dedicated to wheat: http://www.reliefweb.int/library/documents/2003/fao-afg-13aug.pdf.

Cultivation at the national level has certainly fluctuated widely and irrespective of price trends (see Figure 3.1). UNODC estimated that national cultivation rose from 54,000 ha in the 1994/95 growing season to almost 91,000 ha in 1998/99. It then fell to approximately 82,000 ha in 1999/2000 and subsequently collapsed under the Taliban ban to around 8,000 ha in 2000/01. Following the fall of the Taliban, cultivation again returned to mid-1990s levels – 74,000 ha in 2001/02 and 80,000 ha in 2002/03. In 2003/04 predictions of a dramatic increase in cultivation were realised despite considerable reductions in the price of opium prior to planting. But by 2004/05 opium poppy cultivation had fallen to 104,000 ha.

Figure 3.1: Cultivation and Prices of Opium, 1997-2005



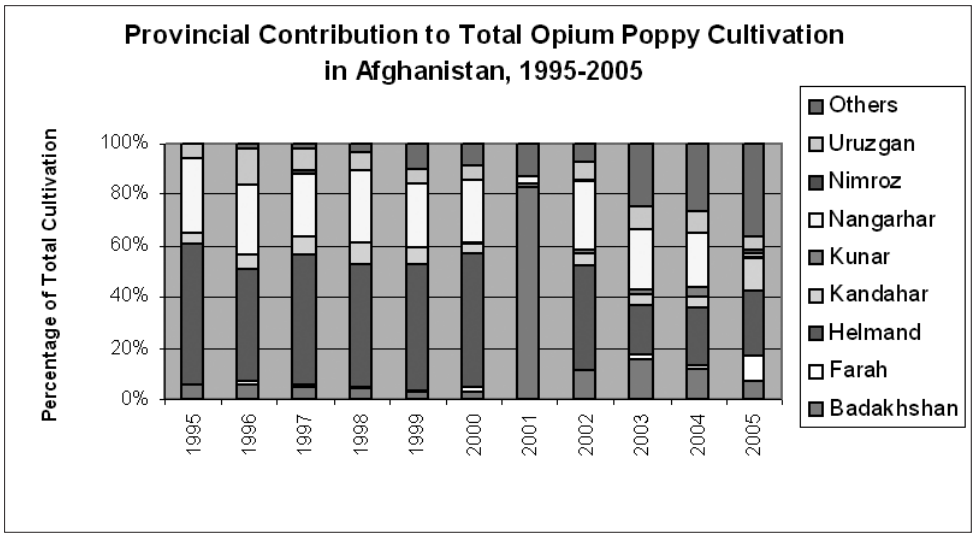
It is also important to recognise that national figures mask pronounced fluctuations and diversity among provinces. For instance, in the province of Helmand cultivation fell from a peak in 1998/99 of around 45,000 ha (and a post-Taliban ban level of 30,000 ha) to 15,000 ha in 2002/03, only to rebound again to 30,000 ha in 2003/04, and then fall slightly to 26,500 ha in 2004/05. Over the same period, cultivation in Nangarhar fell by only 4,000 ha from around 23,000 to 19,000 ha between 1998/99 and 2002/03. As in Helmand, cultivation rose to an unprecedented 28,000 ha in 2003/04 despite the fall in farm-gate prices at planting time that occurred, from around US$ 475 per kg to US$ 210 per kg over this twelve-month period. However, in 2004/05 the level of cultivation fell by a dramatic 96% to only 1,100 ha after a concerted effort by provincial authorities to eliminate opium poppy cultivation across the province. In Badakhshan province, cultivation rose dramatically every year until 2003/04, when it was almost five times the level of 1998/99, before subsequently dropping by an estimated 50% to 7,500 ha in 2004/05. In the provinces of Kandahar, Balkh, and Farah, levels of opium poppy cultivation did not falter in 2004/2005 but increased for the third consecutive year, expanding by between 160% and 350% in that year alone.

The new entrants into opium poppy cultivation also have had widely contrasting experiences. The provinces of Jawzjan, Kapisa, Kunduz, Kabul, and Takhar were reported to have begun cultivation in the 1998/99 growing season, followed by Faryab, Samangan, Sari Pul, and Badghis in 1999/2000, Ghor in 2000/01, and more recently Bamyan, Nuristan, Khost, and Wardak (2002/03). Some of these provinces have seen meteoric rises in levels of cultivation. The province of Ghor is perhaps the best example, with no opium poppy report-

ed in UNODC's 2001 estimates (despite reports of cultivation dating back to 1998), 2,200 ha in 2002, 3,782 in 2003 and 4,983 in 2004. Takhar province has seen cultivation increase from 201 ha to 1,364 ha in the seven years since cultivation began. In Jawzjan province cultivation has actually fallen from 2,593 ha when cultivation was first reported in 1998/99 to 1,748 ha in 2004/05. There is no simple explanation for the differing years of entry or rates of change in cultivation among these provinces.

The emergence of these new areas of cultivation has contributed to a shift in the distribution of cultivation, with the top seven opium producing provinces in 1999, responsible for 96% of total cultivation that year, accounting for 74% of total cultivation in 2003 and by 2005 only 63% (partly due to the substantial reductions in cultivation achieved in Nangarhar province). By 2003, there were nine more provinces cultivating opium poppy than in 1999, but there were 11,000 fewer ha planted nationally. Moreover, in 2003 the province of Helmand no longer headed the list of provinces responsible for the largest amount of opium poppy cultivation, having been superseded by Nangarhar, and accounted for less than 20% of total cultivation compared to around 50% in the mid- to late 1990s (see Figure 3.2). The reduction in cultivation in Helmand in 2003 was attributed to the Governor of the province, keen to show action against opium and perhaps interested in exploring the potential for gaining donor assistance for his efforts (UNODC, 2004). But as we have seen, this reduction proved short-lived, and moreover cultivation in 2005/06 is expected to increase sharply. Some of these provincial trends are illustrated in Figure 3.2.

Figure 3.2: Contribution of Some Provinces to Total Cultivation, 1995-2005



At the same time that Helmand was on the wane, the province of Badakhshan gained increasing prominence, contributing an estimated 15% of total national opium poppy cultivation in 2003 compared with less than 5% during much of the 1990s. Isolated, mountainous Badakhshan, where the Taliban were never able to consolidate their control, was relatively unaffected by the drought, and profited from the Taliban ban that affected the rest of the country. Despite a three-fold fall in farm-gate prices, opium poppy cultivation rose again in 2003/04, only to fall by 50% in 2005. Indeed, the increase in Badakhshan and the reductions in Helmand were so pronounced in 2003 that the district of Keshem in Badakhshan was listed as the district cultivating the largest area of opium poppy in Afghanistan. Nad-e-Ali, the district in Helmand that so frequently featured as either first or second during the mid to late 1990s, did not even register in the top 20 opium poppy cultivating districts in 2003.

[5] Also see Hurd and Masty (1991) for some historical background.

At the district level the picture is even more complicated. Despite the rapid increase in the number of districts cultivating opium poppy, 45% of all districts in Afghanistan did not cultivate any opium poppy in 2005 (see Evans et al, 2004). Among those that did, the intensity of cultivation could vary from less than 10% of total agricultural land to nearer 80%. For example, on average 70% of cultivated land was dedicated to opium poppy in the districts of Musa Qala and Nawzad in northern Helmand in 1999, compared to only 46% in the central districts of Nad-e-Ali and Marja, where the average landholdings are much larger and irrigated by the Helmand River canal system (see ACBAR, 2002).

Similarly, opium poppy cultivation is more concentrated in the southern districts of Nangarhar province, where landholdings are small and access to both irrigation water and markets is more problematic. For example, in Achin district of Nangarhar, where the mean household landholding is less than 0.5 ha, 76% of cultivated land was dedicated to opium poppy in the 2002/03 growing season. This contrasts sharply with the situation in Surkhrud (near the provincial center of Jalalabad), where the farmland is considered rich, crop yields are high, and population density lower, and where even in 2004–a peak year for Nangarhar when UNODC estimated that 28,000 ha of opium poppy were cultivated, less than one-quarter of cultivated land was dedicated to the crop (see Mansfield, 2004c).[5]

Explanations for the emergence of opium poppy cultivation in new areas also vary from district to district. For instance, in Pasaband district in Ghor, the initiation of opium poppy cultivation is attributed to the impact of the drought, the displacement of the opium trade during the Taliban ban, and the knowledge Ghor's itinerant opium poppy harvesters gained in neighbouring Helmand. Yet in the neighbouring district of Chaghcharan, Pashtoon farmers mainly from the southern region (but also the east) are blamed for the introduction of opium poppy cultivation, along with traders from Helmand province looking for new sources of supply.

Clearly Afghanistan has the right conditions for widespread opium poppy cultivation not only in agronomic terms (hence the particularly high yields obtained) but also socio-economically and politically–i.e. weak governance, insecurity, and the lack of viable legal livelihoods. However, although these characteristics are prevalent across the country, opium poppy occupies a small part of total agricultural land in Afghanistan. Cultivation levels and trends are also far from uniform: in some areas the level of cultivation rises exponentially even while falling in the neighbouring province or district; in another district opium poppy will be a long-established crop, while right next door cultivation will have just begun, or is still non-existent.

Perhaps we should not be surprised by these different patterns and trends in opium poppy cultivation at the provincial and district levels. After all, Afghanistan is a country of great diversity in language, terrain, climate, and culture. In particular, political structures, economic opportunities, and livelihood strategies are highly localised. Given such diversity, it would be wrong to assume that households from different socio-economic groups in different areas would respond to the opportunities that opium poppy cultivation might offer in the same way.

[6] See the Report on Findings from the 2003 National Risk and Vulnerability Assessment (NRVA) in Rural Afghanistan by the Vulnerability and Mapping Unit of the World Food Program and the Vulnerability Analysis Unit of the Ministry of Rural Rehabilitation and Development, December 2004. Also see Grace and Pain (2004), and Christopolos (2004).

III. RURAL LIVELIHOODS: DIVERSITY IN ASSETS AND OPPORTUNITIES

It is clear that poverty is prevalent in Afghanistan. In 2003 it was estimated that 3.5 million rural Afghans were extremely poor, 10.5 million were vulnerable to extreme poverty, and among the rest, a further 3.5 million were less poor but nonetheless still vulnerable to poverty (World Bank, 2005, p. ii). While some improvements have been achieved, it does not appear that the situation for the majority of rural Afghans has changed considerably in the last three years.

Despite the prevailing level of poverty, rural livelihoods in Afghanistan have proven resilient in the face of more than two decades of war and a protracted drought. Rural households in Afghanistan have been found to draw on a range of different strategies to manage the risks and uncertainties that they face as part of their day-to-day life. A number of rich sources of data suggest that rural livelihood strategies in Afghanistan are complex and diverse[6] and that they vary not only across the country but within the same province or even district. Even within a single village, different households draw upon diverse income sources depending on their specific assets and capabilities as well as on seasonal opportunities.

The distribution of assets in rural Afghanistan is closely related to geography. Provinces such as Nangarhar and Helmand have far better natural conditions than the more mountainous provinces of Ghor and Badakhshan. Nangarhar in particular, given its temperate climate and its close proximity to markets in both Kabul and Peshawar in Pakistan, offers households a large number of livelihood options. Possibilities include, for example, production of a range of agricultural crops including high-value horticulture and fruit production; sale of livestock and livestock products; the transportation and trade of agricultural and non-agricultural goods; skilled and semi-skilled employment in the construction industry (in Jalalabad, Kabul, and Peshawar); as well as income from the smuggling of licit and illicit goods. The range of livelihood options, and the number of opportunities in each sector, are much more limited for the inhabitants of Ghor province, who find themselves cut off by snow for up to five months of the year and for whom livestock and remittances from Iran form the bedrock of their livelihood strategies.

However, it would be wrong to assume that even in relatively resource-wealthy provinces, such a wide range of livelihood options is available for all. Even in Nangarhar there are considerable differences in the assets households have at their disposal, and consequently in the nature and composition of their livelihood strategies. Take the case of a landowner in the district of Kama with a large amount of well-irrigated land and a shop in the local bazaar managed by one of his sons, while his other son collects a government salary. The livelihood options available to him are very different from those available to a landless farmer in Rodat district, where the prevailing drought has reduced the farmer's already limited yield on the land he sharecrops, and where his four children under five years of age and his sick wife can offer no real assistance on the farm. The comparison would be even starker in an area like Upper Achin where as many as 30 family members, owning only one jerib of land, might try to earn sufficient income to meet their basic needs through a combination of wage labour opportunities. These might include working in Gorroko bazaar in Dur Baba; transporting licit goods across the Pakistan border by mule; foraging for wood in the mountains to sell as fuel in Jalalabad; and cultivating opium poppy on their limited landholdings. Indeed, from the perspective of assets the remote southern districts of the province, such as

Achin, appear to have more in common with the northern districts of Helmand than they do with the better-off districts of Surkhrud and Behsud in Nangarhar province.

While geography is an important factor in determining the different livelihood options available in an area, ultimately it is the portfolio of assets and capabilities within each household that determines which particular opportunities are available to them. At the level of the household there is considerable diversity. For example, rural households in Afghanistan typically are large and may contain a number of families. While national statistics suggest that the median size of rural households was seven persons in 2003, it is certainly not uncommon to find twelve to fourteen family members living within the same compound. Moreover, in areas where it is traditional for the extended family to reside together, household sizes can often exceed 20 members. It is not unusual to find 20-35 household members in districts such as Achin, Shinwar, and Pacha Wa Agam, where the Shinwari tribe are concentrated.

Throughout Afghanistan dependency ratios are high and poverty is found to increase as the percentage of household members able to work diminishes. The very poor are the least likely to have a household member available for productive work. Much depends on the demographics of the household. Typically it is the males of the household that migrate in search of work. However, there has to be a sufficient number of them that one male member can be left at home to ensure the security of the family. In a family of eight it is not uncommon to find only one member of the household working full time, either on the land or generating cash income through daily wage labour. A household with a number of men who are able to find non-farm income can increase its income significantly. Households in close proximity to labour markets can send members there daily, incurring minimum transport, accommodation, and food costs (especially important on days when they do not find work). On the other hand, those located at a greater distance will migrate seasonally in search of wage labour so as to minimise their overhead costs.

The size of landholdings also varies considerably by region and of course by socio-economic group. For example, a particularly wealthy landowner in parts of Kandahar province may own as much as 300 jeribs of land. His equivalent in the province of Nangarhar is more likely to own nearer 30 jeribs. For the very poor, the most common land tenure arrangement is sharecropping. In most provinces the amount of land sharecropped is typically lower than the amount owned. The most comprehensive survey undertaken in Afghanistan to date, covering 11,757 households and 85,577 individuals, found that one-quarter of those interviewed were landless.

Clearly, agricultural production is a key component of rural livelihood strategies. While poorer households may limit vegetable cultivation to a small number of crops for household consumption, the relatively resource-wealthy are more likely to produce a range of high-value vegetable and fruit crops for both consumption and sale. Landholdings of this latter group may be such that they not only produce sufficient wheat for household consumption but also have a surplus for sale. This differs markedly from the situation faced by households with small landholdings and large numbers of household members.

Livestock can also represent an important asset and source of income for the rural population. Typically, wealthier socio-economic groups are not only more likely to own livestock

[7] "Off-farm income typically refers to wage or exchange labour on other farms (i.e. within agriculture) while non-farm income refers to non-agricultural income sources." (Ellis, 1989).

but they have larger herds of animals of greater value. Ultimately this provides a guarantee against food insecurity, a source of revenue, and in some areas a means of accessing credit. This is true of all types of livestock, but particularly oxen and dairy cows. The sale of dairy products, such as milk, yoghurt, and cheese, by households in close proximity to urban areas can provide significant income. The very poor generally own very few livestock, with the exception of poultry.

Off-farm and non-farm income also comprise an integral part of rural livelihood strategies for the vast majority of rural households.[7] For the relatively resource-wealthy, non-farm incomes are not only higher than for other socio-economic groups but also they are more secure and diverse, including drawing on government salaries, transport, and working in the retail trade. In contrast, the resource-poor are more dependent on relatively low-paid and insecure wage labour opportunities compared to the relative security (and patronage) associated with government salaried posts. Even in areas with the greatest proportion of land dedicated to opium poppy, off-farm and non-farm income opportunities provide valuable sources of cash income. However, much of this is insecure wage labour that is often derived from working as hired labour during the opium poppy harvest. In accessing off and non-farm income opportunities, including cross-border migration, households draw upon an extended family and tribal networks where they can.

It is in this context, where households in different areas and from different socio-economic groups draw on different assets and income streams, that opium poppy cultivation has become an important component of rural livelihood strategies. Just as decisions on allocation of household assets to, for example, high-value fruit growing or non-farm income earning opportunities are informed by the assets a household has at its disposal and the opportunity costs of that investment, so too are decisions on the scale and nature of a household's engagement in opium poppy cultivation. Thus opium poppy cultivation cannot be isolated from the wider livelihoods milieu.

IV. OPIUM POPPY CULTIVATION: DIVERSITY IN ASSETS AND DEPENDENCY

From Homogeneity to Heterogeneity

Within the drug control community there has been in the past a tendency to see Afghanistan in the context of "opium poppy growing households" and "non-opium poppy growing households". Too often this analysis focuses on estimates of the economic returns on opium poppy per unit of land. In this context, drug control analysts and commentators typically refer to the gross returns per hectare from opium poppy cultivation. In turn, these aggregate figures are often compared with the economic returns on wheat, and reference is made to the significantly higher profitability derived from opium poppy cultivation.

Typically, this kind of analysis does not place opium poppy within the context of the wider household economy and rural livelihoods strategies. It does not take into account the different rural actors involved in opium poppy cultivation and how the aggregate economic returns for a unit of land are distributed among them; how these returns vary considerably depending on the different inputs that each group contributes to opium production; and how the final return on their input will be a function of the other assets at the disposal of each of these different actors. Perhaps most important of all, the analysis focuses primarily on the

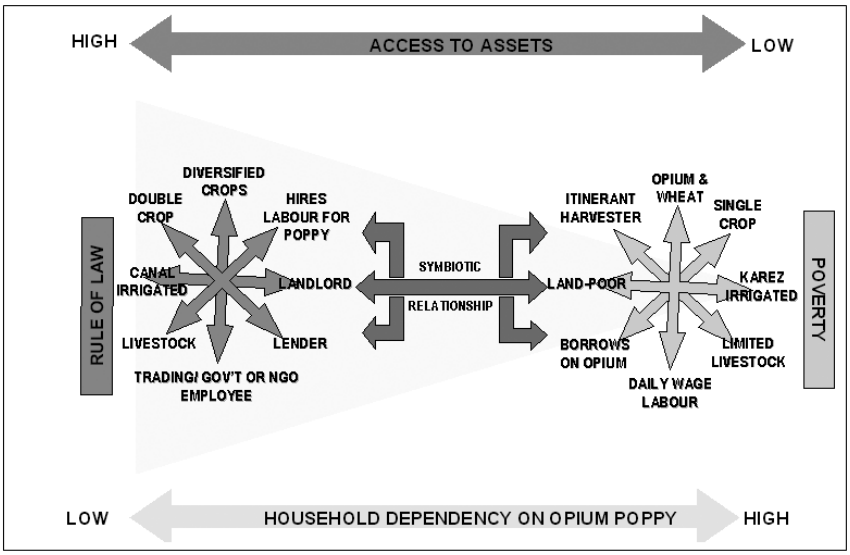
potential on-farm income that might be derived from opium poppy cultivation and neglects the other assets that households gain access to through their engagement in opium poppy cultivation.

Over the last ten years, development analysts and policy makers have come to a better understanding of how opium poppy cultivation fits in the wider socio-economic, political, and environmental context within which household decisions are made in rural Afghanistan. This represents a shift away from the narrow model where households simply respond to market price signals, toward one where access to assets and decisions regarding them are a function of complex social and political processes.

The more informed model of household decision making in rural Afghanistan that has emerged suggests that opium poppy cultivation is both contingent and contextual–a function of where, who, and when–and therefore highly dependent on local factors. Indeed, it suggests that opium poppy cultivation is dependent on the specific assets that the individual household has at its disposal and is not simply a function of the prevailing price of opium in the market. Moreover, it recognises that as the range of legal livelihood strategies available to households is a function of the assets and capabilities they can draw upon, so too is a household's dependency on opium.

There is an inverse relationship between household access to assets and dependency on opium poppy cultivation, illustrated in Figure 3.3. While representing a simplified depiction of households at the two extreme ends of a spectrum, this diagram illustrates both the diversity in assets that different households have at their disposal and, in turn, the diversity in their dependency in opium poppy cultivation as a means of meeting their basic needs. It also highlights the symbiotic relationships that can exist between the different asset groups involved in opium poppy cultivation and the role that opium plays as a means of exchange between them.

Figure 3.3: Access to Assets and Dependency on Opium



On the right-hand side of the diagram are households with limited access to assets and whose dependency on opium poppy cultivation to meet their basic needs is most acute. These are households in areas where opium poppy cultivation has been found to be at its most concentrated and where poverty is not just income-related but also represents poverty of opportunity. Households at this end of the asset/dependency spectrum are typically found in the most inaccessible areas, where labour and agricultural commodity markets are constrained by poor infrastructure and limited purchasing power; where landholdings are typically small and access to irrigation problematic, and where population densities per unit of agricultural land are particularly high. In these areas legal livelihood options are severely restricted and opium poppy cultivation is largely supplemented by off-farm and non-farm daily wage labour opportunities, many of them associated with opium production.

At the other end of the spectrum are households with greater access to assets and low dependency on opium poppy cultivation as a means of meeting their basic needs. Here it is the absence of rule of law that has led to a shift into opium poppy cultivation. These households would typically be found in the more fertile river basins in close proximity to the provincial center, where facilitated by better access to physical infrastructure, as well as improved governance and security, they would have access to functioning labour and commodity markets. These households would typically be relatively land-wealthy and would have the opportunity to double crop. For this group, opium poppy cultivation would be combined with greater diversity in on-farm, off-farm, and non-farm income opportunities to raise household income and reduce uncertainty and vulnerability to shocks. Opium sales, while still a significant proportion of total cash income, are pooled with the income derived from the sale of other agricultural products and livestock. Non-farm incomes are not only higher but also more secure and diverse, including in some cases government salaries, and possibly income from transport and retail trade.

However, it is not merely the dependency on opium poppy cultivation that differs according to a household's access to assets, the economic returns on the crop also vary. For the resource-rich, opium can generate relatively high incomes. As Figure 3.3 illustrates, access to cheap labour through the prevailing unequal land tenure arrangements ensures that landowners accrue a disproportionate share of the final opium crop. Those with sufficient financial assets further increase their profits by purchasing opium on a "distress sale" basis through the provision of advance payments on the crop prior to its harvest. Finally, by being able to retain their opium crop and sell it some months after the harvest when prices have risen, those households that are least dependent on opium poppy as their sole source of income are most able to benefit.

The income that the resource-rich derive from opium is in sharp contrast to the earnings of the resource-poor. Circumstances require that the poor provide relatively low-paid labour through the prevailing land tenure arrangements; they are also compelled to sell their opium at low prices prior to the harvest as means of accessing credit; and it is the poor that are most dependent on opium poppy due to limited on-farm, off-farm, and non-farm income opportunities.

V. FROM MAXIMISING ON-FARM INCOME TO ENHANCING ACCESS TO ASSETS

Fieldwork over the last decade has highlighted the multi-functional role of opium in rural livelihood strategies, providing access to land, credit, and an important source of off-farm income for households with insufficient land to satisfy their basic needs. Even the by-products of opium poppy have been found to have a high use-value.[8] Consequently, in contrast to the relatively asset-rich, for the resource-poor the income that households accrue for their work on opium poppy is only one motivation for its cultivation.[9] Understanding the multi-functional role of opium poppy cultivation in rural livelihood strategies and how this differs by socio-economic groups is critical to developing appropriate development and drug control policies.

Access to on-farm income. It is clear that the on-farm income earned from cultivating opium poppy can be significant; however, these high economic returns are not available to all. Indeed, the returns to opium poppy cultivation can be so marginal in some areas of Afghanistan that the opportunity cost of production is simply too high to justify its production.

For example, in many parts of Ghor province, limited and intermittent irrigation supply, the incidence of frost, and poor plant husbandry have resulted in low yields. Food security, for both household members and livestock, and the importance of remittances from family members working in Iran, have meant that households are reluctant to allocate land and labour to a potentially low-yielding opium poppy crop. Consequently, in 2005 opium poppy cultivation in the districts of Chaghcharan and Sharak in Ghor province was marginal: typically cultivated by family members, particularly the young and women; largely restricted to the upper and middle valleys where access to water was more secure; and occupying only a small proportion (less than 10%) of agricultural land. Similarly, in the main Kunduz river basin it is thought that particularly high ground water levels (the nemesis of opium poppy cultivation), combined with good rice, wheat, and vegetable yields, have made opium poppy cultivation an unattractive option for most farmers in the area. It appears to be far better for household members to earn off-farm income from harvesting opium poppy in Badakhshan rather than to cultivate it on their own land in Kunduz province.

Even in areas where opium poppy cultivation has been concentrated, returns vary considerably by economic group. For those who obtain land under a sharecropping arrangement and accrue only one-third of the crop, and who typically sell some, if not all, of their crop in advance at lower than the harvest price, opium poppy cultivation makes an important contribution to the household economy but does not lift them out of poverty. For this group the gross return per ha in 2005 was not the US$ 5,400 estimated by UNODC, but nearer to US$ 900.[10] When we further consider that the actual amount of land cultivated with opium poppy is typically significantly smaller than a hectare[11] – perhaps only one-third of a hectare – gross returns derived from opium poppy can fall to as low as US$ 300 for a sharecropping house-

[8] By-products include seed, capsules, and stalks. The stalks would appear to have the highest use-value as these provide an important source of household fuel in a country where firewood is becoming increasingly scarce. Anecdotal evidence suggests that one hectare of opium poppy will provide fuel for a household of 20 people until the onset of winter. See UNDCP (1998, p. 32).

[9] Opium poppy plays a similar function in the household strategies of the highland communities in South East Asia. For instance in Laos, "In addition to [opium's] good marketability it is relatively easy to exchange directly against rice, and it is a common payment for wage labourers. Also annual food shortages can be so bridged, at least partly, less land is needed to support a relatively high population density and the frequency of necessary migration can be lower." (Eprecht, 1998, p. 45). In Thailand: "To date opium fulfils an insurance function, as evidenced by the fact that farmers may revert to opium poppy cultivation when they lose their cash crop production due to natural hazards, or when they are unable to market their produce. A number of commercially attractive crops (e.g. tomatoes, beans, coffee etc.) are often relatively perishable and susceptible to pests and diseases. They rely on high inputs and efficient marketing systems. Therefore although some crops offer income opportunities that are more attractive than opium poppy cultivation, they expose farmers to higher risks." (Dirksen, 2001, p. 6).

hold.Given the household sizes in many of the areas in which opium poppy cultivation is at its most concentrated, it seems clear that the on-farm income derived from opium must be used to meet basic needs among the resource–poor and not invested in capital accumulation.

The picture is very different, however, for those who own land and sell the opium they cultivate on it some time after the harvest season when prices have risen. Those with relatively large landholdings may employ a number of sharecroppers on their land to cultivate opium poppy, along with other crops. Consequently, instead of having only one-third of a hectare this group may have in total one hectare of opium poppy, cultivated by three separate sharecropping households. By accruing two-thirds of the final crop from each of those households, the landowner can earn US$ 3,600 from the one hectare of opium poppy cultivated on his land, if the crop is sold at harvest time. If the crop is sold later in the season, the landowner might double the on-farm income derived from opium poppy to US$ 7,200. Moreover, for this socio-economic group– especially those with the capital to provide advance payments on opium, as well as the contacts and perhaps the vehicles to engage in trading of the crop, and able to move opium between regional and border markets–there is even greater potential for increasing the cash income derived from opium poppy.

Access to off-farm income. Current estimates suggest that opium poppy requires weeding as many as three times and needs as much as 200 labour days per hectare during harvesting. This provides an important off-farm income opportunity for the rural population, which currently has few attractive alternatives. For example, in Nangarhar province almost 85% of reported cases of hired labour were for opium poppy cultivation. During the weeding season the labour force might be more localised, drawn mainly from within the province, and could also include young boys working either within the village or in neighbouring villages, who would be paid around US$ 2.50 per day. However, in the harvest season labourers are paid at much higher rates and as a result are willing to travel greater distances, even coming from Pakistan to take advantage of such off-farm income opportunities.

The staggered nature of the opium poppy season, varying by altitude even within a single province, extends the labour opportunities for those willing and able to travel from areas like southern Helmand to central Ghor or Badakhshan. The harvest season alone represents a period of up to ten weeks paid work. Indeed, the labour inputs are such that it is estimated that the employment generated by opium poppy cultivation in Nangarhar in 2004 represented the equivalent of 9.8 million labour days, of which 3.4 million labour days were daily wage labour opportunities, valued at approximately US$ 11.7 million.

For some farmers, the off-farm income derived from opium poppy can actually exceed what they might earn from the opium they obtain from farming their own land. Clearly this is true for those who do not own land and do not have access to land under other land tenure arrangements but only work on opium poppy fields as wage labourers. This is also the case for households that do own land but for a variety of reasons do not cultivate opium poppy on it. Members of such households may work as itinerant labourers during the opium poppy harvest elsewhere. However, it may also be true for households that sharecrop land and have more than one male family member available to travel and work during the weeding and harvesting season in other areas. So much so that fieldwork has revealed that this group is more likely to cultivate varieties of opium poppy that yield what is considered to be poor quality-opium, and therefore carrying a lower price, because it could be harvested earlier, allowing

[10] This figures is calculated based on the assumptions that (i) a sharecropper receives one-third of the final opium crop and (ii) sells the entire crop in advance at half the harvest price.

[11] UNODC (2005, p. 80) estimates that the average amount of household land allocated to opium poppy in the 2005 growing season was 0.33 ha.

family members also to work as itinerant harvesters in neighbouring villages, districts, and provinces.

Access to credit. Previous fieldwork, including by Grace and Pain in 2004, has revealed that credit is an integral part of Afghan rural livelihood strategies (see UNDCP, 1999). In opium growing areas seasonal credit, known as salaam, has typically been obtained as an advance on a fixed amount of agricultural production (see Box 3.1). While salaam sometimes includes advance payments on other agricultural products, such as wheat or black cumin, opium is the crop favoured by lenders. Although the majority of households that cultivate opium poppy in Afghanistan utilise this system to some extent, the resource-poor often sell their entire crop prior to the harvest in return for an advance payment. Traditionally the price paid as an advance has been half the current market price of opium on the day that the agreement is reached. The borrower is expected to submit the agreed amount of opium that the advance has been provided against promptly at harvest time. For the resource-poor, this system allows some of the value of the standing crop to be realised before the opium harvest, facilitating the purchase of food, clothes, and agricultural inputs (including labour for opium harvesting). For the resource-rich, provision of advances allows opium to be purchased at around half the harvest price, and moreover this can subsequently be sold post-harvest when prices have risen.

Box 3.1: Borrowing in Jurm, Badakhshan

I have eight jeribs of rainfed land and a family of ten people. Last year my wife was very ill. We needed money for her treatment so I took an advance payment of 49,500 (US$ 990) against 15 kg of opium. I took my wife to Faizabad to see the doctor and get medicine. There was very little money left. Last year (2005) I cultivated two jeribs of rainfed land with poppy but I only got a yield of three kg of opium. I gave this to the trader who lent me the money. He converted the twelve kg of opium I still owed him into cash at 4,000 Afs per kg (for a total of Afs 48,000). I did not have cash so I sold two and a half jeribs of my land for Afs 62,500 (US$ 1,250). I repaid the trader and the rest of the money I have used for my family expenses. I am very happy with this local trader, he is a very good person as he helped me with my wife's illness. If I had not cultivated poppy I would not have gotten a loan and my wife would not be better.

Source: Mansfield (2006).

The salaam system came under considerable stress following the Taliban ban on opium poppy cultivation in 2000/01 and subsequent attempts to reduce cultivation. There has been a growing reluctance in some areas to provide advance payments against the opium crop. Nevertheless, households that cultivate opium poppy typically are still considered more "creditworthy" than those that do not. For example, in much of Nangarhar province in the 2005/06 growing season, households that cultivated opium poppy could obtain a range of different commodities, including food items, medicine, and clothes, on credit, while those that refrained from cultivation were refused on the basis that they had no collateral with which to repay. Moreover, opium poppy cultivation bans and eradication have seriously aggravated the problem of accumulated opium-related debt for many poorer farmers (see Box 3.2).

Access to land. Opium poppy cultivation has provided access to land for those who own no land, as well as increasing access to land for those with insufficient landholdings to meet their basic needs. This is primarily due to the significant labour demands of the crop and the financial advantage that those with relatively large landholdings can gain from making their land available to other farmers on either a sharecropping or leasing arrangement. Were the landwealthy to cultivate other crops (typically with much lower labour requirements) instead of opium poppy, the land would no longer be available to sharecroppers or for lease but would be farmed using family labour of the landowner or relatively few wage labour inputs.

Box 3.2: Jailed in Marja, Helmand

A sharecropper in Marja district in Helmand reported that he had taken an advance payment of US$1,600 on the understanding that he would repay the lender 10 kg of opium at harvest time in 2003. However, the sharecropper claimed that his crop was destroyed in the eradication campaign during the 2002/03 growing season. In response his landlord took back the land, blaming the sharecropper for failing to bribe the eradication team the US$200 necessary to spare the crop. The sharecropper reported that he did not have the money to pay the bribe, and once his crop was destroyed he could not repay his outstanding debts. In the 2003/04 growing season the sharecropper obtained five jeribs of land from a different landlord, but his creditor had him imprisoned in the district jail for defaulting on his loans. It was reported that the sharecropper's mother and current landlord appealed to the district administrator for his release, insisting that the women of the family would help him in the field so that he could repay his debts. The sharecropper was released but was ashamed. He stated that "no wife or mother works on the land in this district, but mine are working with me. My nine year old daughter and my two younger children are also working in the field. They cannot go to school as they help me on the land–this is the curse of debt." He was cultivating all five jeribs of land with opium poppy.

Source: Mansfield (2006).

For landowners who want their land to be cultivated with opium poppy on a sharecropping basis, preference is often given to those with experience in opium poppy cultivation (see Box 3.2). Under such arrangements, the landowner will typically obtain 50%-66% of the crop despite the fact that up to 80% of the total cost of production consists of labour and therefore is provided by the share-cropper. In many areas tenant farmers who are willing to cultivate opium poppy will also be given preference, as they will typically pay higher rates of rent.[12] A capacity to cultivate opium poppy hence offers the land-poor both the opportunity to gain access to land and to increase on-farm income. It also means they can improve their direct entitlement to food crops given that they will typically cultivate a variety of crops, and not just opium poppy, as part of their land tenure arrangement.[13] Where landowners have abandoned opium, the land-poor have been found to migrate to other areas to cultivate opium poppy. For example, increasing levels of cultivation in Balkh province in 2004/05 were reported to be a direct result of growing numbers of migrants from Nangarhar province who are leaving in search of both land and off-farm income in the wake of the very sharp reduction in opium poppy cultivation in their home districts.

Improving food security. The relationship between the price of agricultural commodities and the level of cultivation in Afghanistan is far from simple. For example, research has indicated that during the drought years, households determined how much land to dedicate to wheat based on estimates of water availability rather than the market price of wheat (Hale, 2002). Other fieldwork suggests that despite relatively high opium prices, households will favour wheat cultivation if they fear that they will not be able to purchase wheat on the open market.[14] Recent in-depth research in Nangarhar suggests that while opium poppy has been cultivated in a wide range of areas and by varied socio-economic groups, it tends to be

[14] Phillips has indicated that "the rural cultivator in Afghanistan will balance the amount of land sown with poppy with household food requirements. When basic foodstuffs such as wheat and flour can be easily purchased for reasonable prices the farmer may opt to dedicate a greater proportion of land to poppy cultivation. However, when wheat becomes too expensive or too difficult to purchase the farmer will reduce the amount of land planted with poppy and increase wheat cultivation, until the balance of the two corresponds with household food and cash requirements." See UNDCP (1995).

concentrated in areas with limited access to irrigated land, high population densities, and limited off and non-farm income opportunities (Mansfield, 2004b).

In many of these areas cultivation of other crops is a limited option. With such small landholdings and such a high number of persons per jerib of land, cultivating wheat exclusively would lead to food shortages. Under such conditions, households need to produce cash crops to meet their basic needs. Yet vegetables and fruits (and indeed wheat) are vulnerable to crop failure as a result of water shortages and inability to reap full value due to poor transportation endemic in these areas. Livestock typically have been sold due to drought and increases in costs of wheat straw. As a result households are left with very few obvious sources of income.

In these circumstances, intensive levels of opium poppy cultivation are not necessarily the cause behind lower levels of cultivation of licit crops, but instead reflect the lack of diversification in on-farm, off-farm, and non-farm income opportunities in the first place. The attraction of opium poppy in these areas lies in its role as a low-risk crop in a high-risk environment rather than as a possible strategy for maximising economic returns. While some crops (particularly as part of mixed cropping systems and combined with non-farm income opportunities) can compete in terms of financial returns with opium poppy when opium prices are lower, none can offer the same more qualitative attributes, including: relative drought resistance; a non perishable product; an almost guaranteed market; and traders who offer advance payments against the future crop. These characteristics serve to make opium cultivation more persistent and less price-responsive, particularly among the poor, than many might imagine. Indeed, the dramatic increases in opium poppy cultivation reported in 2003/04 occurred at a time of significant reductions in the farm-gate price of opium, with prices halving between the times of planting in the 2002/03 and 2003/04 seasons.

The returns on wheat do not have to compete with opium poppy to shift the balance between wheat and opium poppy cultivation. Under current conditions in Afghanistan, most households are more concerned about food security than about profit. Where markets do not function smoothly due to a shortfall in domestic production and restrictions imposed on traditional cross-border trade, households have few options but to cultivate wheat on their own land to guarantee food supplies and have been found to do so even at the expense of opium poppy cultivation.

Facilitating investments in land. In the mid-1990s opium poppy was described as a crop that needed considerable weeding. The reality was that the land needed weeding and that opium poppy provided the financial means (and motivation) with which to pay for agricultural inputs, including weeding and fertiliser. For example, in provinces such as Helmand and Nangarhar, opium poppy is ideally (where households have sufficient land) rotated on a given piece of land on a 2-3 year basis. In the first year opium poppy is cultivated during the winter months. The land is weeded intensively and fertilised. This is often paid for using the credit obtained against the future opium crop. In the summer, maize is cultivated on the same plot of land. In the following winter, wheat is cultivated and given a cursory weeding, with less fertiliser applied. The land is then left fallow during the summer. If the household has sufficient land, it is left fallow during the winter as well. If not, opium poppy is once again cultivated.

In some areas of Afghanistan, cultivation of opium poppy has become almost a prerequisite for agricultural production, providing the necessary resources for investing in the productive capacity of the land. For instance, in the canal areas of Helmand, the poor quality of soils has made fertiliser an essential precondition for agricultural production (Shairzai et al, 1975, p. 108). Yet for the poor, obtaining fertiliser requires credit, and obtaining credit requires opium poppy cultivation. Consequently, within this cropping system, opium poppy cultivation should be assessed based on its role in allowing access to resources for investing in the land over a longer-term time horizon and not simply on the basis of potential economic returns per unit of land from one year's cultivation.

In other parts of Afghanistan, opium has financed investments in land that have further increased returns on all crops. For instance, in the upper valleys of Khustak and Wadooj Bala in the province of Badakhshan, investments in land have also included bunding. Reports suggest that this has protected opium poppy (and other crops) against frost and has helped maximise the returns on water. Opium yields were reported to have increased by 20%, and intercropping with potato further increased returns per unit of land. However, the cost of bunding is significant, requiring 20 person-days at approximately US$ 2-3 per day, compared to only two person-days for preparing land in the usual way. The resource-poor were found to be aware of the benefits of bunding but considered the labour costs beyond their financial means, and would not increase their current level of debt to pay for it.

Maximising returns on water. Opium poppy also offers a relatively high return per unit of water–Afghanistan's most scarce resource. The crop is often described as drought-resistant, but while it is possible to obtain a yield in relatively dry conditions, productivity will be considerably lower than if the crop is irrigated with the right amount of water at the right time.

In Nangarhar province, opium poppy is typically found to be cultivated at its most concentrated in areas where access to irrigated land is acutely limited. For example, households in areas of the province that only obtain a single crop, and therefore have around half the effective cultivable land area of those that can obtain a double crop, have been found to cultivate opium poppy in the most concentrated manner, along with those that use tubewells for irrigation. For households in areas with only a single crop, opium poppy cultivation provides access to income-smoothing loans and maximises returns on relatively small units of land.

Particularly high densities of opium poppy cultivation on land irrigated by tubewells can be attributed to the high cost of installation (often requiring taking on debt to finance it) and recurrent costs. This is not limited to the province of Nangarhar but is also found in Farah, Kandahar, and Helmand. The cost of installation of a tubewell includes digging the well, pipes, a water pump, and a generator to run the pump. In Nangarhar these costs are estimated to total between US$ 900 and US$ 1,100. Sometimes such costs are paid jointly by a group of households and are often covered through loans.

Recurrent costs include repairs to the generator and water pump. In 2005 the diesel cost for irrigating one jerib of land in Nangarhar was estimated at the equivalent of $6 to $8. By 2006 the cost had increased to as much a US$ 10 per jerib due to the rise in diesel prices.

[12] For example, in the late 1990s in Laghman province in eastern Afghanistan, the influx of farmers from the district of Khogiani in neighbouring Nangarhar province served to increase the rental price of land. These farmers typically came to the districts of Qarghai and Mehtarlam on a seasonal basis and complained of insufficient landholdings in Khogiani district. In some cases they offered Laghmani landowners cash payments, repayable only when the rental agreement came to an end, to gain preferential access to the land. Similar trends in leasing land and rates of rent have also been seen in other provinces such as Ghor and Balkh.

[13] For instance, any household that sharecrops one Qulba of land (30 Jeribs) in Surkhrud district in Nangarhar is entitled to cultivate 1 Jerib of land with clover. This crop is not divided between the landowner and sharecropper but is for the sharecropper's animals alone.

Cultivation in sandy loam soils could require as many as seven irrigations. Where households had insufficient irrigation and did not own a tubewell, they could obtain water by leasing use of a tubewell in the village at a cost of up to US$ 17 per jerib.

Those who used tubewells to provide water for opium poppy cultivation were unanimous in their view that few other crops could provide the access to credit required for installation or rent of a tubewell, or indeed the economic returns to pay back the debts incurred. So much so that in 2005, when the ban on opium poppy cultivation was effectively implemented across most of Nangarhar province, villages that were most reliant on tubewells for irrigation typically cultivated wheat as the replacement crop (which is low yielding and does not require very much labor) and relied on migrating out in search of off-farm and non-farm income to meet considerably diminished levels of family expenditures.

Given the diversity in assets, dependency, and motivations and circumstances that influence opium poppy cultivation, developing a better understanding of the contributions made by different socio-economic groups involved in opium poppy cultivation, and the multiple benefits (for example social, economic, and political) they derive, is critical for identifying the entry points for developing an effective strategy for sustainable elimination of the crop in Afghanistan. It is also essential for understanding how different asset groups respond to various interventions, particularly shocks such as a rapid reduction in opium poppy cultivation.

VI. COPING WITH SHOCKS: DIVERSITY IN RESPONSES TO A REDUCTION IN OPIUM POPPY CULTIVATION

A Function of Assets

Significant reductions in opium poppy cultivation are not without precedent in Afghanistan. The most notable reduction took place in the 2000/01 growing season when the Taliban all but eliminated opium poppy cultivation across the territory that they controlled (which at that time broadly accounted for as much as 90% of the total land area of Afghanistan). Other sizable reductions have occurred on a more localised basis–in Helmand province where cultivation was reduced, according to UNODC, from 30,000 ha in the 2001/02 growing season to 15,000 ha in the following year, and in Nangarhar in 1995 and 2005, when cultivation was reduced by 5,000 ha and 26,000 ha respectively.

However, such significant reductions in opium poppy cultivation in Afghanistan have rarely been sustained. The impact of the Taliban ban on rural livelihoods was as dramatic as it was on the level of opium poppy cultivation. The elimination of the crop not only led to a significant fall in on-farm income for those who normally cultivated opium poppy but was also accompanied by a significant loss of employment opportunities for those usually involved in its harvest. Simply replacing one annual crop, opium poppy, with another, wheat, did not constitute a sustainable change in livelihood strategies.

A household's capacity to respond to a shock, such as eradication, is a function of its access to assets. For households with other livelihood options that they can draw upon and who are not dependent on opium poppy, eradication of their crops, or the threat of eradication, can prompt them to increase their investments in legal alternatives. This may involve reallocation of land, water, and labour to high-value vegetable and fruit crops, as well as

members of the household being freed up from the high labour demands of opium poppy to pursue non-farm income opportunities either in Afghanistan or in neighbouring countries. Where members of the family have salaried employment, skills in industries in high demand (for instance construction), or business opportunities in trade or the transport sector, the decision to cease cultivating opium poppy does not impose such a high economic cost on the household.

For households that are dependent on opium poppy and that have limited agricultural land, eradication or its threat, though serious in terms of its implications, does little to raise the opportunity cost of opium production and hence may not translate into a sustained shift into legal livelihoods. For such households, typically with limited landholdings and high population densities, cultivation of wheat will not satisfy basic household food requirements for more than a few months of each year.

Even in "good years" when climatic factors are favourable, distance to markets, poor physical infrastructure, limited local purchasing power, and the presence of rent seekers extorting bribes on most of the major transport routes, make the cultivation of higher-value agricultural crops much less profitable. Small landholdings, as well as low levels of cultivation of wheat and fodder crops, and the distance to markets, have also resulted in low levels of livestock ownership among households most dependent on opium poppy, further limiting their legal livelihood options. Consequently, it should not be any surprise that under these circumstances eradication has at best little effect, and it is quite common to meet farmers who have experienced eradication on a number of occasions yet still continue to cultivate opium poppy every year.

The "Nangarhar Experiment"?

In 2005 there was a concerted effort on the part of the provincial authorities in Nangarhar to eliminate opium poppy cultivation in the province. The result was a 96% fall in the level of cultivation between the 2003/04 and 2004/05 growing seasons. The process of implementing the ban learned much from the Taliban's experience in 2000/01. In particular, emphasis was placed on preventing the planting of the crop itself and on working through district and local power structures. As with the Taliban ban, promises of development assistance were made to communities in return for compliance with the ban.

In-depth research at the time (see Mansfield, 2005b) revealed that the ban imposed by the provincial authorities had a wide-reaching impact extending well beyond opium poppy farmers across a variety of different groups. Rural labourers, who had no land of their own but who had previously been employed, during the weeding and harvesting season for opium poppy, lost as much as US$ 1,000 in off-farm income due to the ban. Businessmen and shopkeepers in the provincial and district bazaars saw their turnover halve due to the significant shortfall in purchasing power that the ban imposed on the rural population. And unskilled daily wage labourers in Jalalabad city experienced a reduction in both the number of days they were hired and daily wage rates.

The most significant impact was borne by opium poppy cultivating households themselves. However, even here the impact of the ban was less punitive in areas with better access to resources. For instance, while households with access to larger and well-irrigated land-

holdings experienced more substantial falls in on-farm income due to the ban, their proximity to the agricultural commodity markets of Jalalabad allowed them to offset some of these losses by increasing cultivation of other high-value crops. Those with a stock of assets also drew on the different sources of legal income that they had access to in the provincial center and, where possible, increased the number of household members allocated to daily wage labour opportunities. While losses were significant, and even among this relatively resource-wealthy group expenditure on basic food items were curbed to make ends meet, neither longer-term productive assets, such as livestock and land, nor investments in licit income streams were sold off in response to the imposition of the opium ban.

In contrast, households most dependent on opium poppy and who typically cultivated it most intensively were found to adopt coping strategies in response to the ban that not only highlighted their growing vulnerability but threatened their long-term capacity to move out of illicit drug crop cultivation. The loss of on-farm income that this group experienced was not offset even in part by an increase in cultivation of high-value licit crops. This was due to constraints on irrigated land, the distance to markets, and the increasing control "local officials" are gaining over trade in licit goods. Instead, opium poppy was replaced by wheat, but due to land shortages and the density of population wheat production was typically insufficient even to meet families' basic food requirements. The loss of off-farm income (up to five months' employment) during the weeding and harvest season for opium poppy could not be replaced by intermittent wage labour opportunities at less than half the daily rate paid during the opium poppy harvest.

For this group, problems in accessing new loans were compounded by inability to pay accumulated debts. Expenditures on basic food items were reduced; children were withdrawn from higher education; and livestock, household items, and prior investments in licit income streams, where households had them, were sold. The resource-poor were also more likely to send members of their family to find employment in Pakistan, and typically were the most vociferous in their opposition to the government for its imposition of the ban and to the foreign countries they believed to be behind it.

Developments in 2006

Follow-up fieldwork in early 2006 has revealed that as anticipated, the pressure to revert to opium poppy cultivation in the 2005/06 growing season has been intense, and that some sections of the rural population in Nangarhar could not sustain such a significant shock to their livelihoods for a second consecutive year. Having sold the assets that they had available to sell in 2005, incurring increasing levels of debt, and having few viable alternatives, farmers believed that they had little choice but to resume opium poppy cultivation. In some parts of the province, opium poppy cultivation once again occupies up to 80% of the agricultural land.

In the areas where it has occurred, the shift back to opium poppy cultivation has led to (i) an increase in the availability of land for rent and share-cropping; (ii) the provision of income-smoothing loans, either as an advance on the future opium crop or in-kind due to the revived "collateral" of opium poppy cultivation; and (iii) an increase in daily wage labour opportunities during the weeding and harvesting season. The reduction in rainfall as compared with 2004/05 has also ensured that farmers in karez irrigated areas that are particu-

larly vulnerable to drought can meet the operating costs of running their tubewells (and possibly pay back some of the loans they obtained to install them).

There is also increasing confidence among the legal business community that many of the accumulated unrepaid loans to opium poppy farmers that they had accrued in 2004 and earlier, which remained unpaid in 2005 due to the imposition of the ban, might be repaid in 2006. It is notable that the new Governor of the province and the local authorities are adopting a pragmatic approach to eradication in some parts of Nangarhar in 2006. No doubt they are conscious that destroying the opium poppy crop of those with few alternative legal means of livelihood could provoke a backlash.

The situation is very different in areas that are in close proximity to the commodity and labour markets of Jalalabad, which have traditionally had larger landholdings and better access to irrigation. Households in these areas have not returned to opium poppy cultivation in 2005/06. Instead they have drawn on a variety of different income streams, with an increase in irrigation water in 2004/05, vegetable cultivation expanded and yields increased substantially. Onion, okra, and green bean production generated good returns in 2005, and in the subsequent year attracted traders to purchase crops in advance at the farmgate. The sale of fodder crops to those owning horses in the city and milk to urban consumers has further increased household incomes in areas adjacent to Jalalabad. Daily wage labour opportunities in the construction industry in Jalalabad and in the brick kilns of Surkhrud have also offered farmers an alternative. There have even been reports that some households have relocated to Surkhrud district from more entrenched areas of opium poppy cultivation in Nangarhar in order to take advantage of the agricultural potential of the area.

However, there are also many households that have on the whole refrained from opium poppy cultivation for a second year but who are facing increasing vulnerability as a result. These are typically areas with the potential for double cropping, reasonable-size landholdings and not really remote–areas such as the district of Bati Kot and lower Shinwar. They are in areas in which there is currently little purchasing power to stimulate the move into high-value horticultural crops, and in which access to regional markets is constrained by poor infrastructure and the impact rent-seekers have had on profit margins. Inventories of opium, among all but the rich, are now gone, and other assets including land are being sold. Households in these areas are currently experiencing a very serious downturn in their economy, and there is increasing evidence of families migrating to Pakistan, hostility to the local authorities, and the resumption of small plots of opium (from one to ten biswa) in 2006, where none had existed in 2005.

Experience across the province of Nangarhar over the last two years thus shows quite vividly the diversity in asset ownership, the corresponding diversity in dependency on opium poppy cultivation, and consequently the diversity in coping strategies adopted in response to the imposition of the ban on cultivation. It is important to note that while the amount of cultivation in Nangarhar as a whole is likely to rise in 2005/06 compared with 2004/05, the continuing very low levels of cultivation in the relatively asset-wealthy districts closest to the provincial center will prevent a return to the unprecedented high levels of cultivation in the province seen in 2003/04. This achievement should not be understated. Historically, the kind of dramatic reduction in opium poppy cultivation that was achieved in Nangarhar in the 2004/05 growing season has immediately been followed by an increase of equal order of mag-

nitude in the following year, but this has not happened in the case of Nangarhar in 2005/06.

It is also important to note that it is not just in the Kabul river basin of Nangarhar that there is evidence of increasing agricultural diversification and investments in high-value horticulture. Laghman, Badakhshan, Balkh, and even Farah are showing similar changes in patterns of behaviour. Furthermore, even within the districts in Nangarhar where over the years opium has been more entrenched and where households are more dependent on cultivating opium poppy as a means of livelihood, there is an increasing tendency to reduce, or even shift out of opium poppy cultivation, mainly in areas in close proximity to the district center. Thus an underlying trend is becoming evident in some provinces, whereby a real diversity is beginning to emerge between areas in the "center" where sustainable progress is beginning to be made against opium poppy cultivation, and those on the "periphery" where access to viable legal livelihoods is more problematic, and where a return to opium is seen as essential to meet both basic needs and repay debts.

This is not the full picture however. In the southern region of Afghanistan, especially in Helmand province, the prognosis is bleak. The incidence and level of opium poppy cultivation is likely to increase significantly. Feelings of resentment toward the local authorities, for what is perceived as their failure to deliver on past promises of assistance, are compounded by the view that those in authority are involved in the opium business themselves and moreover are unable to protect the life and property of even those in close proximity to the provincial center. This deterioration in the governance and security situation of the south should not only be seen in terms of the problems that the Government of Afghanistan has in extending its writ in what was traditionally the Taliban "heartland", but it also represents a failure to create a secure environment for economic growth in which rural households can strengthen and diversify their legal livelihoods. It is in just such an environment of uncertainty, poor governance, and lack of rule of law that opium poppy cultivation thrives, and by all accounts it will expand substantially in 2006 in Helmand, reaching a record level. And this is occurring at the same time that many households in Nangarhar continue their abstention from opium poppy cultivation for a second year running. These patterns could not be more different.

VII. POLICY OPTIONS: DIVERSITY IN CIRCUMSTANCES, DIVERSITY IN RESPONSES

Given the diversity of assets and livelihood strategies of Afghan rural households, as well as the diversity in their dependency on opium poppy cultivation as a means of meeting basic needs, a corresponding diversity in policy and operational responses is required. Just as it is recognised that to fulfil development objectives, policies, programs, and projects need to be designed and implemented so as to specifically target the poor (and not allow the resource-wealthy to accrue the lion's share of assistance), it should also be recognised that drug control efforts need to target and tailor their interventions accordingly if they are to achieve sustainable elimination of opium poppy cultivation in Afghanistan.

The Afghanistan National Drug Control Strategy actually acknowledges the diversity among opium poppy cultivating households in its text, and calls for targeting interventions accordingly. There are even calls for targeting the opium crops of the "greedy not the needy" with eradication. Experience prior to and since 2001 certainly highlights the efficacy of such

an approach. Where an opium poppy ban has been enforced across a wide geographic area and with no consideration of whether viable legal livelihood opportunities exist, it has proven unsustainable. From the Taliban prohibition in the 2000/01 growing season to the pattern of "boom and bust" in provincial-level production in Helmand since 2003, significant reductions in opium poppy cultivated have not been maintained into a second year.

The Taliban prohibition actually initiated a chain of events that not only had a dramatic impact on the livelihoods of the rural population and the overall economy but also established the conditions for increasing levels of opium poppy cultivation in subsequent years (see Box 3.3). For example, the Taliban ban led to a rise in farm-gate prices (increasing from US$ 100 to US$ 500 per kg between September 2000 and July 2001), as well as an exponential rise in the value of opium-denominated debt. Advance payments of $50 per kg on the future opium crop were converted into cash debts at the prevailing market price of US$ 500 per kg.

Box 3.3: The Ban as a Stimulus in Achin District, Nangarhar

In Achin in 2000, a respondent had taken a loan for the equivalent of US$ 448 as an advance payment on five kg of opium. As the respondent did not pay the opium he owed at the time of harvest due to the Taliban ban, this debt was converted into cash in late 2001 at the prevailing price of US$ 480 per kg, resulting in a total debt of US$ 2,400. In preparation for the 2001/2002 harvest season this cash debt was then reconverted into opium at the salaam price of US$160 per kg resulting in a debt of 15 kg of opium to be paid at harvest time. Once again the respondent failed to repay, this time due to drought. His debt was once again converted into cash at the prevailing price of opium of US$ 320 per kg in late 2002. Given that he now owed 15 kg of opium his total debt had increased to the equivalent of US$ 4,800 in cash. In January 2003, this unpaid debt was once again converted into opium at the salaam price of around US$96 resulting in a debt of 50 kg of opium. The respondent did not have sufficient land to produce this much opium even if it had been well irrigated. Finally the jirga intervened and decided that the respondent would give his 8-year-old daughter as payment. This was duly done.
Source: Mansfield (2005b).

For farmers saddled with high levels of accumulated debt, maximising the amount of land they allocated to opium poppy was their only means of raising enough funds for repayment. For those without debt, the high market price of opium following the ban encouraged them to cultivate the crop. At such high prices even those in more marginal areas where poor yields would otherwise have militated against cultivation (when prices had been lower) considered taking up cultivation. The increasing availability of wheat following the end of the drought, the freeing up of both internal and external markets, and the absence of effective governance–all contributed to making opium poppy cultivation an attractive option across many parts of Afghanistan.

Experience has also shown that the political costs incurred by local and provincial leaders in implementing an opium ban have been significant. Promises of development assistance in return for compliance with a ban have rarely been fulfilled, and the kind of development impact required to address the multi-functional role that opium poppy plays in the livelihoods of the households that are most dependent on it cannot be delivered in the short term. With fear of political unrest and the impact it would have on their own future (political, as well as financial where local political leaders are involved in the trade), there has often been little appetite among the political leadership to marginalise communities for a second year running. While we will never be entirely sure whether the Taliban would have been able to maintain a low level of cultivation for a second year in succession, it can certainly be said that the financial and social costs incurred by a large contingent of the rural population in strategic Pashtun provinces did little to bolster their support to the Taliban once the events

of September 11, 2001 unfolded.

In practice, implementation of the more targeted drug control effort outlined in the National Drug Control Strategy has proven illusive. Eradication has typically targeted the "needy", not the "greedy". For example, in some areas access to social and political networks and the finances to bribe officials has ensured that an individual's crop escapes unscathed (see Box 3.4 for an illustration). On occasion the threat of eradication has become a vehicle for extracting money from local communities. There is also a perception that eradication is targeting the poor, and while the true extent of this is unclear, this impression is damaging and remains hard to dispel given that in some areas there is a deeply-held view that local officials (sometimes even those charged with eradication themselves) are cultivating opium poppy on their own land.

Box 3.4: Corruption in Gulistan District, Farah Province

Due to the drought I dug one tubewell. Last year (2005) I cultivated eight jeribs of poppy. The local authorities came to destroy my crop. They said they would destroy it unless I gave them some money. I gave them Afs 20,000 (US$ 400) and they left my crop alone.

While local power structures clearly prevail in areas where the national government has not extended its writ, there are also those in the international drug control community who have not supported a targeted approach to the drug control effort and oppose limiting eradication to areas where farmers have viable legal livelihoods. This opposition is on the principle that all cultivation is illegal and therefore should carry the risk of being destroyed.

Although the thinking is that eradication, or the threat of it, can raise the opportunity costs of opium poppy cultivation, making it too risky an endeavour to pursue, the reality is that eradication can produce quite different results under different circumstances. Where there is access to viable legal livelihoods, the threat of eradication may deter farmers from planting in the first place. When faced with the risk of eradication, a household that has access to viable alternatives will likely choose not to plant opium poppy and forego the potential benefits they could obtain, by instead investing their assets (i.e. land, water, labour, capital) in legal livelihood opportunities.

Eradication does appear to have had some impact on the scale and nature of households' engagement in opium poppy cultivation where certain conditions prevail. For example, reports suggest that in the 2004/05 growing season, eradication in the province of Wardak proved effective in reducing opium poppy cultivation. Agricultural diversification, including the extensive cultivation of high-value fruit and vegetable crops and the limited history of opium poppy cultivation in the area, appears to have meant that the abandonment of what was after all a relatively minor crop in the local context was not such a difficult shift to make (see Mansfield, 2005b, p. 35). As discussed in the previous section, a similar phenomenon seems to have occurred in Nangarhar province in 2006 in areas with better access to legal livelihood opportunities.

However, in general the experience with eradication in Afghanistan since 2001 has been much more equivocal than its strongest advocates would like to admit. Households that have lost their opium crop to eradication on more than one occasion have been found to continue to cultivate opium poppy, even increasing the amount of land dedicated to it in subsequent seasons (see Mansfield, 2005b and 2006). Where a household is highly dependent on

opium poppy and has few or no other legal livelihood opportunities, this makes sense (see Box 3.5). Under these circumstances, eradication may not only not have any impact on the level of opium poppy planting in subsequent years, it may even result in an increased incidence of cultivation– as households seek to recoup the losses (and increased debts) they incurred as a result of their opium crop being destroyed. Households may even build the impact of intermittent bans on opium poppy cultivation into their decisions on how household assets will be allocated, electing to maximise cultivation in years where cultivation is not banned to make up for the "lean" years in which the local authorities feel compelled to enforce a ban.

Perhaps of even greater concern is the impact that poorly implemented eradication can have on the nascent relationship between citizen and state. There are anti-state elements that will no doubt seek to exploit any disaffection that eradication generates. The issuing of night letters by the Taliban, encouraging opium poppy cultivation and offering protection against eradication, in the southern region in the 2005/06 growing season, provides clear evidence of this. A more pronounced eradication campaign that ignores whether households have alternative legal sources of livelihood in place could prove even more destabilising.

Box 3.5: Eradication and Accumulated Debt in Marja Distrtct, Helmand

Mohammed Khan had 13 jeribs of land in the district of Marja but owed Afs 100,000 (US$ 2,000) that he had borrowed to meet household expenses in 2004. He cultivated seven jeribs of land with opium poppy in 2005 but it was all destroyed by the government. His creditor wanted him to repay the loan but he could not. The village Jirga decided that Mohammed Khan should give his eleven-year-old daughter to his creditor as payment in kind. In 2006 Mohammed Khan was cultivating ten jeribs of opium poppy and was convinced that he would resolve his economic problems.

There are those who would dispute claims that a comprehensive elimination effort would result in widespread unrest. They suggest that there is no need to focus eradication only on areas where households have access to legal livelihoods, as development assistance can be targeted to ensure that households which currently do not have viable alternatives to opium poppy cultivation can meet their basic needs. Indeed, Cash For Work is increasingly being seen as an appropriate response to opium poppy elimination (be it through eradication or non-planting) in such areas.

However, typically those that advocate the "eliminate-first-develop-later" model do not recognise that development assistance cannot be delivered in as timely a way as would be desirable; neither government nor bilateral or multilateral agencies have the capacity to respond so quickly, particularly in the insecure environment that prevails in most of the opium growing areas of Afghanistan. Nor do those pushing for quick and dramatic reductions in opium poppy cultivation realise that the farmers who are most dependent on opium production for their livelihood are least likely to be the beneficiaries of the development assistance provided.[15] Not only is the total cash income offered by interventions like Cash for Work insufficient to meet households' basic needs, but these initiatives do not address the other roles that opium poppy plays in the livelihoods of the rural poor, such as providing access to land and credit.

Ultimately, the kinds of interventions that are being designed as a specific response to reductions in opium production do not address the underlying structural and institutional reasons that have led to the growth of opium poppy cultivation in the first place. They do not address the issues of governance and the wider enabling environment that is required for

[15] "The impact of Cash-for-Work programs designed to meet some of the income shortfall experienced as a result of the opium poppy ban has been limited, often failing to reach those who have been made most vulnerable by the ban on opium poppy cultivation." (Mansfield, 2005a, p. iv).

households to move from illegal to legal livelihoods. Consequently, opium poppy cultivation continues to be perceived by many as a low-risk crop in a high-risk environment. Changing this perception requires not just increasing the risks associated with opium poppy cultivation through the threat of eradication and in conjunction papering over the livelihood issue by providing some short-term development assistance. More fundamental changes are required in areas as diverse as the provision of physical and social infrastructure, the promotion of high-value agricultural crops and agri-businesses, the enforcement of anti-corruption measures, and the development of non-farm income opportunities.

Considerable thought also needs to be given to provincial and regional economies. Areas of potential economic growth need to be prioritised rather than spreading efforts too thinly across wide geographical areas and where the development impact is likely to be limited. Much to the chagrin of some, it has to be recognised that there are many geographical areas in Afghanistan that are unlikely to offer viable legal alternatives to opium poppy cultivation given their location, the productive capacity of the land, and current population densities. From both a drug control and development perspective, the proportion of development funding that should be allocated to these areas needs to be carefully considered. This is not to say that these areas or their populations should be ignored, but rather that particular effort should be devoted to establishing the necessary "pull factors" in areas of higher economic potential so as to increase the legal livelihood opportunities for those moving to them from more marginal areas.

Most important, it has to be recognised that there is no substitute for state building and extending the presence of the state and service delivery in areas where there has been little or no direct relationship between the government and rural communities for the best part of two decades, if not longer. Indeed, as experience in the more accessible districts of Nangarhar the 2005/06 season illustrates, where improvements in governance are combined with the development of legal livelihood options, it is possible to sustain reductions in opium poppy cultivation for a second consecutive year. Both drug control and development efforts should learn from this experience and focus and target their efforts accordingly.

VIII. CONCLUSIONS

Given the diversity that exists in rural Afghanistan, it has always seemed rather counter-intuitive to attempt to generate the concept of an idealised "average" farmer on which to base development and drug control efforts. This chapter has sought to bring out the depth of understanding that we now have regarding the contribution different socio-economic groups make to the cultivation of opium poppy and the multiple benefits they derive from their involvement. This knowledge is critical to identifying the entry points for developing an effective strategy for the sustainable elimination of the crop.

It is certainly true that opium poppy growing households come in many different shapes and sizes. Some have considerable assets at their disposal. They own large tracts of (mostly) irrigated land; capital assets such as tractors, vehicles, and livestock; and are located near the main provincial markets. They employ others to work their land, while the landowner himself may engage in trade or politics, or both. The income earned on the numerous crops grown is supplemented with the sale of livestock and dairy products. The social

and political networks they have at their disposal ensures secure employment opportunities for family members, and access to patron-client relationships that may result in them preventing local power brokers, both formal and informal, from acting against their interests. There is little evidence to support any argument that poverty is the determining factor for opium poppy cultivation among this socio-economic group.

The same cannot be said of households at the opposite end of the socio-economic spectrum. For them, limited landholdings or a state of landlessness compounds the pressure that the sheer number of family numbers places on household assets. For this group, typically residing in a remote area far from commodity and labour markets, and with limited physical and social infrastructure, cultivation of opium poppy can facilitate access to on-farm and off-farm income, credit (in cash and in-kind), and–for the landless or those with insufficient land –increase the amount of land available for leasing or sharecropping.

Even with some of the most concentrated levels of opium poppy cultivation, the communities in these areas are typically far from prosperous: food is simple, education and health status poor, and ownership of capital goods limited. Moreover, even with opium poppy cultivation, the majority of households in these areas still need to send family members in search of off-farm and non-farm income opportunities in order to meet their basic needs. With the birth of a new generation of children and the further fragmentation of land that this will imply, the pressure to migrate can only intensify.

Between these two polar extremes there are a multitude of socio-economic groups with differing portfolios of assets and differing degrees of dependency on opium production as a livelihood strategy. The question remains as to what proportion of households can forego the assets that they derive from their engagement in opium poppy cultivation without enduring the kind of hardship that would be unacceptable from both a development and humanitarian perspective, as well as from a political perspective–recognising the potentially destabilising effect of denying a livelihood to a potentially significant proportion of the rural population.

Current estimates of the number of "people involved in opium poppy cultivation" seem rather unrefined. Issues of definition and methodology pervade. The multiplier effect of the opium economy, and the number of households that do not reside in poppy-growing communities but nevertheless engage in weeding and harvesting of the crop, are currently not considered.

Available rural household survey data suggest that three-quarters of households own some land and one-quarter are entirely landless. This is not to say that those that do own land have sufficient land to meet their basic needs–far from it. Indeed, this same survey suggests that in 2003 there were 3.5 million rural Afghans who were extremely poor, 10.5 million who were vulnerable to extreme poverty and the rest, a further 3.5 million, were less poor but nonetheless still vulnerable to poverty (World Bank, 2005, p. ii).

While it is true that many of the poor do not currently cultivate opium poppy on their own land, it is unclear how many of these derive either direct or indirect benefits from the opium economy as a consequence of the off-farm income they earn as itinerant labourers or though the effect on demand of the increase in disposable income generated by the opium

economy. There is certainly evidence in many areas where opium poppy is not cultivated, often due to environmental constraints increasing the opportunity costs of production, of households migrating seasonally to work in areas where opium poppy is grown more intensively. Were a more effective eradication campaign to be pursued this could constitute the shock that might turn those "vulnerable to poverty" into "the extremely poor". These are critical gaps in our knowledge base. They need to be filled in order for both development and drug control policies, programs, and their corresponding budgets to be designed, tailored, and targeted appropriately.

Fundamentally, there is a need to work with the diversity that exists in rural Afghanistan rather than ignore it for the sake of bureaucratic convenience or ideological positions. There is a great deal that we know about opium poppy cultivation and how the motivations and circumstances that influence its cultivation vary by socio-economic group and location. This knowledge needs to be used and built upon in response to both current information gaps and the new ones that will arise with the inevitable further evolution of the opium economy.

Indeed, both Afghanistan and opium poppy cultivation are too dynamic for any complacency. Effective policy and planning requires an evidence base by which to assess the impact of interventions. This is as much the case for development policy and planning as it is for drug control. Given how intrinsically linked the achievement of goals in each of these areas is, there can be no shortcuts. Greater effort needs to be made to define what we know, what we don't know, and what we need to know with regard to the interface between drug control and development efforts in Afghanistan, if the delicate balance between interventions aimed at reducing the scale of illicit drug crop cultivation and those aimed at broader state building and development are not to be undermined.

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