

Afghanistan Research and Evaluation Unit
Case Study Series

WATER MANAGEMENT, LIVESTOCK
AND THE OPIUM ECONOMY

Resurgence and Reductions:
Explanations for Changing Levels of
Opium Poppy Cultivation in Nangarhar
and Ghor in 2006-07



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This report is one of seven multi-site case studies undertaken during the second stage of AREU's three-year study, "Applied Thematic Research into Water Management, Livestock and the Opium Economy."



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About the Afghanistan Research and Evaluation Unit

AREU is an independent research organisation headquartered in Kabul. AREU's mission is to conduct high-quality research that informs and influences policy and practice. AREU also actively promotes a culture of research and learning by strengthening analytical capacity in Afghanistan and facilitating reflection and debate. Fundamental to AREU's vision is that its work should improve Afghan lives.

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David Mansfield, May 2008

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Acronyms

ANA	Afghan National Army
ANP	Afghan National Police
AREU	Afghanistan Research and Evaluation Unit
DAP	diammonium phosphate
GoA MCN	Government of Afghanistan Ministry of Counter Narcotics
IED	improvised explosive device
TAF	The Asia Foundation
UNHCR	United Nations High Commissioner for Refugees
UNODC	United Nations Office on Drugs and Crime
USG	United States Government

Glossary

<i>biswa</i>	unit of measurement used for area (1 <i>biswa</i> =100 m ²)
<i>jerib</i>	unit of measurement used for area (1 <i>jerib</i> = 2000m ²)
<i>naswar</i>	a form of chewing tobacco
<i>ser</i>	unit of weight used for opium in Nangarhar, which is the equivalent of 1.2 kg; for reference in this paper, this should not be confused with the measurement for other commodities, for example, in Kabul where one <i>ser</i> is the equivalent of 7 kg

Currency Exchange Rates

Based on their value at the time of research, the exchange rates used in this paper are approximately:

US\$1 = 50 Afghanis (Afs)

US\$1 = 60 Pakistani rupees (Rs)

Executive Summary

This report looks at changes in opium poppy cultivation from 2005-06 to 2006-07 in two provinces of Afghanistan: Nangarhar in the east of the country and Ghor in the centre. Nangarhar is of particular interest, both because it experienced a comprehensive ban on opium production in the 2004-05 growing season resulting in a 96 percent decline in cultivation over a 12-month period and because, in 2007-08, a ban was once again imposed on the province, reducing levels of cultivation to those not seen since the imposition of the Taliban prohibition in 2000-01. Ghor, a province that has come to opium poppy cultivation much later in the day, serves to highlight both the relatively “footloose” nature of cultivation in Afghanistan, and the market and environmental constraints on more extensive cultivation found in some areas.

Drawing on three years of fieldwork in Nangarhar and Ghor, this report highlights that rural households cultivating opium poppy do not necessarily generate a gross per capita income either above the subsistence level of a dollar a day or greater than non-poppy cultivating households in the same province. Indeed, the report suggests that in Ghor, persistent opium poppy cultivation is more an indicator of desperation than of wealth. Size of land holdings, land tenure arrangements, number and composition of household members, dependency ratios and the timing of sale can all act against the crop, making a significant contribution to the socioeconomic status of the household. At the same time, many of the households that did cultivate opium poppy in 2007-08 in Nangarhar and Ghor currently lack viable alternatives through which to meet their basic needs.

This report shows that dramatic reductions in opium poppy cultivation are difficult to sustain because of their powerful negative impact on the welfare of households. Indeed, the return of widespread opium poppy cultivation in Nangarhar in the 2006-07 growing season was rooted in the dramatic reductions in cultivation imposed across the population in 2004-05, recalling the expansion in cultivation across Afghanistan in the early years of the Karzai administration that occurred in response to the Taliban prohibition of 2000-01.

This report suggests that the resurgence in opium poppy cultivation in Nangarhar in 2006-07 was not simply a one-off event resulting from a change in the political environment. Rather, it was part of a cumulative process in which the deteriorating social and economic position of a population affects the local political environment. As the ban on opium imposed a toll on the economic well-being of the population in Nangarhar, that population in turn changed its level of support for the government. To impose a comprehensive ban on opium poppy in such an environment is to invite destabilisation – a risk of which provincial governors and district administrators are acutely aware.

This report also shows the effects of both eradication and crop failure when households lack viable alternatives to opium poppy cultivation. Eradication in Nangarhar during the 2005-06 growing season proved ineffective at deterring cultivation in the districts of Achin, upper Shinwar and Khogiani the following year. Sustained crop failure over a number of years in Ghor has not prevented opium poppy cultivation in those areas where the population has limited livestock and rain-fed land.

Households that persist in growing poppy in these provinces do not have a consistent, natural predisposition to favour the crop (though some may) or an inherent bent toward “illegality.” In Ghor, farmers who continue to cultivate opium poppy do so because they do not have livestock in which to invest and increasingly have fewer non-farm income opportunities both within the province and across the border in Iran. In Nangarhar, those with better access to resources, as well as greater proximity to the labour and agricultural commodity markets of Jalalabad and Kabul, refrain from opium

poppy cultivation; it is those with fewer assets and greater distance to markets who continue to cultivate the crop. This evidence supports two important findings: despite claims to the contrary, the returns on opium poppy are not unassailable; and, those who cultivate the crop are not the wealthiest members of a community.

This report further highlights the need for a high degree of caution when interpreting the data around opium poppy cultivation, in particular, explanations of changing levels of opium poppy cultivation. Explanations of fluctuations in cropping patterns that are firmly rooted in the language of the “political commitment” of the local authorities tend to overlook the wider socioeconomic, political and environmental conditions that influence both opium production and the broader livelihood strategies within which opium poppy cultivation takes place.

Too often, such explanations confuse correlation with causality, and attribute reductions in cultivation to the commitment of the local authorities and the effects of counter-narcotics messaging rather than natural events such as crop failure and increasing levels of precipitation, or a change in the economic environment – or both. Perhaps more importantly, such explanations tend to overlook the impact of reductions in opium poppy cultivation on the welfare of the local population and, therefore, tend to neglect whether a change in the level of cultivation will prove sustainable. Ultimately, there is a need for more disaggregated data if the Government of Afghanistan and the international community are to develop a deeper understanding of the nature of the transition from illegal to legal livelihoods; how this differs by time, location and socioeconomic group; and, what tools are most likely to deliver the improvements in economic growth, security and governance that have proved so critical to delivering sustained reductions in opium poppy cultivation in other source countries as well as in those districts around the provincial centre of Nangarhar.

1. Introduction and Methodology

1.1 Introduction

The United Nations Office on Drugs and Crime (UNODC) reported that in the 2006-07 growing season levels of opium poppy cultivation took very different trajectories in different parts of Afghanistan. UNODC described a “fault line” between the north and the south that “now divides the country.”¹ The United States government reiterates this point, referring to “bifurcation.”²

Explanations for these divergent trends are offered, typically linking increases in the south with “greed” and the escalating insurgency³ while tying reductions in the north to political commitment and efforts aimed at dissuading farmers from cultivation.⁴ It is not the intention of this report to support or refute these claims directly. This has been done elsewhere.⁵ Instead, this work seeks to take a detailed look at the explanations for fluctuation in the level of cultivation in the 2006-07 growing season in two areas, Nangarhar in the eastern region and Ghor in the centre.

These two provinces are of some interest in relation to the current debates on the causes of such diverging trends in cultivation. For instance, the province of Nangarhar experienced an estimated 285 percent increase in the level of cultivation in 2006-07 over the previous 12 months, resulting in 18,739 hectares (ha) of opium poppy being harvested in the province.⁶ Only the province of Helmand saw a larger increase in the level of cultivation during that period. In the province of Ghor, cultivation is reported to have fallen from 4,679 ha in the 2005-06 growing season to 1,503 ha in 2006-07. As such, these two provinces represent the divergence in cultivation levels that is evident in Afghanistan and present an opportunity to explore its causes.

Not only do these two provinces offer different trajectories in opium poppy cultivation over a 12-month period, they also offer divergent histories of the production and trade in opium. Nangarhar is a province where cultivation has typically been extensive, averaging 15,000-20,000 ha through much of the 1990s and early 21st century. During most of these years, only the province of Helmand cultivated more opium poppy. Nangarhar also has been closely associated with the trade of opium and its processing into heroin. It has acted as regional hub for trading opium in the eastern region with

¹ United Nations Office on Drugs and Crime and Government of Afghanistan Ministry of Counter Narcotics, *Afghanistan Opium Survey 2007* (Kabul: UNODC, 2007), iii.

² *U.S. Counternarcotics Strategy for Afghanistan* (Washington, DC: United States Government Bureau of International Narcotics and Law Enforcement Affairs, August 2007), 24.

³ “By preventing national authorities and international agencies from working, insurgents have allowed greed and corruption to turn orchards, wheat and vegetable fields into poppy fields” (UNODC and GoA MCN, *Afghanistan Opium Survey 2007*, iii); “It should be noted that 75% of the opium poppy cultivation in Helmand is new cultivation that did not exist two years ago. By definition, then, at least 75 percent of the poppy in Helmand is not being grown by poor farmers who lack licit economic alternatives — two years ago these farmers were doing something else” (*U.S. Counternarcotics Strategy for Afghanistan*, 53.)

⁴ “... leadership, incentives and security have led farmers to turn their backs on opium” (UNODC and GoA MCN, *Afghanistan Opium Survey 2007*, iii); “... a combination of political will and incentives and disincentives, such as effective public information, alternative development and eradication” (*U.S. Counternarcotics Strategy for Afghanistan*, 24.)

⁵ See David Mansfield and Adam Pain, *Evidence from the Field: Understanding Changing Levels of Opium Poppy Cultivation in Afghanistan* (Kabul: AREU, 2007); Barnett Rubin and Jake Sherman, “Counter-Narcotics to Stabilize Afghanistan: The False Promise of Crop Eradication” (New York: Center on International Cooperation at New York University, 2008); UNODC, “Is Poverty Driving the Afghan opium Boom?” (Kabul: UNODC, 2008).

⁶ For ease of purpose, estimates of levels of cultivation will be derived from UNODC’s annual opium surveys.

the focus of trade moving from Ghani Khel in the district of Shinwar in the mid-1990s to Kahi and to Shadal bazaar in Achin after the fall of the Taliban.

On the other hand, the province of Ghor, according to both UNODC and the U.S. government, has grown opium poppy only since the fall of the Taliban – although evidence from the field suggests cultivation preceded 2001⁷—and, even in the year that UNODC reported as its peak year of production, only 4,983 ha of opium poppy were grown. The expansion in cultivation has been due largely to the Taliban ban on opium production in the 2000-01 growing season and the return of seasonal labourers and migration by southern Pashtuns to the area. Similarly, the trade in opium has been dependent largely on demand from the south either for opium from Ghor itself or through the province from more significant production in the northern provinces⁸. In contrast to Nangarhar, there are no reports of opium being processed into heroin within the province of Ghor.

The two provinces also differ in their history of drug-control efforts. In Nangarhar, there have been a number of efforts in the last decade aimed at reducing opium poppy cultivation. For example, in 1995 then-Governor Haji Qadeer reportedly eradicated approximately 5,000 ha of opium poppy in an attempt to reduce levels of cultivation. In the 2000-01 growing season, the Taliban prohibition on opium production resulted in cultivation in Nangarhar being reduced to only 218 ha from an estimated 19,747 ha in 1999-2000. Subsequently, since the fall of the Taliban, Haji Qadeer's younger brother Haji Din Mohammed orchestrated a concerted effort to deter farmers from planting, resulting in cultivation falling to 1,093 ha in 2004-05 from 28,213 ha in 2003-04. Only last season, the provincial and district authorities in Nangarhar eradicated an estimated 3,048 ha of opium poppy, up from 337 ha in 2005-06.

The situation in the province of Ghor could not be more different. Cultivation is reported to have made some of its most significant increases during the year of the Taliban prohibition.⁹ Since then, there have been few attempts to curb cultivation by the provincial and district authorities apart from the obligatory pre-planting information campaigns. In the 2006-07 growing season, an all-time high for the province was reached – an estimated 188 ha of opium poppy destroyed.

These very different histories of cultivation and the associated divergent trajectories of opium production in these two provinces yield insights into the complex socioeconomic, political and environmental context in which decisions over opium poppy cultivation are made. An analysis of the causes of the change in cultivation between 2005-06 and 2006-07 also provides an opportunity to explore what impact drug-control efforts, as well as wider changes in governance, security and economic development, have had on levels of cultivation.

This report is based on three consecutive years of fieldwork in the provinces of Ghor and Nangarhar and is part of the Water, Opium and Livestock (WOL) project funded by the European Commission and implemented by the Afghanistan Research and Evaluation Unit (AREU) in cooperation with its partners the Danish Committee for Aid to Afghan Refugees (DACAAR) and German Agro Action (GAA).

The report is divided into three sections. The first looks at development in Nangarhar during the 2006-07 growing season. It analyses the socioeconomic and political

⁷ See David Mansfield, "Opium Poppy Cultivation in the Provinces of Nangarhar and Ghor" (Kabul: AREU, 2006).

⁸ See Adam Pain, "Opium Trading Systems in Helmand and Ghor" (Kabul: AREU, 2006).

⁹ See Mansfield, "Opium Poppy Cultivation in the Provinces of Nangarhar and Ghor."

processes that led to the return of extensive opium poppy cultivation across much of the province. It looks at how responses to the ban imposed on opium poppy cultivation over the last three years have been contingent largely on the socioeconomic position of the population and how this, in turn, has impacted support for the provincial authorities. This section highlights the unsustainable nature of dramatic reductions in opium poppy cultivation in areas where viable livelihood options do not exist and warns of the political repercussions of adopting an indiscriminate approach to counter-narcotics regardless of the socioeconomic, political and environmental conditions.

The second section explores the pattern of cultivation in the province of Ghor in the 2006-07 growing season. It documents the transition towards investments in the livestock sector and the abandonment of opium poppy in those areas that have retained their herds and have sufficient rain-fed land. It also highlights the increasingly difficult circumstances experienced by those who persist with opium poppy cultivation despite its repeated crop failure and falling prices. This section concludes that far from opium poppy cultivation being an indicator of the wealth of those who grow it in the province, it is a sign of increasing poverty.

The final section provides a comparative analysis of these two very different provinces with very different histories and trajectories of opium poppy cultivation. It illustrates how current explanations for fluctuations in opium poppy cultivation in the 2006-07 growing season fail to capture the complex socioeconomic, political and environmental factors that influence opium production across Afghanistan and how these factors differ by both location and socioeconomic group. It suggests that, despite claims to the contrary, the returns on opium poppy are not unassailable and that those that cultivate the crop are not the wealthiest members of a community.

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The report concludes that there is a need for more disaggregated data if the Government of Afghanistan and the international community are to develop a deeper understanding of the nature of the transition from opium poppy cultivation to its abandonment; how this differs by time, location and socioeconomic group; and, what tools are most likely to deliver the improvements in economic growth, security and governance that have proved so critical to delivering sustained reductions in opium poppy cultivation.

1.2 Methodology

1.2.1 Approach

Conducting research on opium poppy cultivation in Afghanistan has always been difficult. As with any "illegal" or "underground" activity, data collection is difficult and vulnerable to the biases of those involved in drugs production and the organisations responsible for its control.¹⁰ Matters are made all the more difficult in

¹⁰ Paul Gootenberg, "Talking like a State," in *Illicit Flows and Criminal Things: States, Borders and the other Side of Globalisation*, ed. William van Schendel and Itty Abraham (Bloomington, IN, USA: Indiana University Press, 2005), 121.

Afghanistan by the absence of robust data on the most basic variables including population size and its composition. The worsening security situation in some parts of rural Afghanistan, including many of those visited for the purpose of this study, is further exacerbating data collection and, in some areas, making fieldwork virtually impossible. Pressure to act against opium cultivation and its trade is increasing the already heightened sensitivities associated with discussions about any behaviour that could result in government or international action.

In such an environment, undertaking large-scale surveys using probability sampling techniques makes little sense.¹¹ Instead, the focus in this study is on understanding the variation between the diverse areas and socioeconomic groups that cultivate opium poppy and how they respond to the different political, socioeconomic and environmental factors that curtail or encourage its cultivation. To achieve this, districts were selected for fieldwork on the basis of the differing asset portfolios of the rural population within them, with final selection based on districts where there was maximum variation. For example, proximity to the provincial capital typically coincides with a number of assets. On the whole, provincial capitals such as Jalalabad and Chaghcharan are established in areas with better access to irrigated land and water. Therefore, a household in a district neighbouring the provincial capital, like Surkhrud, Behsud or Kama, is generally more likely to have a larger landholding with a greater availability and consistency of water supply than a household in a more remote district such as Achin.

Proximity to the provincial capital can also mean better access to commodity markets for the purchase and sale of agricultural and non-agricultural goods as well as labour markets for daily wage labour opportunities and perhaps salaried employment. Those areas nearest the provincial centre may have better physical security and are more likely to benefit from better social and physical infrastructure, as well as, in the case of Nangarhar, a more diverse population in terms of tribes and ethnic groups, making it easier for the provincial authorities to impose their will. The history and extent of opium poppy were also considered when selecting districts for fieldwork. In both Ghor and Nangarhar, preference was given to revisiting districts and households where fieldwork had been undertaken in the 2004-05 and 2005-06 growing seasons.

Within each district, interviews were conducted with a variety of different socioeconomic groups to explore how assets and capabilities affected changes in cultivation. In the case of Nangarhar, consideration was also given to the impact of significant reductions in opium production on the household economy, which subsequently informed the type of coping strategies that households adopted. Interviews were also conducted with patrons and shopkeepers in the bazaars of Chaghcharan and Jalalabad, as well as in district centres and along transit routes (such as Kahi and Markoh in Nangarhar and Angaran in Ghor). These interviews were used to explore the positive and negative contributions of opium poppy cultivation to the local economy.

¹¹ "This procedure is intended to produce a representative sample. The process draws subjects from an identified population in such a manner that every unit in that population has precisely the same chance (probability) of being included in the sample." Bruce Berg, *Qualitative Research Methods for the Social Sciences* (Boston: Pearson Education Inc, 2007), 42.

		No. of villages	No. of respondents		
			2005	2006	2007
Rural Households					
Nangarhar	Achin	5	15	15	12
	Bati Kot	1	3	3	3
	Shinwar	5	14	14	14
	Kama	5	12	12	15
	Surkhrud	5	12	14	12
	Khogiani	5	15	15	14
Ghor	Chaghcharan	4	12	14	12
	Sharak	3	12	-	-
	Dawlat Yar	5	-	12	12
Shopkeepers					
Nangarhar	Jalalabad	-	5	5	5
	Markoh	-	3	3	3
	Kahi	-	4	4	4
	Chaghcharan	-	3	3	3
Daily Wage Labourers					
Nangarhar	Jalalabad		7	9	9
	Markoh		-	-	9

In all interviews, the focus was on the different assets and activities that constituted the livelihood of the household and the impact of any change in circumstance on the different activities pursued, as well as on the overall welfare of the household. The wider political and institutional environment that shapes household decisions was also explored with both respondents and key informants. Opium poppy was treated as another agricultural commodity and was not the focus of enquiries. In those areas where opium poppy was cultivated, respondents freely discussed most aspects of the cultivation and trade in opium.¹²

Given the continuing debate on the income status of those cultivating opium poppy, the fieldwork also attempted to establish the different sources of income to which households had access and the income derived from them. It is recognised here that income is one of a range of measures used to determine poverty that on its own does not capture the multidimensional and complex nature of the concept, particularly in areas of chronic insecurity.¹³ Problems associated with measurement of poverty are

¹² One of the most sensitive aspects of the discussion was with regard to any inventory that might be stored in the household.

¹³ The UN High Commissioner for Human Rights states "Economic deprivation – lack of income – is a standard feature of most definitions of poverty. But this in itself does not take account of the myriad of social, cultural and political aspects of the phenomenon. Poverty is not only deprivation of economic or material resources but a violation of human dignity too." United Nations High Commissioner for Human Rights, "What is Poverty? Human Rights in Development," <http://www.unhcr.ch/development/poverty-02.html>.

also acknowledged.¹⁴ Nevertheless, where possible, household incomes and net returns on crops have been calculated not to establish whether farmers are indeed “rich” or “poor” but to highlight the different income sources they draw upon and the contribution that opium poppy cultivation can make to the overall household economy.

The fieldwork was undertaken by an international consultant in partnership with Afghan national colleagues. Interviews were semi-structured and conducted in a conversational manner. Notes were not taken during interviews but were written up once the interviews had finished and the interviewer had departed the area. Given the paucity of robust data on rural livelihoods in Afghanistan, it is not possible to determine whether this sample is truly “representative”. However, this work builds on more than ten years of fieldwork in rural Afghanistan including during the late 1990s when research on the role of opium poppy in rural livelihoods was decidedly easier both as a consequence of the security situation at the time and the absence of counter-narcotics measures. Where possible, the findings of this study were cross-referenced with other research that has been conducted in this area. Specific villages and individual households are not identified in this report.

1.2.2 Access

In 2006-07, fieldwork was undertaken in the province of Nangarhar in mid-April 2007 at the onset of the harvesting season. In 2004-05 and 2005-06, fieldwork was undertaken slightly earlier in late March and early April. The districts covered were Achin, Kama, Khogiani, Shinwar and Surkhrud. Both “upper” and “lower” parts of each district were covered in order to explore the diversity within districts and how access to water impacted on assets, dependency on opium poppy cultivation, and the coping strategies adopted in response to the implementation of the opium poppy ban.

Initial fieldwork was undertaken in the province of Ghor in August 2005. This was then followed up in July 2006 and July 2007. Due to the logistics of travelling in Ghor (even in the summer months) and insecurity in the districts bordering the provinces of Helmand and Dai Kundi, fieldwork was restricted to the districts of Chaghcharan and Sharak in 2005. In 2006, security in Sharak was problematic, so fieldwork was undertaken in the same villages (and, where possible, households) in Chaghcharan and coverage was extended to include the district of Dawlatyar, east of the provincial centre.¹⁵ In 2007, fieldwork was repeated in the same villages in the districts of Chaghcharan and Dawlatyar.

By 2007 there was a notable downturn in the security situation in both provinces compared to the previous two years.¹⁶ In the province of Nangarhar, tensions were already high in a number of districts, but the killing of 17 civilians in March on the Torkham road after a vehicle-borne improvised explosive device attack on a U.S.

¹⁴ “Measuring household economic status in developing countries poses considerable problems. Data on two frequently used indicators of wealth, household income and expenditure levels, are often unavailable or unreliable. In countries where a large part of the population works in self-subsistence agriculture or the informal sector, expressing income or expenditure levels in monetary values can be extremely time-consuming and suffers important reliability problems.” (Tanja Houweling et al, “Measuring Health Inequality Among Children in Developing Countries: Does the Choice of the Indicator of Economic Status Matter?,” *International Journal for Equity in Health* (2003)); see also M.R. Montgomery, M. Gragnolati, K. Burke and E. Paredes, “Measuring Living Standards with Proxy Variables,” *Demography* 2000, no. 129 (1999), 155-174

¹⁵ In 2007, UNODC no longer included Dawlatyar and Charsada under Chaghcharan district. Historical data for poppy cultivation in these two districts remains under Chaghcharan.

¹⁶ “...with the greatest growth in [security incidents in] 2007 being found in the Eastern Region,” United Nations Department of Safety and Security (UNDSS), “Topic Assessment 02/07 Half Year Review of the Security Situation in Afghanistan” (2007), 2.

military convoy further increased resentment toward foreign nationals. The continuing eradication campaign and the onset of the harvesting season at the time of fieldwork further exacerbated the situation (see Section 2.3.2).

In Nangarhar, there were numerous reports of an increase in the number of robberies (some of which were attributed to the Afghan National Police or ANP) and improvised explosive devices (IEDs),¹⁷ and contacts in rural areas warned of the threat of violence and kidnapping. This followed an increase in the incidence of kidnapping locally, such as the kidnapping and subsequent release of an Italian journalist in Helmand in March 2007, the execution of his two Afghan colleagues in April, and then the kidnapping of two French citizens in the province of Farah. While these developments restricted the mobility of the consultant, they did not preclude all fieldwork.

In the province of Ghor, there were reports of an increase in the incidence of violent robbery in the district of Chaghcharan and en route to Dawlatyar, Charsada and Sharak. There were also reports of groups of “unknown armed men” being seen at the top of some of the valleys visited in July 2006 situated to the south of the provincial capital. Persistent rumours of an imminent attack by anti-government elements on the provincial centre did not materialise and did not curtail fieldwork but did add to the overall atmosphere of insecurity and uncertainty.

¹⁷ See security summaries from The Asia Foundation (TAF) for overview of security situation during the first quarter of 2007.

2. Resurgence in Cultivation in Nangarhar: The End of the Experiment?

2.1 Introduction

The province of Nangarhar experienced a dramatic return to opium poppy cultivation in the 2006-07 growing season. This followed a two-year respite in 2004-05 and 2005-06 during which levels of cultivation fell well below the 17,369 ha provincial average for the last decade, and significantly lower than the estimated 28,213 ha of the 2003-04 growing season. In 2006-07, cultivation nearly quadrupled to 18,739 ha from a reported 4,871 in 2005-06.¹⁸ The most obvious sign of the increase in the province was that opium poppy was not grown solely in more inaccessible areas in 2006-07 but, for the first time in three years, could be seen on large tracts of land along the main highway between Torkham and Jalalabad.

Described as a “success story” following the 96 percent reduction in the level of cultivation... attributed to a campaign of eradication and the threat of imprisonment, the return to widespread cultivation in the province is now described as “backsliding”...

The increase in the amount of land cultivated for opium poppy in Nangarhar province between 2005-06 and 2006-07 was such that only the province of Helmand experienced a larger increase in the absolute number of ha in the 2006-07 growing season. However, unlike Helmand, for which numerous accounts attribute the increase in cultivation to the “insurgency” and “greed,”¹⁹ few explanations have been forthcoming from drugs policymakers and commentators for the rebound in the province of Nangarhar.

This lack of explanation is all the more surprising given the attention Nangarhar has received in the past. Described as a “success story” following the 96 percent reduction in

the level of cultivation between 2003-04 and 2004-05 attributed to a campaign of eradication and the threat of imprisonment,²⁰ the return to widespread cultivation in the province is now described as “backsliding”²¹ and largely blamed on the failure of “two important tribes” to adhere to the opium ban.²²

As in 2004-05, when a ban on opium production was implemented by then-provincial governor Haji Din Mohammed, current explanations for such a dramatic change in cultivation tend to focus solely on an analysis of provincial powerbrokers. Typically, it is the “political will” and “commitment” of the current governor, Gul Aga Shirzai, as well as some of the key tribes in the area, that are questioned. The shift in the socioeconomic environment, primarily as a consequence of the implementation of the opium poppy ban in 2004-05, and how this has affected Nangarhar’s political environment at the regional, provincial, district and subdistrict level is too often

¹⁸ For convenience, this report cites UNODC data on opium poppy cultivation in the main text.

¹⁹ UNODC and GoA MCN, *Afghanistan Opium Survey 2007*, iii-iv; *U.S. Counternarcotics Strategy for Afghanistan*, 53; David Rohde, “Taliban Push Poppy Production to a Record Again,” *International Herald Tribune*, 25 August 2007. For an alternative explanation of changing levels of cultivation, see Mansfield and Pain, *Evidence from the Field*.

²⁰ UNODC and GoA MCN, *Afghanistan Opium Survey 2005* (Kabul: UNODC, 2005), 29.

²¹ UNODC and GoA MCN, *Afghanistan Opium Survey 2005*, iv.

²² UNODC and GoA MCN, *Afghanistan Opium Survey 2005*, 11.

ignored. The implications for security, governance and economic growth of continuing a province-wide ban are also rarely discussed.

Research undertaken for this report suggests the resurgence in cultivation in Nangarhar was foreseeable and was predicted as early as May 2006.²³ Fieldwork conducted in the province in 2005 documented the impact the ban on opium production had on households across the province and how it differed according to both location and access to assets. Revealing the coping mechanisms adopted by households in response to the implementation of the ban in 2004-05 and 2005-06, further fieldwork in 2006 highlighted the shock experienced by many households. The research subsequently charted both the return to opium production in more remote parts of the province and the maintenance of the ban in those areas that were more accessible and where provincial and district authorities could impose their will. It documented the increasing tensions and hostility to the government in some of the areas that were without sufficient alternatives to opium production but had at that point experienced two consecutive years of negligible levels of cultivation.

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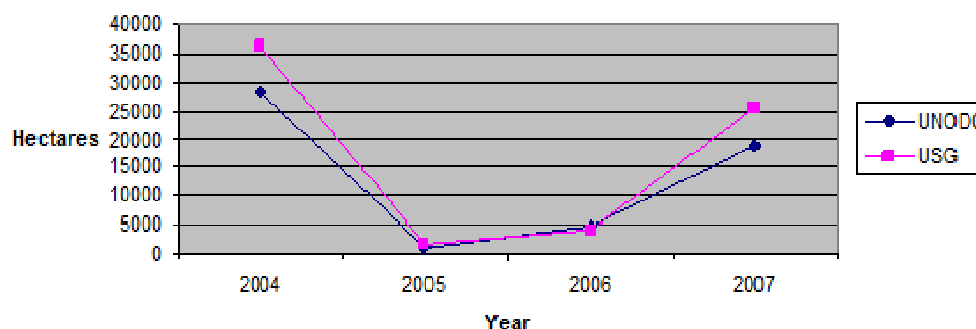
The UNODC estimate of poppy cultivation for 2006-07 could indeed suggest a lack of willingness by the provincial and local authorities to impose a ban on opium poppy cultivation. But, if this is the case, what are the events that resulted in the authorities deciding on a more conciliatory position on opium poppy cultivation in the 2006-07 growing season? And what are the implications for Nangarhar in 2007-08 as well as for policy in other parts of the country? This section provides a brief overview of the ban in 2004-05 and 2005-06 and how its impact differed by area and socioeconomic group. It then goes on to look at the resurgence in opium poppy cultivation in 2006-07, charting how its return was closely linked to the absence of viable alternative livelihoods even in areas in relative proximity to the provincial centre of Jalalabad. It also discusses the provincial and local authorities' efforts to curb cultivation mainly through a campaign designed to destroy some of the standing crop. Finally, it looks at the implications of the resurgence in cultivation for both development and counter-narcotics efforts in Nangarhar.

2.2 The Nangarhar experiment: The initial years of "success"

For a province like Nangarhar, where opium poppy cultivation occupied more than 15,000 ha per year for most of the last decade, two consecutive years of low levels of cultivation was unprecedented. The scale of the reduction achieved in one year, from UNODC's estimated 28,213 ha in 2003-04 to 1,093 ha in 2004-05, is also atypical, except for the year of the Taliban prohibition in 2000-01 (see Figure 1). To understand the cause of the resurgence in cultivation in the 2006-07 growing season, it is necessary to understand first how the reduction was achieved and then how the reduction impacted on different segments of the population.

²³ This followed fieldwork in Nangarhar in April 2006 subsequently published in August and December 2006. See David Mansfield and Adam Pain, *Opium Poppy Eradication: How Do You Raise Risk Where There is Nothing to Lose?* (Kabul: AREU, 2006), 12; Mansfield, "Opium poppy cultivation in the Provinces of Nangarhar and Ghor."

Figure 1: Official Estimates of Levels of Opium Poppy Cultivation in Nangarhar Province, 2004-2007 (Source: UNODC and GoA MCN, Afghanistan Opium Survey 2007)



2.2.1 From boom to bust: The immediate impact of the opium poppy ban of 2004-05²⁴

In the 2004-05 growing season, the provincial authorities in Nangarhar launched a concerted effort to eliminate opium poppy cultivation in the province. The result was a 96 percent decline in the level of cultivation between the 2003-04 and 2004-05 growing seasons. The process of implementing the ban was informed by 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 to ensure compliance. Local administrators and security chiefs were held responsible for the reductions in their particular area and dismissal had credibility as a sanction for failure to deliver. The declaration of a "jihad" against opium poppy by President Karzai, just after his inauguration in late 2004, also lent considerable political gravitas to the campaign in areas where there had been significant tribal support for his candidacy. As with the Taliban ban, promises of development assistance were made to communities in return for compliance with the ban.

In-depth research during 2004-05 revealed that the ban imposed by the provincial authorities had a wide-reaching impact extending well beyond opium poppy farmers, affecting a variety of socioeconomic groups.²⁵ Rural labourers who had no land of their own but who had been employed previously, during the weeding and harvesting season for opium poppy, lost as much as US\$1,000 each in off-farm income as a consequence of the ban. Indeed, imposition of the ban led to a loss of approximately 9.4 million labour days of which an estimated 3.3 million represented daily wage labour opportunities with a value of \$11.2 million. Businessmen and shopkeepers in the provincial and district bazaars saw their turnover halved by the decline in purchasing power that the ban imposed on the rural population. Unskilled daily wage labourers in Jalalabad city experienced a reduction in both the number of days they were hired and their daily wage rates.

The most significant impact, however, was borne by opium poppy cultivating households themselves. Even here, however, the impact of the ban differed by socioeconomic group and location; those in districts with better access to resources, such as in Surkhrud, Kama and Behsud, experienced a less dramatic decline in

²⁴ For a detailed account of the impact of the ban on opium poppy cultivation in Nangarhar, see David Mansfield, "Pariah or Poverty?: The Opium Ban in the Province of Nangarhar in the 2004-05 Growing Season and Its Impact on Rural Livelihood Strategies" (Internal Document No. 11, GTZ Project for Alternative Livelihoods in Eastern Afghanistan, 2005).

²⁵ Mansfield, "Pariah or Poverty?"

household welfare. For instance, while households with access to larger and well-irrigated landholdings experienced more substantial falls in on-farm income as a result of 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. The amount of land allocated to onion, green bean, okra and other vegetable crops expanded rapidly in those areas nearest the provincial centre. Households with a stock of assets also drew on the different sources of legal income to which they had access in the provincial centre and, where possible, increased the number of household members allocated to daily wage labour opportunities. Income losses were significant, and even among this relatively resource-wealthy group, expenditure on basic food items was curbed to make ends meet, but neither longer-term productive assets, such as livestock and land, nor investments in legal income streams were sold off in response to the imposition of the 2004-05 opium ban in Nangarhar.

In contrast, those households most dependent on opium poppy to meet their basic needs, 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 legal crops. This was due to constraints on irrigated land, distance to markets, and the increasing control that “local officials” had gained over the trade in legal agricultural products. In these areas, opium poppy was replaced largely by wheat; poppy persisted only in the most remote part of the province and even there at markedly lower levels than in previous years. Yet, due to land shortages and the density of population, wheat production was typically insufficient to meet even a household’s basic food requirements. The loss of off-farm income (up to five months’ employment) during the weeding and harvesting season for opium poppy could not be replaced by intermittent wage labour opportunities paid at less than half the daily rate offered during the opium poppy harvest the previous year.

For this group, problems in accessing new loans were compounded by inability to pay accumulated debts. Typically, expenditures on basic food items were reduced, children were withdrawn from higher education, and livestock, household items and prior investments in legal income streams were sold. The resource-poor were also more likely to send members of their family to find short-term 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 were behind it. The impact of the ban on some households was such that even where there was only one male of working age, he would travel in search of wage labour opportunities, often leaving the women and children behind in the household compound without an adult male relative present.

It is from this picture of contrasting assets and dependency on opium poppy cultivation that households entered the 2005-06 growing season with the likelihood of the provincial authorities enforcing a ban on opium poppy cultivation for the second consecutive year.

2.2.2 The evolving crisis in 2005-06: The beginning of the end of the ban²⁶

By 2006, it was clear that very divergent trends were emerging across the province in response to the ban on opium poppy cultivation based on both location and

²⁶ For a more detailed account, see Mansfield, “Opium Poppy Cultivation in the Province of Nangarhar and Ghor.”

socioeconomic group. There was no “fault line” as such or “bifurcation” but a differentiated response that was contingent on the assets to which households had access and the degree of dependency they had on opium poppy as a source of livelihood.

Fieldwork revealed that, as anticipated, the pressure to revert to opium poppy cultivation in some parts of the province in the 2005-06 growing season was 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 2004-05, incurring increasing levels of debt, and having few viable alternatives, farmers in some districts returned to cultivation. Consequently by the 2005-06 growing season, opium poppy cultivation occupied up to 80 percent of the agricultural land in some parts of the province as it had in 2004-05 in areas such as lower Achin and upper Shinwar and Khogiani.

In these areas, referred to as “Zone 3,” there was a shift back to opium poppy cultivation and households typically reported: 1) an increase in the availability of land for rent and share-cropping; 2) renewed access to 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 3) an increase in daily wage labour opportunities during the weeding and harvesting season. There was also increasing confidence among the wider business community that many of the outstanding loans to opium poppy farmers accrued in 2003-04 and earlier through the provision of cash loans or goods in kind, which remained unpaid in 2004-05 due to the imposition of the ban, might be repaid in 2005-06.

The situation was very different, however, in those areas in close proximity to the commodity and labour markets of Jalalabad – districts such as Behsud, Surkhrud and Kama (“Zone 1”). In these districts, where households traditionally had larger landholdings and better access to irrigation, there was no return to opium poppy cultivation in 2005-06. Instead, households typically drew on a variety of different income streams at their disposal. With an increase in available irrigation water in 2004-05, vegetable cultivation expanded and yields increased substantially. Onion, okra and green bean production had resulted in good returns in 2004-05, and in the following year attracted traders to purchase crops in advance at the farm-gate. The sale of fodder crops to those with livestock in the city and of milk to urban consumers 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 also provided farmers non-farm income opportunities. At the time, there were even reports that some households relocated from more entrenched areas of opium poppy cultivation in Nangarhar to those districts near the provincial centre, such as Surkhrud, to take advantage of the agricultural potential of the area.

Still, there were many households in the province that refrained from opium poppy cultivation for a second year. These households, typically in areas with the potential for double-cropping, had landholdings of between 7.5 and 15 *jerib*²⁷ and could not be considered remote; examples included the district of Bati Kot, and lower Shinwar and Khogiani (“Zone 2”). However, in these areas there was limited purchasing power to stimulate the move into high-value horticultural crops and access to regional markets was constrained by poor infrastructure and the impact that rent-seekers had on profit margins. Wheat remained by far the dominant crop across much of lower Shinwar and Khogiani in spite of the associated inevitable shortfalls in income and food security.

²⁷ One *jerib* is equivalent to an area of 2000m².

Furthermore, inventories of opium, among all but the rich, had been depleted, and other assets including land were being sold in increasing numbers. Consequently, after a second year of the ban, households in these areas experienced a serious downturn in their economy. Increasing evidence surfaced of families migrating to Pakistan, hostility toward the local authorities was becoming more pronounced, and cultivation of small plots of opium (from one to ten *biswas*²⁸) resuming in 2005-06 where none had existed in the 2004-05 growing season.

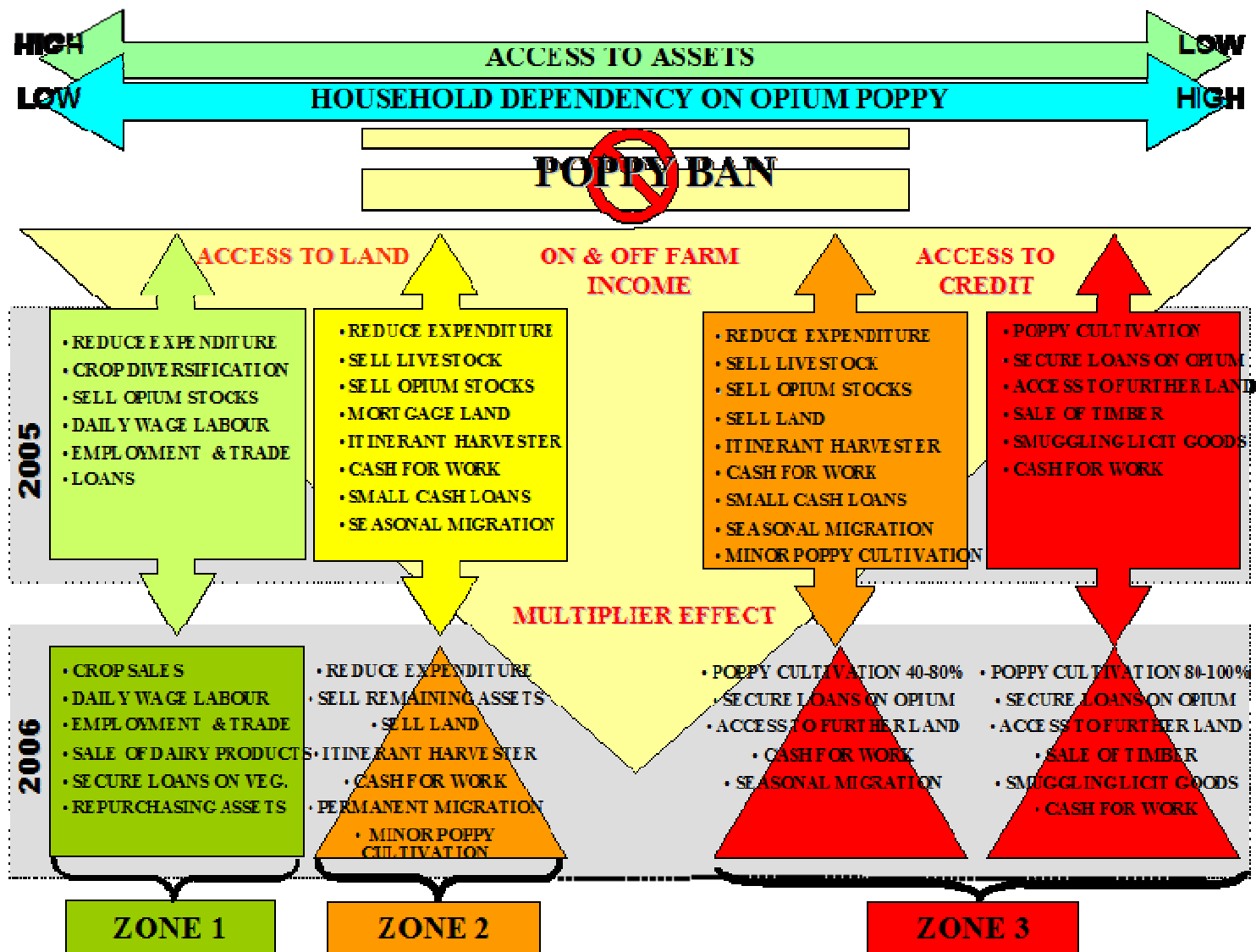
In this environment, the local authorities adopted what could be considered a pragmatic attitude toward enforcing the ban on opium poppy cultivation. In "Zone 2" areas, more accessible and with greater tribal diversity, the authorities could impose their will in 2005-06 with little resistance. Efforts to reduce initial planting were largely heeded. Where eradication was required, access was made easier by the fact that only a few patches of opium poppy had to be destroyed, rather than large areas cultivated by the majority of farmers in a village or subdistrict.

Eradication in "Zone 3," however, areas had to be approached with more caution. Counter-narcotics measures could not be ignored, especially by the new governor, Gul Aga Shirzai, who had presided over a rapid increase in cultivation in his own province of Kandahar only the year before. Yet at the same time, the socioeconomic and political implications of pushing through a rigorous campaign in these areas by a new governor who did not have a tribal constituency in the province were well understood. The limited economic options available in these areas due to high-population densities and the shortage of irrigated land, the extent of cultivation and the more cohesive tribal and political structures ruled out a more concerted attempt to achieve a second consecutive year of negligible levels of opium production in "Zone 3".

Instead, the authorities elected to allocate a number of *jerib* of opium poppy for destruction to each village cultivating opium poppy in "Zone 3". Typically, this was no more than 30 *jerib* in villages where there could be more than 200 *jerib* cultivated to the crop. The issue of whose crop was destroyed and whether they should receive payment for their loss was left to the village to decide. More often than not, poorly-germinated crops or less-productive fields near the roadside were given up for destruction and farmers typically were compensated by their fellow villagers in cash at the equivalent value of their anticipated crop.

At the time, this graduated response to opium poppy cultivation was seen by respondents in lower Shinwar and Khogiani and other areas in "Zone 2" as perplexing. After all, the inhabitants of these areas were also from the Shinwari or Khogiani tribes; they also claimed to have problems meeting their basic needs without resorting to opium poppy cultivation, especially after already experiencing two years of negligible levels of opium production. Yet the local authorities prevented those in the more accessible lower valleys from growing opium poppy but did not enforce a ban on their fellow tribesmen in the upper valleys. By May 2006 and the onset of the harvest season, a return to widespread cultivation in the 2006-07 looked inevitable.

²⁸ One *biswa* is equivalent to 100 m². There are 20 *biswas* in one *jerib*.



Source: Mansfield, "Opium poppy cultivation in the provinces of Nangarhar and Ghor."

2.3 Resurgence in cultivation in 2006-07 growing season

By 2006-07, opium poppy cultivation had returned to much of Nangarhar. In fact, the crop was so abundant in some parts of Shinwar, Khogiani and Achin districts that it was on occasion difficult to see anything but opium poppy (see Illustration 1). Not only did the crop cover a large area, but it produced a particularly high yield. Reports of 12 *ser*²⁹ of opium per *jerib* were not unheard of, but yields of between nine and ten *ser* per *jerib* were the most frequently cited (see Illustration 2).



Illustration 1: Extensive opium poppy cultivation in lower Shinwar, Nangarhar

Yet as with previous years, there were clear differences in levels of cultivation across the province that reflected the diversity in assets and a concomitant dependency on opium poppy cultivation. There was also a very different response from the district and provincial authorities when the ban on opium poppy was not met with compliance; that is, the graduated response from the 2005-06 growing season continued into 2006-07.

It was certainly clear, as UNODC has suggested, that the decisions of the Shinwari and Khogiani tribes not to comply with the ban on opium were important factors behind the return of widespread opium poppy cultivation to the province. In fact, it was reported that the elders of each of these individual tribes (as well as the Mohmand tribe) met prior to the planting season and agreed to plant opium poppy and resist eradication. It was also claimed that the position of each of the tribes was then presented by the elders to the governor where it was argued that none of the tribes was in a position to maintain the ban on cultivation for a third consecutive year as a result of the economic impact on a majority of the population. It was also stated by the elders that there was a particular unwillingness to implement a ban in light of the fact that other provinces, in particular Helmand which they considered wealthier than Nangarhar, continued to cultivate increasing levels of opium poppy.

Fieldwork during the planting season in 2006-07 found increasing disquiet among the population in districts such as Khogiani and Shinwar who had experienced two consecutive years of an opium poppy ban. Respondents often indicated they were not "for the government" but nor were they "against the government." At the time,

²⁹ One *ser* of opium in Nangarhar is the equivalent of 1.2 kg and should not be confused with the measure for other commodities where, for examples, in Kabul one *ser* is the equivalent of 7 kg.

eradication and, in particular, the way it might be implemented, was seen as critical in determining whether this rather ambivalent position might be maintained or whether parts of the rural population would turn against the government, including joining with anti-government elements that were becoming increasingly active in the province, most notably in the district of Khogiani.³⁰

Indeed, it was conspicuous during the planting season that respondents in Nangarhar were far more aggressive and threatening in their language than they had been in previous years. For example, in areas in close proximity to the centre of Khogiani, where households simply accepted the ban in 2004-05 and 2005-06, threats were made against the district administrator: "If he comes here to eradicate he will end up like the previous woliswal," who had been killed along with the district security commander and head of intelligence in an orchestrated attack during Ramazan (the month of fasting). There were reports of significant unrest in the area, including "Taliban" leaflets and tapes being distributed in the area. Many respondents claimed that there had been deterioration in the security situation within their district, with reports of the sighting of "unknown armed men" during the night.



Illustration 2: Harvesting in Shinwar district, Nangarhar

At the same time, the local authorities were reported to have mounted a strong defence of the ban on opium during the planting season. On occasions, this in itself exacerbated political tensions. For example, at a December 2006 meeting in Shinwar district with elders from the districts of Shinwar, Deh Bala, Durbaba, Achin, Bati Kot and Nazian, it was reported that the governor's frustration at the united position of the Shinwari tribe prompted him to threaten that "NATO and the government would bomb villages if communities resisted eradication." These threats are reported to have been repeated during the eradication campaign later in the growing season (see section 2.3.2). Inevitably as the season progressed, the local authorities' counter-narcotics response was once again tailored in recognition of the particular socioeconomic and political environment in which they operated.

2.3.1 Different assets, different conditions, different responses

While travelling in Nangarhar, the divergent levels of opium poppy cultivation from one district to another are clearly evident, as is the obvious disparity in local authorities' reaction to the ban being flouted. But equally evident is the variation in political, socioeconomic and environmental conditions that exist among areas. This section looks at the different livelihoods that households have pursued in response to the imposition of the ban on cultivation in the 2005-06 growing season, and how this in

³⁰ See David Mansfield, "Beyond the Metrics: Understanding the Nature of Change in the Rural Livelihoods of Opium Poppy Growing Households in the 2006-07 Growing Season" (Report for the Afghan Drugs Inter Departmental Unit, UK Government, 2007).

turn impacted on their decisions on what to cultivate in 2006-07. It looks at each of the different zones as outlined above, as well as the impact on the wider economy of the province.

“Zone 3”: Entrenchment

In the district of Achin, where respondents rarely cultivated more than four *jerib* of land per household, opium poppy continued to be monocropped in 2006-07 as it was in 2005-06. Only around the district centre of Kahi did respondents cultivate small amounts of wheat during the 2005-06 cropping season. Vegetable production was largely limited to a level commensurate with household requirements. In the summer, cultivation in this area was largely limited to maize with some marijuana. By 2006-07, all but one respondent monocropped opium poppy – even those whose land was visible from the district administrator’s office: “My land is near the government. Every day they see my poppy but they did not eradicate it.”

Yet despite the extent of opium poppy cultivation, yields in 2005-06 were reported to be around five *ser* per *jerib* and rarely exceeding seven *ser*. Most respondents had also lost some of their crop to eradication and others experienced low yields due to hail and shortage of water. Low yields in 2005-06 were compensated, however, by relatively high prices; some respondents reported that they sold their opium at around 13,500 Pakistani rupees (Rs) per *ser*. Indeed, one respondent reported selling as much as 15 *ser* of opium at this price, resulting in his three *jerib* of opium (one *jerib* was lost to eradication) producing a gross income equivalent to \$4,050.

While on the surface this looks like a relatively high income for a rural household in the district of Achin, when it is put into context and the number of household members (22) is considered, it represents a gross income of only \$0.60 per person per day. The majority of other households interviewed in Achin were far less fortunate, obtaining little more than the equivalent of \$0.30 per person per day from their opium crop in 2005-06. Of course, it also has to be remembered that these figures represent gross returns and do not consider the input costs for opium production that are considerably higher than for other crops due to the labour intensive nature of the crop (see Table 1).

Table 1: Gross income from opium amongst respondents in Achin district in 2005/06

No. Household members	Opium Poppy (<i>jerib</i>)	Eradication (<i>jerib</i>)	Yield (<i>ser</i>)	Share	Price Sold (Rs/ <i>ser</i>)	Gross income (US\$)	Gross income/ household member (US\$)	Gross income/ household member/day (US\$)
16	4	0.5	19	19	19,500	2,925	189	0.50
22	4	1	15	15	19,500	9,975	159	0.42
11	1	0.5	1	1	12,000	200	18	0.05
12	2	1	5	5	12,500	1,042	87	0.24
7	0	0	0	0	0	0	0	0
9	1	1	4	4	19,500	900	100	0.27
7	1	0	7	9.5	7,000	817	117	0.92
10	9	1	5	5	19,000	1,089	108	0.90
14	2	0	4	4	9,000	600	49	0.12
18	1	0.5	9	9	10,000	500	28	0.08
12	1	0	2	2	10,000	999	28	0.08
8	9.5	9.5	0	0	0	0	0	0

Among those interviewed, off and non-farm income were crucial to the household economy. Those with family members permanently residing in Pakistan seemed to fare

the best. The respondent that reported selling 15 *ser* of opium in 2006 also had two sons working in a bus station in Torkham for Rs 6,000 each per month and a further two sons in Peshawar working as drivers for around Rs 4,000 each per month. This provided the equivalent of around \$4,000 gross income to the household and, when combined with the sale of the previous year's opium crop, constituted the equivalent of \$0.92 of gross income per person per day.

The majority of those interviewed had one member of the household or more earning an off-farm or non-farm income. Some respondents had: household members with shops in the Kahi bazaar (one of which was closed during the opium poppy harvest season to allow the owner to work in Shinwar for around Rs 400 per day); employment as a mechanic; and, one was a teacher, earning the equivalent of Rs 3,000 per month. Each had eight or more family members to support. Other households had more seasonal wage labour employment opportunities in Afghanistan or Pakistan including one working in the brick kilns in Peshawar for three months for about Rs 250 per day.

All but three households reported that they had taken advantage of the employment opportunities that were available in the area through development assistance. Typically, a single family member was reported as working for between 15 and 30 days for a payment of 150 Afghanis (Afs) per day. The contribution to monthly household income was typically no more than the equivalent of \$90 and, compared to other income sources, was a small but nevertheless important proportion of total household income.

Instead, a more significant contribution to household income came from working in the opium poppy harvest in those areas where cultivation persisted in the 2005/06 growing season. Three respondents reported that their sons had travelled to Chemtal district in Balkh in 2006.³¹ They received payments of the equivalent of between Rs 7,000 and Rs 8,000 for roughly 20 days of work. A further respondent had travelled to Goshta in Nangarhar to work 25 days for Rs 200 per day.

Four respondents also reported that they had recently taken advantage of the United Nations High Commissioner for Refugees (UNHCR) payment aimed at encouraging Afghan refugees to return to Afghanistan from Pakistan. They had travelled from Achin to Peshawar to take advantage of the one-off payment of \$93 per person prior to the onset of the opium poppy harvest. One head of a household of 11 members reported paying travel and accommodation costs of Rs 14,000 (\$235) to transport his entire family to Peshawar and back in return for a payment of the equivalent of around \$1,000 from UNHCR.

Although each respondent in Achin reported one family member or more earning an off-farm or non-farm income in 2005-06, the gross income per person per day that was generated was no more than \$0.50. Furthermore, the vast majority of these jobs was seasonal and insecure. Even with opium poppy cultivation and for some the one-off payment by UNHCR, gross income per person per day was still less than \$1, and for all but three respondents, less than \$0.50. It is therefore of little surprise that opium poppy cultivation continued to be highly concentrated in "Zone 3" and even increased in the 2006-07 growing season, aided by an increase in both uncertainty and the costs associated with the 2005-06 eradication campaign (see section 2.3.2).

With the rise in the opium poppy crop came an increase in work available in the opium poppy harvest in 2006-07, with both employment opportunities and daily wage labour

³¹ For a detailed discussion of the links between Chemtal and Nangarhar, see Adam Pain, "Opium Poppy Cultivation in Kunduz and Balkh." (Kabul: AREU, 2006).

opportunities increasing markedly. One respondent reported his son had left for Helmand where daily wage labour rates were reported to range from 600 to 1000 Afs per day (plus cigarettes, accommodation, food and *naswar*); another reported that his brother who ran a shop in Kahi bazaar had closed up and left for the district of Shinwar, where an experienced harvester was reported to be receiving the equivalent of Rs 400 per day plus food, accommodation and cigarettes.

While there was, however, an inevitable boost to the local economy of Achin in 2006-07 with the expansion in opium poppy cultivation, it was not as significant as many respondents had hoped. The economic advantages of increased production (due to both environmental factors and lower levels of eradication in Achin) were offset by the fall in farm-gate prices, down as low as Rs 4,500 per *ser* at harvest time. Consequently where respondents were selling five *ser* of opium at Rs 12,000 per *ser* in 2005-06, they anticipated selling as much as 12 *ser* of opium at Rs 5,000 per *ser* in 2007. Much depends on the socioeconomic position of the household and whether it had the disposable income (and absence of accumulated loans) to retain some of its crop and sell later in the season when prices typically increase, but ultimately, constraints on cultivable land and population densities meant that many of those in "Zone 3" could not meet their basic needs even with the monoculture of opium poppy. Off-farm and non-farm income are crucial to household welfare.

"Zone 2": Resurgence

It was those areas that had cultivated much lower or even negligible levels of opium poppy cultivation in the 2005-06 growing season that experienced the real economic gains from the return to opium poppy cultivation in 2006-07. In both upper and lower Shinwar and Khogiani district, opium poppy cultivation was prolific in the 2006-07 growing season (see Illustration 3). Among those interviewed, it was by far the most dominant crop, occupying over half the land of 90 percent of those interviewed in these two districts. In Shinwar district, over three-quarters of those interviewed had monocropped opium and, in the district of Khogiani, more than half.



Illustration 3: Opium poppy cultivation in Shinwar district, Nangarhar

It was not just in what would be considered the more remote upper Shinwar where cultivation had increased dramatically. In fact, the most significant increases in cultivation could be seen among those respondents in lower Shinwar with land irrigated by the Nangarhar canal. Here monocropping was common among respondents (although some of this crop was lost to eradication; see section 2.3.2), whereas in the 2005-06 growing season at least three quarters of their land had been cultivated with wheat. The same shift in cropping patterns could be seen among respondents in the

district of Khogiani; the vast majority of those interviewed there had cultivated at least two-thirds of their land with wheat in 2005-06 but in 2006-07 were dedicating this portion of land to opium poppy. As land cultivated with opium poppy in 2003-04 was largely replaced by wheat in the 2004-05 and 2005-06 growing seasons in 2006-07 wheat was ultimately substituted for opium poppy.

This replacement of extensive wheat cultivation in 2005-06 with opium poppy in 2006-07 should be of little surprise. In both Shinwar and Khogiani in 2005-06, vegetable production remained restricted to those areas nearer the Torkham road or district centres and summer vegetable production was largely limited to upper Khogiani. There was some evidence of traders beginning to buy these crops at the farm-gate in these areas, but it was limited. Instead, the vast majority of households not only had insufficient wheat to satisfy household food requirements (as a result of the size of both landholdings and households) but had limited vegetable production for sale and had to find other sources of income to meet their basic needs. Consequently, in spite of a more concerted eradication campaign and much lower levels of cultivation in 2005-06, sales of opium have been a crucial source of cash income to households in this area. While yields were reported to be far lower than the 2006-07 growing season at a maximum of five *ser* per *jerib*, prices of between Rs 10,000 and Rs 14,000 per *ser* offered some compensation.

Yet, with average household sizes of around 12 members, these sales would contribute an income of the equivalent of only \$0.20 per day for each household member. Consequently, households have had to pursue other sources of income as well. In the upper parts of Khogiani where there is better irrigation than in the lower district, the sale of tomatoes (gross income of Rs 15,000-Rs 20,000 per *ser*), groundnut (gross income of Rs 12,000-Rs 14,000 per *ser*) provided income to some farmers in the summer of 2006. However, these opportunities have not been widely available; in lower Khogiani and Shinwar summer cultivation was largely limited to maize and, in some cases, cotton.

To make up for the shortfall in on-farm income, households pursued off-farm and non-farm income opportunities. In 2006, it was far more common for respondents (or members of their household) from the district of Shinwar and Khogiani to have travelled to other poppy growing areas to find employment during the harvesting season. Destinations included the districts of Chemtal and Balkh in Balkh province and Anderab in Baghlan. These itinerant harvesters reported payments of between 7,000 and 10,000 Afs for around 15-20 days work. Other sources of income were the sale of livestock, which was more common among respondents in the districts of Shinwar and Khogiani than in other districts in 2006 and loans. Debts were reported to be on average twice that of those interviewed in the districts of Surkhrud and Kama at around Rs 40,000 per household.

With the return of widespread opium poppy cultivation to "Zone 2" in 2006-07 advance payments on opium, known as *salaam*, were not just available in the upper part of Shinwar ("Zone 3") as they had the previous year but also in the lower part where they had not been offered in 2005-06. As had been the case in Zone 3 in the previous season, advance payments were not available at the traditional rate of 50 percent of the prevailing price of opium at the time that the loan is taken. Instead, payments were around one-third of the prevailing price varying from Rs 4,000 to Rs 5,500 per *ser* when the price ranged from Rs 12,000 to Rs 15,500 per *ser*. Farmers could also take loans in opium itself, known as *jawzai*. These loans were typically at a lower rate of interest but at a higher value. For example, one respondent reported that he had taken *jawzai* on one *ser* of opium, agreeing to repay Rs 25,000 after the spring harvest. He had immediately sold the opium for Rs 14,000. As opposed to the two previous years, respondents were generally confident they would be able to repay

these debts given the opium yields they were obtaining although, in those areas nearer to the roadside, concerns lingered about the ongoing eradication campaign.

The return of widespread opium poppy cultivation in 2006-07 also led to a growth in off-farm income opportunities. While some anticipated returning to Baghlan and other opium producing areas in 2007 once their own harvest had been completed, others had a preference to stay locally, anticipating both a good harvest from their own opium crop and an increase in local employment opportunities, directly due to the need for hired labour during the harvest season and indirectly as a consequence of the increase in disposable incomes associated with the resurgence in opium production.

In fact, the return of widespread opium poppy cultivation to the province increased off-farm income opportunities not only for those from Nangarhar but for seasonal labourers from outside. Daily wage labour rates during the harvest season in Shinwar reached as high as Rs 450 per day for experienced labourers, with only Rs 250 per day for those who were not as accomplished. In 2006-07, the province of Helmand offered a further boost to off-farm income opportunities for those willing to travel to the area.³²

“Zone 1”: Diversification:

In those districts of Nangarhar around the provincial centre, such as Surkhrud, Kama and Behsud, the ban on opium poppy was largely met with compliance for a third consecutive year in 2006-07. While small amounts of poppy could be seen in the districts of Kama and Surkhrud, these were typically plots of only one or two *biswa*, often intercropped with onion (see Illustration 3). Typically, households had refrained from planting opium poppy, as had been the case in both the 2004-05 and 2005-06 growing seasons, and there were few reports of eradication in the area.



Illustration 3: Opium poppy grown amid onion crop in Surkhrud district, Nangarhar

³² In Markoh bazaar in Shinwar, labourers were being recruited to work in Helmand province. During the initial days of the fieldwork, two trucks departed for Helmand each with more than 30 labourers. Wage rates were found to differ according to the arrangements labourers made with the individual who recruited them. These individuals, referred to as “guarantors,” provided the logistics and contacts for the labourers’ employment and guaranteed to pay the labourers even if their contacts in Helmand province failed to do so. Some labourers reported that they had agreed on wage rates of 600 Afs per day with all transport, accommodation, food and cigarette costs being met by those recruiting them. Under this arrangement, wages would be paid for the time it took to travel south and during periods when labourers were not able to work because of bad weather or illness. Other respondents reported daily wages of 800 Afs per day. However, under this arrangement the increase in daily wages was offset by not paying labourers for the time it took to travel to Helmand province and back. Others who were contacted directly by family members in the south reported daily wages of 1000 Afs per day plus food, accommodation, cigarettes and *naswar*.

There appeared instead to have been a further expansion in the amount of land dedicated to vegetable crops in the districts of Kama, Surkhrud and Behsud. Interviews with respondents in Kama and Surkhrud confirmed this. For example, in Surkhrud there was a noticeable increase in the amount of onion in the upper part of the district. One respondent who had cultivated three *jerib* of onion in 2004-05 and had increased the amount of land he dedicated to the crop to five *jerib* in 2005-06 had allocated all 9.5 *jerib* of his land to onion in 2006-07. In the lower part of Surkhrud district, increasing amounts of okra were being cultivated.

While wheat appeared to be the dominant crop in the district and typically occupied more than half the cultivable land of those interviewed, there was also a growing range of vegetable crops being cultivated by respondents in both the upper and lower parts of Surkhrud, including spinach, pea, garlic, green bean and squash. In the district of Kama, wheat was important but less prevalent, with more than half of those interviewed from that district cultivating no wheat at all.

In both districts, respondents took increasing advantage of the different cropping seasons available to maximise their returns and manage risk (see Table 2). Intercropping was commonplace. In Kama, green bean was widely seen intercropped with maize in the lower part of the district. Respondents suggested that green bean prospered in the shade of the maize crop producing a higher value crop (see Illustration 4). In Kama district, sugar cane was grown with a variety of different crops including onion, green bean and tomatoes.

Crop	Planting Season	Harvest Season	Intercrop
sugar cane	Jan-Feb	Oct	green bean, onion, cucumber, clover
potato	Feb	May-June	watermelon
okra	Mar	June-Sep	maize
green bean	Mar	June	maize
tomato	Mar (June in Khogiani)	June-Aug (Oct-Nov in Khogiani)	onion
pea	Mar	July	n/a
cucumber	Mar-Apr	May	sugar cane
eggplant	Apr-May	Jun-July	n/a
cotton	Apr-June	Oct-Nov	n/a
maize	May-June	Aug	okra, green bean
maize	June-July	Oct	okra, green bean
rice	June-July	Oct-Nov	n/a
mung bean	June-July	Oct	n/a
ground nut	July	Nov	n/a
cauliflower	Aug	Oct-Jan	radish
radish	Aug- Sep	Oct	cauliflower
spinach	Sep-Apr	Oct-May	n/a
clover	Sep-Nov	Jan-June	barley
garlic	Sep	June	n/a
spring onion	Sep	Jan	n/a
wheat	Nov - Dec	May-June	sugar cane
opium poppy	Nov- Dec	Apr- May	n/a
onion	Nov - Feb	June	tomato
squash	Dec	Mar-Apr	n/a

The rise in vegetable production in these districts in 2006-07 was attributed to a number of different causes. An increase in the availability of irrigation this year was considered critical. Good rains and snow during the winter had made a significant difference. In parts of upper Surkhrud where farmers rely on the snowmelt from the Spin Ghar mountains for irrigation, respondents reported that they were expecting a good summer crop for the first time since the onset of drought in 1998. Others reported that, as opposed to the 2005-06 growing season, they did not have to use tubewells in 2006-07 to meet the irrigation needs of their crops. In upper Kama, the repair of one of the canal intakes had further improved access to irrigation water.

Vegetable traders and their agents had also been active in promoting vegetable production, in particular onions. At the time of fieldwork, there was still a high level of optimism around the forthcoming onion crop. Traders were reported to be purchasing the crop in the field prior to the harvest and paying advances of between Rs 25,000 and Rs 35,000 per *jerib*. Some respondents that had been offered Rs 30,000 were holding out waiting for the price to rise. As part of these agreements, costs of transportation, bags and harvesting labour were all met by the trader. This arrangement would also involve traders paying farmers around Rs 200 per day to harvest their own crop. A number of respondents had also received advances equivalent to Rs 40,000 per *jerib* on spring onion in early 2007.

Though not available as early in the season as an advance for opium poppy cultivation, it is noteworthy that an advance payment of Rs 35,000 per *jerib* on onion or Rs 40,000 per *jerib* for spring onion was potentially greater in value than the advance a farmer producing opium would have obtained if he had sold his entire opium yield from one *jerib* of land prior to the harvest.³³ Furthermore, with much lower input costs, the net returns on onion were more than comparable to those of opium poppy (see Appendix B).

The market confidence around onion stimulated production and, with better irrigation, came better yields. Reports of 1,800 *ser* per *jerib* were not uncommon in either Kama or Surkhrud, but yields of around 1,300 *ser* were considered average. However, the continued increase in cultivation of onion was accompanied by a fall in prices from Rs 110-Rs 120 per *ser* in April 2005 to Rs 55-Rs 65 per *ser* in 2006. While pre-harvest prices in



Illustration 4: Green bean and maize in Kama district, Nangarhar

³³ This assumes an average *salaam* payment on opium of Rs 4,500 per *ser* (as reported during fieldwork) and a yield in accordance with UNODC's reporting for 2007 for the east of seven *ser* of opium per *jerib*. It should be noted that, in the course of this fieldwork, reports of yields of 12 *ser* per *jerib* were not uncommon.

Jalalabad in April 2007 varied from Rs 30-Rs 35 per *ser*, most respondents anticipated a further fall in prices given the extent of cultivation in the districts around Jalalabad and in Laghman.³⁴ The drop in the amount offered as an advance on a *jerib* of onion from Rs 40,000-Rs 50,000 per *jerib* in April 2006 to Rs 25,000-Rs 35,000 in April 2007 prompted some respondents to suggest that onion had been overproduced that year.

There was also an increase in the cultivation of other vegetable crops in "Zone 1." Green beans, okra, tomatoes and *gandana*³⁵ were all seen as increasingly attractive

Green beans, okra, tomatoes and gandana were all seen as increasingly attractive crops due to the multiple harvests and resulting steady flow of income they provided. Each offered good net returns that could compete with opium poppy...

crops due to the multiple harvests and resulting steady flow of income they provided. Each offered good net returns that could compete with opium poppy depending on the final yields and point of sale of both crops. Intercropping provided the opportunity to further increase net returns on land.

In the district of Kama, sugar cane was not only cultivated with a range of other crops, but there was an increasing move towards agro-processing. Reports suggested that in the first year of sugar cane production, yields varied from 600 to 800 *ser* per *jerib*. However, by year two, production had risen to between 1,500 and 2,000 *ser* per *jerib*. This yield would be maintained in the third and final year of the crop's production.

Respondents reported an increasing local production of raw sugar, known as *gurra*, rather than the sale of fresh sugar cane itself. It was estimated that around 10 kg of sugar cane was required to produce 1 kg of *gurra*. However, production required a degree of technical knowledge, equipment, oxen and a place to produce the *gurra* known as a *gani*. It was reported that the person that ran this *gani*, the *gani wallah* produced *gurra* for a payment of 10 percent of the final product. While sugar cane sold for Rs 15 per *ser*, *gurra* fetched Rs 240 per *ser* allowing farmers to potentially more than double their net returns despite the 10 percent payment to the *gani wallah*. By intercropping sugar cane with other crops such as onion, tomatoes, green bean and wheat, net returns were higher than for opium poppy (Appendix B).

Respondents in Surkhrud and Kama also reported that they sold dairy products at the farm-gate. In Surkhrud, yoghurt was sold for between Rs 10 and Rs 12 per kg.

In Kama, cheese sold for around Rs 700 to Rs 800 per *ser*. Respondents reported that they could produce around a *ser* of cheese per week plus milk for the family from the yield of two cows. Sold directly in Jalalabad, one *ser* of cheese could fetch from Rs 900 to Rs 1000.

³⁴ In May 2007, the price fell as low as Rs 18 per *ser*. In May 2006, the price had been Rs 85-Rs 95 per *ser*. Follow-up fieldwork in the vegetable bazaar in Kabul found a number of vegetable traders from the eastern region who reported that they had lost a considerable amount of money because they offered advances of up to Rs 40,000 per *jerib* only to see the crop's value fall to as low as 22,000 Rs. With traders incurring the costs of harvesting, bags, transportation, taxes and corruption, the losses were high. One trader reported that he lost more than Rs 700,000 in 2007.

³⁵ A green salad crop of the *Allium* family.

In both Sukhrud and Kama, traders were travelling to the farm-gate to purchase agricultural crops, incurring transport costs and road taxes of Rs 5-Rs 8 per *ser*. It was reported that a truck with around 200 bags (of 18 *ser*) travelling from Kama to Jalalabad would also have to pay between Rs 700-1000 to avoid having to unload and have the cargo searched by the ANP. Advances were also being paid on a range of crops, including onion, spring onion, radish, okra, cucumber and sugar cane.

The traders' willingness to incur these costs reduced the risks associated with expanding the cultivation of horticultural production in areas around the provincial centre. The result is not only an expansion in the amount of land cultivated with horticultural crops, but three respondents reported that they for the first time cultivated only vegetable crops. One respondent in upper Surkhrud with only three *jerib* of land reported that in both 2006 and 2007 he had cultivated an early crop of spring onion (0.5 *jerib*) followed by onion (one *jerib*); green bean (two *biswa*), garlic (0.5 *jerib*), squash (one *biswa*), radish for seed (one *biswa*), clover (two *biswa*), and okra (1.1 *jerib*). He had also grown mint and coriander. If there was sufficient irrigation water, he anticipated cultivating turnip and radish as summer crops. He used the clover to feed his dairy cows, from which he produced 10-15 kg of yoghurt per day for five months of the year that he sold at around Rs 10-Rs 12 per kg. From these three *jerib* of land the respondent earned each year an estimated net return of Rs 115,487 plus a further Rs 24,000 from the sale of his yoghurt, a total of Rs 139,487.

Crop	Area (<i>jerib</i>)	Net Return (Rs)
okra	1.1	38,885
onion	1	53,150
spring onion	0.5	11,150
garlic	0.5	5,150
squash	0.05	2,680
green bean	0.1	1,537
radish	0.1	2,935
clover	0.1	animal feed
Total		115,487

If this same land had been cultivated to opium poppy in 2006, the potential net returns would have been around Rs 118,050 assuming the respondent had received five³⁶ *ser* of opium per *jerib* and sold after harvest at Rs 10,000 per *ser* and not had any of the crop destroyed by the authorities. In 2007, the net return on 10 *ser* of opium poppy at a price of Rs 4,500 per *ser* would have been only Rs 99,450 as a result of the fall in price and the rise in labour costs during the harvest season.

On this basis, the net returns on vegetable production and dairy products were comparable with opium poppy in 2006 and higher than they potentially would have been in 2007. However, this particular individual had 14 people in his household and did not report any other sources of income, either off-farm or non-farm. Others with larger landholdings or non-farm income opportunities fared considerably better. For example, one household in upper Surkhrud sharecropped only four *jerib* of land (all of which was wheat) but with one son in the Afghan National Army (earning 8,000 Afs per month), a brother with a shop in Jalalabad (earning on average 5,000 Afs per month) and another son working as a driver (earning Rs 200 per day), generated a gross non-

³⁶ This yield is in keeping with UNODC reports of 36.6 kg/ha for the eastern region in the 2005-06 growing season. UNODC and GoA MCN, *2006 Opium Poppy Survey* (Kabul: UNODC, 2006), 45.

farm income of the equivalent of \$1.20 per person per day. In both Kama and Surkhrud, this diversity in on-farm, off-farm and non-farm income was common.

Indeed, one respondent in Surkhrud reported how the household had split, with one part of the family moving nearer to the provincial centre to sharecrop land and take advantage of the market for vegetable production, leaving the remainder of the family in Chapahar where opium poppy was being cultivated. In Surkhrud, there were seven family members cultivating three *jerib* of land, one with wheat and two with onion. In Chapahar, three sons were cultivating their two *jerib* of land with opium poppy after which they would head to Kabul to find seasonal work as labourers.

A further respondent with a household of eleven members owned three *jerib* of land in Khogiani but had taken 15 *jerib* of land in Kama as a sharecropper, sharing half the costs and yield with the landowner. He reported that in Kama he intercropped a variety of horticultural crops on 0.5 *jerib* and clover on 0.5 *jerib* (for his livestock) but the vast majority of the land (14 *jerib*) was cultivated with wheat (with a gross income of Rs 44,800 for his share) because of the shortage of family labour in the household. In the summer, he focused his efforts on a summer crop of 15 *jerib* of paddy rice from which he obtained a yield of 42 *ser* per *jerib* and a share of 21 *ser* per *jerib* (gross of Rs 56,700). The household also gained from the sale of yoghurt (gross of Rs 48,000) and in particular from the monthly salary of Rs 6000 earned by a son in the ANA (gross income of Rs 72,000) resulting in a gross income per person per day of \$0.92. However, in the district of Khogiani two *jerib* of his land had been cultivated with opium poppy in 2006 from which he received four *ser* (gross of 48,000 Rs) taking the gross income per person per day up to the equivalent of \$1 per day. In 2007, his land in Khogiani had been monocropped with opium poppy and he anticipated a much better yield.

With the widespread return of opium poppy to the province in 2006-07 there was however, a boost to off-farm income opportunities and respondents in both Kama and Surkhrud reported that members of their households were in neighbouring districts working on the opium poppy harvest. It was reported in upper Kama that many of the young men were in the neighbouring district of Goshta working on the opium poppy harvest. Rates were reported to be around Rs 250 per day plus food, accommodation and cigarettes. In Surkhrud, a respondent reported that his two sons were in Markoh in Shinwar district looking for work in the poppy harvest. Daily wage labour rates varied from Rs 250-Rs 450 per day depending on experience.

Yet, despite the opportunity to take up employment in the harvest at attractive daily wage labour rates, only two respondents reported doing so. One even commented, "Now most of the people work in harvesting the poppy but we are so busy on my farm with my vegetables we do not have any free time." It is also notable that loans among respondents in these two districts were systematically lower than other areas at around Rs 20,000, and none anticipated any problems repaying these loans once they had harvested their vegetable crops.

The wider economy: The multiplier

The impact of the resurgence in opium poppy cultivation on the wider economy should not be underestimated. Potential increases in the on-farm income of the population in those areas where opium returned in the 2006-07 growing season were supported by the increase in off-farm income opportunities across the province. For example, on the basis that 1 ha of opium poppy requires around 350 person-days of labour, an increase of 13,508 ha of opium production between 2005-06 and 2006-07 would generate an extra 4.7 million labour days of employment. Previous estimates have suggested as

much as one-third of these labour days would be made up of daily wage labour opportunities at a potential value of \$27.6 million.³⁷

Indeed, labourers from as far as Herat, Kunduz, and Takhar could be found in the bazaars of Jalalabad and Markoh looking for work as harvesters, along with a multitude



Illustration 5: Opium poppy is a labour intensive crop

of men from Kapisa, Laghman, Kabul and from across Nangarhar. Other labourers had travelled from Rawalpindi and Peshawar, attracted by reports of the high daily wages available for those working in the opium poppy harvest. Some even reported they had been offered Rs 300-Rs 350 per day, but were holding out to get Rs 400.

Moreover, the demand for wage labour for the opium poppy harvest led to a shortage of unskilled

labour for the construction industry and other jobs in Jalalabad. In 2007, a lot fewer people congregated in Bajarzai Chawk looking for work in construction than had been seen during the same month in 2005 and 2006. The result was an increase in daily wage labour rates in the construction industry, rising from Rs 100-Rs 150 in April 2006 to Rs 150-Rs 200 in April 2007, with some respondents reporting receiving as much as Rs 220-Rs 230 per day. Skilled labourers such as bricklayers and painters also reported daily wage labour rates increased from Rs 400 per day in 2006 to Rs 450-Rs 500 per day in 2007. Indeed, the vast majority of labourers interviewed anticipated greater employment opportunities at higher wage labour rates not just in the provincial centre but in the districts themselves: "when people find the money from poppy they build their houses."

The growth in the economy could also be discerned in an upturn in commercial activity across a range of different traders, from those selling clothes and food to electrical goods and general items (see Table 4). The hoteliers in the district bazaars were particularly pleased with the influx of itinerant harvesters in 2007 who required food and accommodation while they waited for employment. In Markoh, a hotelier reported that there had been as many as 100 labourers in the bazaar in the morning looking for work and 50-60 during lunch. All required food at around Rs 50-60 per meal. "We are happy it is a good year – it is a poppy year."

³⁷ This assumes daily wage labour rates at an average of Rs 350 per day. However some of the 4.7 million labour days would be at a lower rate of Rs 200 for weeding while others would be at a higher rate of Rs 450 per day during the harvest period.

Table 4: Commercial activity in selected communities of Nangarhar Province

Location	Type of Business	Indicator	2004 Amount (Rs)	2005 Amount (Rs)	2006 Amount (Rs)	2007 Amount (Rs)
Jalalabad	Hotel	Wholesale	15,000-20,000 (per day)	12,000 (per day)	10,000 (per day)	10,000-12,000 (per day)
		Employed	6	4	4	5
		Wage Rate	100-150 (per day)	100-120 (per day)	80-120 (per day)	120-160 (per day)
	Clothes	Wholesale	20,000-30,000 (per day)	10,000-15,000 (per day)	5,000-7000 (per day)	7,000 (per day)
		Profit				700 (per day)
		Capital			1,000,000	350,000
		Owed			300,000	50,000
	General store	Debt				
		Wholesale	10,000 (per day)	7,000-8,000 (per day)	3,000-4000 (per day)	5,000-6,000 (per day)
		Profit	500 (per day)	300 (per day)	0	400-500 (per day)
		Capital			400,000	600,000
		Owed			140,000	80,000
	Tractor	Debt			150,000	180,000
		Sales/month	20 tractors	10 tractors	10 tractors	12 tractors
Cars	Sales/year	140 threshers	70 threshers	140 threshers	120 threshers	
	Sales/month	30 cars	13 cars	5 cars	10 cars	
Marko	Hotel	Wholesale	10,000 (per day)	6,000 (per day)	4,000 (per day)	5,000-6,000 (per day)
		Profit	2,000 (per day)	1,000-1,200 (per day)	600 (per day)	800-1,200 (per day)
		Employed	4	4	4	4
		Wage Rate	200-250 (per day)	100-150 (per day)	50-100 (per day)	80-150 (per day)
	Clothes	Wholesale	15,000-20,000 (per day)	10,000 (per day)	3,000-4,000 (per day)	6,000-9,000 (per day)
		Profit				700-850 (per day)
		Capital			600,000	700,000
		Owed			300,000	360,000
		Debt			90,000	180,000

Location	Type of Business	Indicator	2004 Amount (Rs)	2005 Amount (Rs)	2006 Amount (Rs)	2007 Amount (Rs)
Marko (cont'd)	Electrical and Paint	Wholesale	8,000-10,000 (per day)	6,000 (per day)	3,500 (per day)	6,000-8,000 (per day)
		Profit	500-600 (per day)	350 (per day)	200 (per day)	600-700 (per day)
		Capital			500,000	500,000
		Owed			200,000	180,000
		Debt			55,000	60,000
Kahi	General store	Wholesale	6,000 (per day)	2,500 (per day)	1,000-1,500 (per day)	5,000-6,000 (per day)
		Profit	400 - 600 (per day)	200 - 250 (per day)	150 (per day)	1,000 (per day)
		Capital			400,000	500,000
		Owed			250,000	350,000
		Debt			85,000	200,000
	Hotel	Wholesale	4,000 (per day)	2,000 (per day)	2700 (per day)	3,000-3,500 (per day)
		Profit	500 (per day)	150-300 (per day)	400-500 (per day)	800-1,000 (per day)
		Owed			34,000	
		Debt				
	Cloth	Wholesale	20,000-22,000 (per day)	5,000-6,000 (per day)	2,000 (per day)	closed to harvest opium poppy
		Profit	4,000-5,000 (per day)	500 - 700 (per day)	200-250 (per day)	
		Capital			300,000	
		Owed			80,000	
	Vegetable	Wholesale	4,000 (per day)	3,000 (per day)	1,500 (per day)	3,500-4,000 (per day)
		Profit	300-400 (per day)	250 (per day)	100 (per day)	400 (per day)
		Capital			30,000	50,000
		Owed			20,000	50,000
Debt						

2.3.2 Eradication: Responding to the resurgence

Once the opium crop is planted, there is little the local authorities can do but decide whether to destroy it. Crop destruction can be done early in the season on the assumption that it may allow other crops to be planted prior to winter, thereby reducing the potential for civil unrest or later in the season once the crop is at cabbage stage and prior to the harvest. In the province of Nangarhar in the 2006-07 growing season, eradication was conducted from the point of germination up to, and in some cases beyond, the beginning of the harvest.

With the rebound in opium poppy cultivation in 2006-07, the provincial and district authorities clearly faced a challenge. On one hand, they were encouraged if not required to deter cultivation by the central government and the international community, yet on the other hand they know doing so will impact not only the economy of individual households but that of the province as a whole. Consequently, the way in which eradication was conducted and the extent of crop destruction became largely a function of proximity to the provincial centre and the main roads, as well as the stage in the growing season that eradication of the standing crop occurred.

Given the pronounced increase in levels of opium poppy cultivation in Nangarhar in 2006-07, the amount of opium poppy reported as eradicated was considerably higher than the 337 ha reported destroyed the previous year. By the end of the 2006-07 growing season, UNODC reported that 3,048 ha³⁸ of opium poppy was destroyed in 548 villages across all 19 districts of Nangarhar province.

However, while every district was reported to have had some opium destroyed in 2006-07, it was the districts cultivating opium along the Torkham-Jalalabad that were the main focus of the eradication campaign. For example, UNODC reported that 755 ha of opium poppy were eradicated in the district of Shinwar (see Table 5). This represents one-quarter of the total number of ha eradicated in the province. The district of Bati Kot is reported to have had 479 ha of opium poppy destroyed (16 percent of the provincial total) and Mohmand Dara 361 ha (12 percent of the total). The only district reported to be cultivating significant amounts of opium poppy on the main road to have escaped widespread eradication was Rodat, where UNODC estimated only 120 ha of the crop were destroyed leaving 3,755 ha to be harvested. More remote and insecure districts such as Khogiani and Achin also experienced relatively low levels of eradication compared to their corresponding levels of cultivation.

Table 5: Quantity of opium poppy cultivation and eradication in the districts of Nangarhar in 2006/07

District	Harvested (ha)	Eradication verified (ha)	Proportion of the total crop destroyed in the province	Eradication as proportion of amount planted in each district
Achin	1797	207	7	10
Bati Kot	1774	479	16	21
Bihsud	0	1	0	100
Chapahar	878	78	3	8
Dara I Nur	322	9	0	3
Dih Bala	1075	106	3	9
Dur Baba	36	1	0	3

³⁸ Of this reported destruction, 2,339 ha were effective with the balance conducted after the first lancing. (UNODC and GoA MCN, *Afghanistan Opium Survey 2007*, 71).

District	Harvested (ha)	Eradication verified (ha)	Proportion of the total crop destroyed in the province	Eradication as proportion of amount planted in each district
Goshta	109	85	3	44
Hisarak	295	0	0	0
Jalabad	0	0	0	0
Kama	0	0	0	0
Khogiani	3253	196	6	6
Kot	0	242	8	100
Kuz Kunar	153	3	0	2
Lal Pur	356	249	8	41
Mohammand Dara	995	361	12	27
Nazian	266	54	2	17
Pachir Wa Agam	594	56	2	9
Rodat	3755	120	4	3
Sherzad	864	25	1	3
Shinwar	2218	755	25	25
Surkh Rod	0	21	1	100

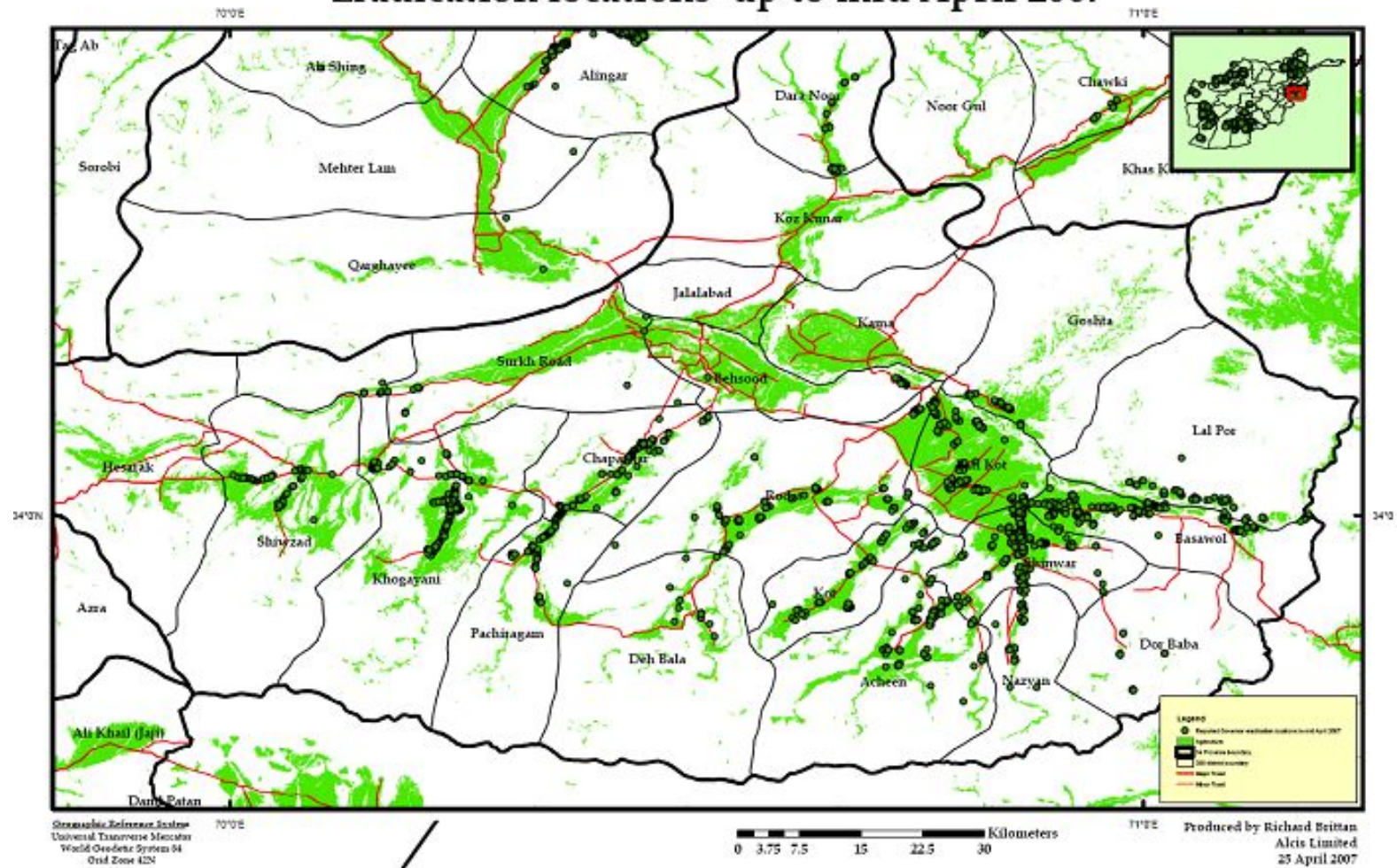
Source: UNODC and GoA MCN, *Afghanistan Opium Survey 2007*

A more detailed review of the eradication campaign based on the fieldwork for this report as well as eradication verification data suggests that it was typically the most accessible areas that were the most vulnerable to crop destruction – with eradication typically being conducted in those fields adjacent to the roads (see Figure 2). Respondents in Achin and Shinwar recognised the likelihood that those with fields next to the roads were likely to have their crop destroyed and, depending on the location of their village, reported that they had anticipated some level of eradication, believing they would either receive payment for the loss of their crop (if they had fields adjacent to the road) or would need to compensate their fellow villagers (if they had fields further away from the road).

In fact, almost two-thirds of those interviewed in the districts of Shinwar, Khogiani and Achin that had grown opium in the 2005-06 growing season (35 respondents) had lost a proportion of their opium poppy (on average, half of their crop) to the previous year's eradication campaign. None reported that they had refrained from cultivation in 2006-07. Rather, all those that had the land to do so increased the amount of land they dedicated to opium poppy cultivation. This included the six respondents whose entire crop had been destroyed in the 2005-06 growing season.

Among those interviewed, rates of eradication were far lower in the 2006-07 growing season than in 2005-06. For example, of those 40 individuals interviewed in the districts of Achin, Shinwar and Khogiani, all of whom cultivated opium in 2006-07 (compared to 35 in 2005-06), only nine had experienced the destruction of their opium crop that season (as of April 2007) and only one respondent had lost his entire crop. His land was situated along the roadside in Wiala 25 and only 400 metres from the Torkham-Jalabad road in lower Shinwar.

Figure 2
Nangahar Province
Eradication locations up to mid April 2007



In 2006-07 as in 2005-06, responsibility for eradication in Nangarhar lay with the provincial and district authorities. The Afghan Eradication Force (AEF)³⁹, a specialised unit within the Ministry of Interior, was not mobilised in Nangarhar in either the 2005-06 or 2006-07 growing season. Early in 2006-07, eradication was undertaken using tractors; in some areas, it was possible to see their tracks through fields where opium poppy continued to grow (see Illustration 6). Later in the season (and some eradication continued until late May) eradication was undertaken using hired labourers wielding sticks.⁴⁰



Illustration 6: Eradication of crop in Shinwar district, Nangarhar

Regardless of the method of crop destruction, eradication was typically scheduled in each district on a rotational basis to reduce the amount of crop destroyed in any one area and thereby the likelihood of a more orchestrated and violent reaction among the local population. This was done by dividing each district into its constituent areas, known as *manteqas*, and having the district eradication team visiting each *manteqa* in a sequential order. For example, the district of Shinwar was divided into its 14 *manteqas* resulting in the eradication team revisiting each *manteqa* every 15 days.



Illustration 7: Residual crop after eradication and the replanting of wheat in the 2004/05 growing

Lower-lying areas in the main Jalalabad river valley were some of the first to experience eradication in 2006-07, just after completion of planting and once germination had occurred. However, unlike the eradication campaign undertaken during December and January of the 2004-05 growing season, households typically did not respond to early eradication in 2006-07 by ploughing over their opium crops and replanting wheat (see Illustration 7). Instead, many irrigated and fertilised the opium poppy that had been "eradicated" so as to assist the recovery of

³⁹ The Afghan Eradication Force is now known as the Poppy Eradication Force.

⁴⁰ In March 2007, many of these labourers were being recruited from the internally displaced persons camp at Hesar Shahi. Reports suggested that as many as 500 people were being employed for the eradication campaign from this one camp and that they were being paid \$5 per day to destroy the crop in the surrounding districts. In the district of Shinwar, there were reports of hostility to the residents of Hesar Shahi who in previous years had worked in the harvesting of the opium crop in the district. There were claims of threats being made against those eradicating the crop and photographs being taken. There were also reports that Shinwari farmers had agreed that they would not employ residents of the camp during the upcoming harvest. By late April, eradicators were being recruited in Jalalabad, including some students.

any plants not permanently damaged, and prompt the growth of what had previously been ungerminated seeds (see Illustration 8).⁴¹

Consequently, in the lower parts of Shinwar and Bati Kot, it was possible to see fields where only a few plants were left standing while in neighbouring fields much of the



Illustration 8: Opium poppy after eradication and the addition of irrigation and fertiliser

crop appeared to remain intact, though significantly stunted. It also explained why it was possible to meet farmers who claim their crop had been “eradicated” twice in the 2006-07 growing season. In fact, one farmer with land adjacent to the road in Wiala 26 in the district of Shinwar reported that his crop initially had been destroyed in early December 2006 using tractors and then subsequently on 6 April 2007 by the ANP using

sticks. Much of the eradication conducted in the more accessible areas at the earlier stages of the growing season appeared to have been forced. There were no negotiations with tribal elders or village leaders regarding how many *jerib* and which fields of opium poppy would be destroyed.⁴² Respondents reported that in these areas, eradication was more comprehensive and typically was not compensated by fellow villagers. Key informants argued that both the extent of eradication⁴³ and the differing tribes inhabiting the villages in the canal-irrigated zones meant that they were not only more vulnerable to more extensive eradication, but less likely to engage in collective action either to resist the crop destruction or to provide financial compensation for those who lost their crop.

However, by March and early April 2007, forced eradication began to result in increasing unrest even in the lower-lying areas. While demonstrations in the more remote parts of the province in districts such as Pachir Wa Agam,⁴⁴ Achin and Nazian⁴⁵ were to be expected, unrest in lower lying areas such as Chapahar,⁴⁶ Bati Kot⁴⁷ and

⁴¹ A respondent in lower Achin reported that the application of 50 kg of urea and 50 kg of diammonium phosphate (DAP) per *jerib* as well as irrigation could prompt some recovery of the crop after early eradication, resulting in a potential yield of two *ser* per *jerib*.

⁴² See Mansfield, “Opium Poppy Cultivation in the Provinces of Nangarhar and Ghor.”

⁴³ It was argued that once eradication exceeded 50 percent of the crop in a given village, compensation was unlikely. This was on the basis that once there was more of the crop destroyed than left standing, compensation was no longer economically viable.

⁴⁴ “On 2 April...it was reported that hundreds of villagers blocked the road of the district with stones to prevent government and security forces from conducting poppy eradication operations. No arrests or injuries reported.” (TAF security summary, 3 April 2007)

⁴⁵ “On 2 April...it was reported that hundreds of villagers/farmers of the district made a protest against the poppy eradication campaign and blocked the road with stones. No casualties or arrests were reported.” (TAF security summary, 3 April 2007)

⁴⁶ “On 2 April...it was reported that hundreds of villagers/farmers engaged in clash with government security forces against the poppy eradication campaign. Reportedly some farmers/villagers opened fire on the security forces which resulted in return fire. As a result one civilian was killed, whilst four civilians

Shinwar also became more frequent. Initially, resistance to eradication took the form of roadblocks, but more violent reactions were also mounted, resulting in the loss of seven lives.⁴⁸ There were a further two fatalities in the neighbouring province of Laghman during the period of the fieldwork.

In areas of greater tribal cohesion and where there were limited livelihood options *in situ*, such as in the upper parts of Shinwar and Khogiani and Achin districts, the eradication campaign adopted a more conciliatory approach, with district officials and village elders agreeing on eradication targets. Under this kind of negotiated eradication, villagers typically agreed to compensate those farmers whose crop was eradicated as they had in the 2005-06 growing season.⁴⁹ Typically, the fields selected would be those where the crop was damaged or had not germinated well, and fields located near the roadside. In upper Shinwar, respondents reported that those farmers whose crop had escaped unscathed during the 2005-06 growing season had paid between Rs 500 and Rs 800 to village elders so that the money could be distributed to their fellow villagers whose opium poppy had been destroyed. Payments were higher amongst respondents in Achin at Rs 800-Rs 1000.

One respondent in Upper Shinwar anticipated that he would receive a payment of Rs 8,000 from his fellow villagers for the half-*jerib* of opium poppy he had lost to the 2006-07 eradication campaign. In lower Achin, a farmer suggested that his one *jerib* of opium poppy that had been destroyed would be compensated based on the estimated three *ser* of opium it would have produced. In both cases, the final payment would not be calculated until the end of the 2006-07 growing season when both eradication and the harvest were complete.

As the season progressed and unrest increased, the district and provincial authorities appeared to have adopted a variety of responses to achieve (or perhaps more importantly appear to achieve) eradication targets. In some cases, the authorities took a more aggressive position and continued to press for further eradication. For example, it was reported that after experiencing some unrest in response to eradication in Wiala 27 in the district of Shinwar, the authorities heard rumours that the population of the neighbouring *manteqa* of Wiala 28 was arming itself to respond to defend its crop. Though a low-lying canal irrigated area, Wiala 28 is predominantly inhabited by members of the Shinwari tribe who originate from the districts of Achin and Pachir Wa Agam. As such, the residents of this *manteqa* were known to take collective action. It was reported that the authorities went to the elders and informed them they were aware the local population was preparing to defend its crop. The local authorities went further, saying eradication would have to take place as they were under considerable pressure from the foreigners, or *kharaji*, to eradicate as much of the opium crop as possible. It is alleged the leaders were told that they should not resist the destruction and if they did, "NATO would bomb [their] houses."

As the crop approached harvest, eradication became even more problematic. By April 2007, reports of corruption were widespread and bribes of Rs 3,000-Rs 5,000 per *jerib*

and two ANP members were injured. Reportedly the resistance lasted approximately four hours." (TAF security summary, 3 April 2007)

⁴⁷ "On 2 April it was reported that more than 1000 residents of the district protested against the poppy eradication campaign. Reportedly the protesters blocked the Torkham-Jalalabad highway for a period of time, which eventually led to a clash with government security forces. As a result 12 villagers and 4 ANP members sustained bullet/stone injuries (four civilians are classified as serious) and approximately 20 other villagers were arrested." (TAF security summary, 3 April 2007)

⁴⁸ UNODC and GoA MCN, "Table 35," *Afghanistan Opium Survey 2007*, 90.

⁴⁹ Mansfield, "Opium Poppy Cultivation in the Provinces of Nangarhar and Ghor."

of opium were reported as commonplace. One respondent reported paying Rs 5,000 to avoid eradication. The result was that the eradication team bypassed his field and destroyed his neighbour's crop instead.

It was also reported that once harvesting season began, larger payments would result in a change to the sequential order that the eradication teams were scheduled to visit a specific *manteqa* thereby giving farmers more time to harvest their crop. Villages that fell on the boundaries of two or more districts were even more vulnerable to extortion, with the authorities from each district demanding payments. Indeed, respondents from one such village reported paying the district authorities of Mohmand Dara 60,000 Afs (in two instalments) and those from Shinwar 20,000 Afs.

There were also clear cases of over-reporting by the authorities. In one particular village, those eradicating the crop were witnessed destroying only five areas of between 4 and 5 m² of opium poppy. Photographs were taken of the eradicated crop but at an angle so as to disguise the actual area destroyed. Those responsible for reporting the amount of crop destroyed were seen to walk an area significantly larger than the actual plot destroyed and were heard to say they would report each parcel of land of 4-5 m² as the equivalent of about one *jerib*. In other villages, over-reporting was even more significant with entire areas being reported as destroyed when, in fact, the entire crop remained intact.

Reports of corruption were accompanied by complaints of the inequitable nature of the eradication campaign and the overwhelming perception that the poorest were those most likely to lose their crop. "Some people give bribe and their crop is not destroyed, but the poor people could not and their crop was destroyed."

Tensions in lower Shinwar were palpable; the efficacy of eradication was challenged amid claims of the absence of viable alternatives "eradicate my land every year and I will still grow opium poppy"; "If they gave me a choice of killing my child or destroying my poppy I would have told them to kill my child." Those whose crop remained intact, however, continued to support the government. For example, in parts of the district of Khogiani, low levels of eradication corresponded with statements of support for the district and provincial authorities: "The government saw our poppy but did not eradicate it; they have helped the people"; "We are happy with the government — they don't push me, they don't eradicate the crop, they have done projects and helped the people."

2.4 Findings

Evidence from the field suggests that the resurgence in opium poppy cultivation in Nangarhar was not simply a one-off event linked to a change in the position of the local tribal leadership; it was part of a cumulative process in which the deteriorating social and economic position of a population across an area impacts on the support for the authorities. In reality, the ban on opium poppy cultivation imposed a toll on the economy of the population that differed by area and socioeconomic circumstances.

In areas where there was a critical mass of the population that did not feel it could meet basic needs without recourse to opium poppy cultivation, the ban was flouted and widespread cultivation returned. These were areas where the population felt aggrieved that it had not been able to cultivate much opium poppy for the last two consecutive years and consequently organised to respond to any efforts to impose a third year of prohibition. However, these were also areas that had limited livelihood opportunities in terms of high-value horticulture and local wage labour. Those households that had coped best in response to the ban were those that could draw on income from family members with more secure and long-term employment in either Afghanistan or Pakistan and who had managed to produce at least some opium in the 2005-06 period.

In the more remote parts of the province, where landholdings are particularly small and population densities high, cultivation continued to be concentrated as it has been for many years. In these areas, the population cannot sustain itself even with the monoculture of opium poppy.

The local authorities were more than aware that civil unrest would result from pressing either of these areas not to cultivate or, later in the season, adopting an aggressive eradication programme. The early stages of this recognition were evident in both the lower-lying districts and the more remote parts of the province, resulting in the authorities stepping back from a more comprehensive eradication campaign. Consequently, crop destruction became a political process based first on negotiation and, subsequently, on corruption and exaggerated claims, further fuelling resentment toward the district authorities in some areas.

The areas that did not cultivate opium poppy for a third consecutive year were those that could take advantage of the growing demand for high-value horticultural crops and the increasing presence of traders in the area. Through the provision of advance payments and purchasing at the farm-gate, these traders reduced the costs and risks farmers associated with the cultivation of vegetable crops. The result was a rapid expansion in crops such as green bean and onion. In these areas, opium poppy cultivation was negligible, limited to a few patches interspersed among other crops. Supported by non-farm income opportunities, most households in these areas could meet their basic needs while avoiding the sale of livestock or the incursion of significant loans.

But even here, the return of widespread opium poppy cultivation to other parts of the province provided an economic stimulus, increasing wage labour opportunities in neighbouring districts during the harvest season and wage labour rates in non-farm income opportunities in Jalalabad and the surrounding area.

However, even these areas of greater economic potential were not without their problems. In Kama there were increasing concerns about the closure of refugee camps in Pakistan and the potential return of people to the district who were currently residing in Mohmand agency and Peshawar. In upper Kama, it was anticipated that more than 700 families were due to return to the area. Respondents not only saw these returnees as likely to increase demand on already scarce resources, most notably land, they believed their departure from Pakistan would also limit Kama residents' access to work in Pakistan through the loss of both social and family networks as well as accommodation during periods of seasonal employment.

There were also reports of increasing tensions within the area. Respondents expressed concern over increases in the incidence of IEDs and military patrols. There were complaints from elders that areas such as Kama, with better security and negligible levels of opium poppy, were seeing little development assistance. It was suggested that with a further deterioration in security and the subsequent impact of refugees returning to the area, there was a potential for the small amounts of opium poppy visible in the district in 2006-07 to be replaced by much larger areas in the 2007-08 growing season. The same sentiments could be heard in Surkhrud, particularly the upper part, where fears over falling onion prices added to concerns about increasing insecurity boiling over from neighbouring Khogiani. Consequently, by the close of the harvest season, it was anticipated that opium poppy would be cultivated widely even in those districts in close proximity to the provincial centre during the 2007-08 growing season.

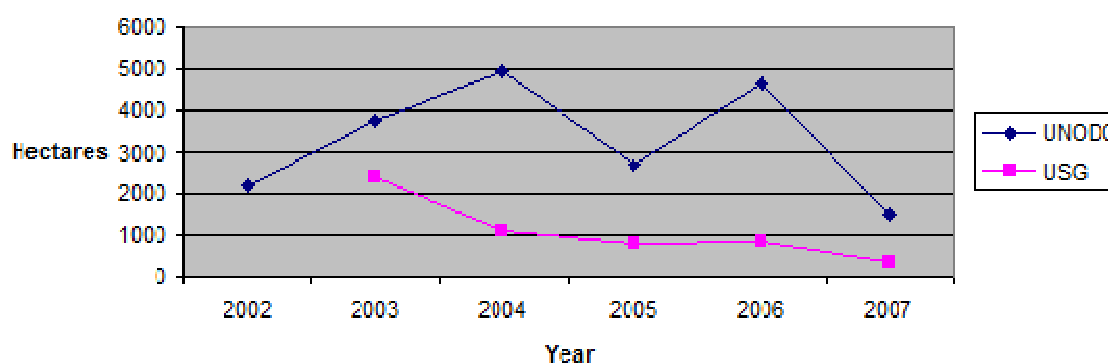
3. Environment not Enforcement: Reductions in Ghor in 2006-07

3.1 Introduction

The picture in the central province of Ghor could not be more different from Nangarhar. In Ghor, opium poppy cultivation offers less of the benefits that in the eastern province. It remains a marginal crop grown on a small proportion of household land largely using family labour. There are few of the wage labour opportunities that are associated with its cultivation in Nangarhar, and growing opium poppy provides no preferential access to land or informal credit as in the east nor in parts of Ghor in 2000-01 and 2001-02, the "golden years" for cultivation in the province.⁵⁰

Inconsistency is evident in the reporting of the trend in cultivation of opium poppy in Ghor. UNODC reported a fluctuation in cultivation between 2003-04 and 2005-06 whilst the U.S. government charts a steady decline since it first reported the crop's presence in Ghor in the 2002-03 growing season (see Figure 3). Fieldwork conducted for this report from 2005 to 2007 supports the U.S. government observation of a trend of steady decline.

Figure 3: Official Estimates of Levels of Opium Poppy Cultivation in Ghor Province, 2002-2007 (Source: UNODC and GoA MCN, Afghanistan Opium Survey 2007)



The decline in the amount of land cultivated to opium poppy in 2006-07 compared with 2005-06 was obvious. In the district of Chaghcharan, many of the valleys on the northern bank of the Hari Rod river had virtually given up opium poppy; the main valleys were cultivated instead with wheat and fodder crops. Some small fields of opium could be seen, but typically only a few *biswa* that were stunted if not failed. On the road south of the river to Angaran and in Angaran itself, more poppy could be seen but it was also not faring well.

In the district of Dawlatyar, an area with better access to water, the crop was also limited to small plots of no more than a *jerib*. This crop looked somewhat healthier than the crop in Chaghcharan but it was still typically less than 30 cm in height. Compared to 2005-06, there was considerably less opium poppy visible across the two districts.

This section outlines the causes of the decline in the amount of land dedicated to opium in 2006-07. It attributes this reduction not to the efforts of the provincial authorities and governance, as some have suggested, but to environmental factors

⁵⁰ For more details, see Mansfield, "Opium Poppy Cultivation in the Provinces of Nangarhar and Ghor."

such as improved precipitation and the continuing fall in opium yields across the province. It concludes that those households that persisted with cultivation in 2006-07 in the face of continued and systematic crop failure were not the wealthier members of a community but those who had few viable alternatives, which were becoming even fewer as Iranian authorities clamp down on Afghan migrant labour.

3.2 The status of cultivation and counter-narcotics efforts in 2006-07

3.2.1 Counter-narcotics efforts

Counter-narcotics efforts can take on a variety of forms, the most obvious being destruction of the standing crop. In 2006-07, UNODC reported that a total of 188 ha of opium poppy were eradicated in the province of Ghor.⁵¹ This was up from zero ha in 2004-05⁵² and 2005-06.⁵³ According to these reports, almost half the total area eradicated in 2006-07 was in the district of Chaghcharan and 28 percent was in Dawlat Yar (see Table 6). In those villages where eradication had taken place in Chaghcharan and Dawlat Yar, it was reported as much as 30 percent and 49 percent of the crop had been destroyed.

District	Harvested (ha)	Eradication verified (ha)	Eradication as proportion of the total crop destroyed in the province	Eradication as proportion of amount planted in each district
Chaghcharan	910	85	45	9
Charsada	41	51	27	55
Dawlat Yar	132	52	28	28

Source: UNODC and GoA MCN, *Afghanistan Opium Survey 2007*

Despite this rate of eradication, none of those interviewed during the course of this fieldwork reported that the provincial or district authorities had destroyed their crop or that of their neighbours. There were reports of eradication in May near the bazaar in Angaran, as well as near the district centre of Dawlat Yar, but these were considered limited. Two respondents further up the valley in upper Angaran reported that the local authorities came to their land with the intent of destroying the crop but on seeing the extent of crop disease left without conducting any eradication.

Respondents considered government action against the crop to be limited. There were efforts to dissuade farmers from planting in both Chaghcharan and Dawlat Yar. These largely took the form of radio announcements, but in some areas there were reports the local authorities conducted a more proactive dialogue with communities. Comments from respondents typically reiterated those made during fieldwork in 2005-06 that it was "Allah that had banned opium poppy, not the Government."⁵⁴

3.2.2 Crop failure and a downturn in the market

There was general consensus among those interviewed that the opium crop in Ghor had "not been good for the last four or five years". None of those interviewed reported obtaining yields greater than 7 kg per *jerib* since 2001-02. One respondent charted the

⁵¹ See UNODC and GoA MCN, *Afghanistan Opium Survey 2007*, 163.

⁵² See UNODC and GoA MCN, *Afghanistan Opium Survey 2005*, 53.

⁵³ See UNODC and GoA MCN, *2006 Opium Poppy Survey 2007*, 53 and 146-148.

⁵⁴ Mansfield, "Opium Poppy Cultivation in the Provinces of Nangarhar and Ghor," 34.



Illustration 9: Opium poppy cleared after only two lancements, Dawlat Yar

“diseased” and yielded little. Few reported receiving the equivalent of more than 1.5 kg of opium per *jerib*. One respondent who was clearing his field at the time of interview reported receiving as little as 300 g and that the crop had ceased to yield after the second lancing (see Illustration 9).

All of those interviewed blamed low yields on disease. Most reported that the disease occurred at the cabbage stage prior to stem development resulting in the yellowing of the leaves and subsequently affecting capsule development. Capsules across the area were small and distorted and little more than thumbnail in size. They did not grow vertically but at an angle (see Illustration 10). The cause of the disease was unknown, but crop rotation was not being practised and respondents reported they were using the seed from their previous year’s crop even though they believed that this too had been diseased.

Respondents reported that the failure of the opium crop was exacerbated by a decline in its trade. It was noted that traders from the districts of Pasaband and Taiwara in the southern part of the province bordering Helmand had not been to the area to purchase opium in 2005-06 and were not anticipated in 2006-07 because the high level of production in Helmand made it not worth their while. Opium prices were also reported to be declining at 3,300-3,500 Afs per kg compared to 4,000 Afs during the harvest in 2005-06 and 5,000-6,000 Afs per kg in 2004-05.

continuing decline in opium production he had experienced since 2004-05 citing yields of 6 kg per *jerib* in 2004-05, compared with 1 kg per *jerib* in 2005-06 and the abandonment of the crop and the shift to the fodder crop, *kulu*⁵⁵, in 2006-07.

All those interviewed cited poor yields in 2005-06. During fieldwork in August 2006, it was clear that some farmers had experienced such bad yields that they had abandoned their crop, leaving it as fodder for livestock. Yet in 2006-07, yields were even worse. Across the districts of Chaghcharan and Dawlatyar, the opium crop was reported to be



Illustration 10: Diseased opium poppy capsule

⁵⁵ Grass pea, *Lathyrus Sativus*.

3.3 Responding to continued crop failure: A function of assets

3.3.1 Those “with”...

Responses to this persistent crop failure and the downturn in the market for opium were found to differ by area and assets. Respondents in areas that had retained some livestock following the drought in the late 1990s and early 21st century and that also



Illustration 11a: Upper Qartoos, Chaghcharan 2006



Illustration 11b: Upper Qartoos, Chaghcharan 2007

had better access to rain-fed land typically reported that they allocated the area on which they grew opium poppy in 2004-05 and 2005-06 to both fodder and wheat in 2006-07. Those who had lost much of their livestock and had limited rain-fed land persisted with opium poppy cultivation regardless.

This shift in cultivation patterns was apparent while travelling through the districts of Chaghcharan and Dawlat Yar. There was an obvious increase in the availability of water compared to 2005-06 that was attributed to both the increase in snow cover during the winter and better spring rains. Not only had land previously cultivated to opium poppy been allocated to wheat, but the land that had been left fallow in the main valleys in 2005-06 was brought under cultivation in 2006-07 (see

Illustration 11a and 11b). There was also a shift from cultivation of barley to wheat in some of the drier valleys such as Kasi. Fodder crops such as *kulul*, *ghamu* and alfalfa were far more prominent in most of the valleys of Chaghcharan and the district of Dawalat Yar than they had been during the same period in 2005-06.

For a number of respondents, it was possible to chart the change in cultivation within the same field over the last three years, from opium poppy cultivation in 2004-05 to a failing crop in 2005-06 and the abandonment of opium poppy and the shift to fodder crops in 2006-07 (see Illustrations 12a and 12b). There was no evidence that the abandonment of opium poppy cultivation in these particular fields was offset by an increase in opium poppy on respondents' other land holdings.



Illustrations 12a: Opium crop in August 2005



Opium crop left for fodder in July 2006



Opium poppy abandoned and fodder cultivated in July 2007



Illustrations 12b: Opium crop in August 2005



Opium crop cleared with no yield in July 2006



Opium crop abandoned and fodder cultivated in July 2007

There was consensus among those that abandoned opium poppy in 2006-07 that poor yields, low prices and an increase in the amount of land available for cultivation had prompted this change. In particular, the increase in land available for cultivation allowed these respondents to invest in their livestock, which was seen as a more profitable endeavour than cultivating opium poppy. The sale of livestock and its byproducts, *ghee*, *qurut* (a hard cheese made from dried buttermilk) and wool, was seen as the main source of income for these respondents.

3.3.2 ...And those "without"

Those that persisted with opium poppy consistently linked cultivation with their losses in livestock over the last few years. For example, in Angaran respondents reported a decline in herds dating back over six years that corresponded with a general increase in the amount of land cultivated to opium poppy over the same period. In Shinyar in the district of Dawlat Yar, respondents reported that ten years ago many villagers had as many as 40 or 50 animals but systematically sold some each year and were now left with small numbers. One respondent in Puza in Dawlat Yar claimed that prior to 2000 his household had earned 60,000-80,000 Afs each year from the sale of livestock and their by-products, but now has only one cow (which he expected to sell after the summer) and two oxen.

In Awlatgarda in Chagcharan, it was reported that opium poppy cultivation allowed households to limit the sale of their livestock, but that the continued failure of the opium crop since 2003-04 increased rates of livestock sale. One respondent in the upper part of the valley reported that his herd had dwindled from 15 sheep in 2005, to ten in 2006 and four in 2007. He anticipated selling two more sheep before the end of summer.

Those who did cultivate opium poppy in 2006-07 typically grew less than one *jerib* of the crop. Small amounts could be seen cultivated among fruit trees. Only one respondent cultivated two *jerib*. He was located in Angaran and had a small amount of rain-fed land (less than two *jerib*) but no oxen to till it. He claimed opium poppy cultivation was his only source of cash income.

All of those who persisted with the crop used family labour. Children as young as seven could be seen irrigating (see Illustration 13) and harvesting the crop. There was a consensus among those cultivating the crop that it remained an important albeit diminishing source of household income, particularly given the increasingly scarce non-farm income opportunities available. Indeed, it was reported that wage labour opportunities in the provincial centre of Chaghcharan were limited and daily rates had fallen to 150 Afs per day compared with 150-200 Afs per day in 2005-06. Given the importance of labour migration in households' overall livelihood strategies, of greater concern was the Iranian authorities' clampdown on migrant workers. This led to cross-border smuggling and the risk of detection once in Iran, with associated losses to households.



Illustration 13: Young boy helping his father irrigate the opium poppy crop

Reports of family members returning to Ghor were widespread. For example, in the village of Shinyar, respondents reported ten young men had returned from Iran. More returnees were anticipated but were reported to be in the city of Herat looking for work. Three respondents claimed they had been caught by the Iranian authorities and returned to Afghanistan. One reported that he had lost 50,000 Afs after being arrested in Iran and returned. The second claimed a loss of 40,000 Afs. The third reported that he had incurred costs of 32,000 Afs to travel illegally to Iran, only to be caught after eight days and returned.

3.4 Findings

The government's counter-narcotics efforts had little to do with this downturn in the opium poppy crop in the province of Ghor between 2005-06 and 2006-07. The primary reason for the fall in the level of opium poppy cultivation was the repeated failure of the opium crop in the province in previous years. Some areas reported their fifth consecutive year of opium yields of little more than 2 kg per *jerib*. Opium prices continued to fall in Ghor, from 4,000 Afs per kg in 2005-06 to 3,000-3,500 Afs per kg in 2006-07, and traders from the south have been found not to travel as much to the area, which is not surprising given the high level of production in the province of Helmand. Consequently, for those households in Ghor that had livestock and rain-fed land for the cultivation of wheat, opium poppy cultivation no longer appeared viable.

The sale of livestock and its by-products continued to be one of the most important sources of income for those who managed to retain their herds. Heavy snows in the winter of 2006-07 meant many farmers could both irrigate land and be confident of a reasonable yield from their rain-fed land. Those farmers with livestock planted their rain-fed land with wheat and a greater proportion of their irrigated land with fodder crops. The prospect of increasing quantities of wheat and fodder crops following better winter snows presented farmers with the opportunity to invest in their herds. Given the input-intensive nature of the opium crop and its poor performance over previous years, many farmers abandoned it in 2006-07. Much of the irrigated land cultivated with opium poppy in 2005-06 was cultivated to other crops in 2006-07.

Some households persisted with opium poppy cultivation, typically those without significant livestock and with limited rain-fed land. They had few options for generating the cash income they require to meet their basic needs other than by cultivating opium poppy or migrating to Iran. Their dependency on opium poppy as a source of cash income was underscored by their continuing cultivation of the crop despite its repeated low yields and continuing drop in price.

And once again, the opium crop failed in 2006-07. Those households that cultivated opium poppy in 2006-07 expected little more than 1 kg per *jerib*, and farmers could be seen removing their opium crop after lancing it only twice (in comparison with the normal minimum of three to four lancements), reporting that the capsules were no longer producing latex. Most of these households also relied on remittances from migrant labour in Iran. In 2006-07, they faced a further downturn in their income as a result of migrant workers being expelled from Iran and increasing difficulties crossing the border.

Farmers in Ghor expressed growing concern in 2006-07 about what they saw as deteriorating security. Reports of an increase in the incidence of armed and violent robberies as well as rumours of both the presence of armed men in valleys to the south of the provincial centre of Chaghcharan and an "imminent Taliban attack" on the government all added to a growing feeling of unease. The combination of migrant workers being returned from Iran, falling livestock prices and the failure of the opium crop only increased the sense of tension and disillusionment with the government in the province.

4. Conclusion

What do the changes in levels of opium poppy cultivation in the provinces of Nangarhar and Ghor tell us about the causes of opium poppy cultivation and counter-narcotics efforts in Afghanistan? Primarily, they support the argument outlined elsewhere that opium poppy cultivation in Afghanistan is both contingent and contextual – a function of where, who and when – and therefore highly dependent on local factors.⁵⁶ Indeed, the level of diversity that exists in rural Afghanistan, not only among provinces but within them, highlights the problems associated with single explanations for the presence and fluctuations of opium poppy cultivation.

Opium poppy is one crop within a wider cropping system that is part of an overall livelihood strategy. Rural households also derive off-farm and non-farm incomes that are crucial to their overall well-being. The degree of dependency on opium poppy cultivation is therefore largely a function of the other income streams and assets households can draw upon for their livelihood. Where access to these incomes streams and assets changes, levels of poppy cultivation can also vary.

As such, increasing or declining levels of opium poppy cultivation are not solely a function of a change in the farm-gate price of opium or an assessment of the potential for government action against the crop, but the result of a complex process in which household resources are allocated across a range of different activities. Where there are limited options, households may well continue to cultivate opium despite the threat of crop loss (through disease or eradication) and falling opium prices, as documented in some parts of both the provinces of Nangarhar and Ghor in 2006-07.

Also clear from the evidence in both provinces is that those households that cultivate opium poppy do not necessarily derive a gross per capita income that is either more than a dollar a day, or in excess of those households in the same province who do not produce opium at all. Indeed, in the province of Ghor, continued opium poppy cultivation is more a sign of desperation than of wealth. The size of land holdings, land tenure arrangements, the number and composition of household members, dependency ratios, and the timing of sale can all act against the crop, making a significant contribution to the socioeconomic status of the household. Yet at the same time, many of those households in both Nangarhar and Ghor that did cultivate opium poppy in 2006-07 lacked viable alternatives with which to meet their basic needs.

The fluctuations in cultivation in Nangarhar and Ghor further inform understanding of the impact of reductions in opium poppy cultivation on the welfare of the household and on the wider economy. The Nangarhar experiment shows that dramatic reductions in opium poppy cultivation are difficult to sustain because of their damaging impact on the welfare of the household. The roots of the return of widespread opium poppy cultivation in Nangarhar in 2006-07 trace back to the dramatic reductions in cultivation imposed across the population in 2004-05, echoing the link between expansion in cultivation across Afghanistan in the early years of the Karzai administration and the Taliban prohibition of 2000-01.

As such, the resurgence in opium poppy cultivation in Nangarhar in 2006-07 was not simply a one-off event related to a change in the political environment. It was part of a cumulative process in which the deteriorating social and economic position of a

⁵⁶ See David Mansfield, . "Economical with the Truth: The Limits of Price and Profitability in Both Explaining Opium Poppy Cultivation in Afghanistan and in Designing Effective Responses." In *Reconstructing Agriculture in Afghanistan*, ed. Adam Pain and Jacky Sutton (Rugby, UK: Practical Action Publishing, 2008).

population across a given area affects the local political environment. As the ban on opium imposed a toll on the economy of the population, it in turn attenuated support for the government. As provincial governors and district administrators recognise, imposing a comprehensive ban on opium poppy in such an environment can be destabilising.

The evidence in Nangarhar and Ghor also shows the effect of both eradication and crop failure where households do not have viable alternatives to opium poppy cultivation. Eradication in Nangarhar during the 2005-06 growing season proved ineffective at deterring cultivation in the districts of Achin, upper Shinwar and Khogiani the following year. Sustained crop failure over a number of years in Ghor did not stop opium poppy cultivation in those areas where the population has limited livestock and rain-fed land.

Households that persist in growing the poppy in these provinces do not have a consistent, natural predisposition to favour the crop (though some may) or an inherent bent toward "illegality." In Ghor, farmers who continue to cultivate opium poppy do so because they do not have livestock in which to invest and increasingly have fewer non-farm income opportunities both within the province and across the border in Iran. In Nangarhar, those with better access to resources, as well as greater proximity to the labour and agricultural commodity markets of Jalalabad and Kabul, refrain from opium poppy cultivation; it is those with fewer assets and greater distance to markets who continue to cultivate the crop. This evidence supports two important findings: despite claims to the contrary, the returns on opium poppy are not unassailable; and, those who cultivate the crop are not the wealthiest members of a community.

This report calls attention to the need for a high degree of caution when interpreting the data around opium poppy cultivation and, in particular, explanations of changing levels of opium poppy cultivation. Explanations of fluctuations in cropping patterns that are firmly rooted in the language of the "political commitment" of the local authorities tend to overlook the wider socioeconomic, political and environmental conditions that influence both opium production and the broader livelihood strategies within which opium poppy cultivation occurs.

Too often, such explanations confuse correlation with causality and attribute reductions to the commitment of the local authorities and the effects of counter-narcotics messaging rather than natural events such as crop failure or increasing levels of precipitation, a change in the economic environment or both. Perhaps more importantly, such explanations tend to overlook the impact of reductions in opium poppy cultivation on the welfare of the local population, and therefore tend to neglect whether a change in the level of cultivation will prove sustainable. Ultimately, there is a need for more disaggregated data if the Government of Afghanistan and the international community are to develop a deeper understanding of the nature of the transition from illegal to legal livelihoods; how this differs by time, location and socioeconomic group; and, what tools are most likely to deliver the improvements in economic growth, security and governance that have proved so critical to delivering sustained reductions in opium poppy cultivation in other source countries as well as in those districts around the provincial centre of Nangarhar.

Appendix A: Categorisation of Areas in Nangarhar Province by Both Access to Assets and Status of Opium Poppy Ban

	Poppy ban likely to be sustainable	Poppy ban unlikely to be sustained in 2007	Poppy ban no longer sustained in 2006	Poppy ban not complied with in 2005 or 2006
Governance	<ul style="list-style-type: none"> Local power elite weak or part of provincial and national government system Diverse tribal groups Close to provincial centre where government can impose will with minimum reaction 	<ul style="list-style-type: none"> Weak or divided local power elite In accessible areas, government can impose will but potential for groups in area to link with wider tribe Growing sense of "insecurity" in terms of crime and presence of anti-government elements 	<ul style="list-style-type: none"> Strong and unified tribal group Historically state penetration limited to district centre Relatively remote and perceived as "insecure" 	<ul style="list-style-type: none"> Strong and unified tribal group State presence only temporary Remote and perceived as "very insecure"
Agricultural land (winter and summer)	<ul style="list-style-type: none"> Large: More than 15 <i>jerib</i> 	<ul style="list-style-type: none"> Medium: More than 7.5 <i>jerib</i> but less than 15 <i>jerib</i> 	<ul style="list-style-type: none"> Small: Less than 7.5 <i>jerib</i> Access to land on sharecropping or rental basis closely tied to level of poppy cultivation 	<ul style="list-style-type: none"> Very Small: Less than 3 <i>jerib</i> Access to land on sharecropping or rental basis closely tied to level of poppy cultivation Rent payable in opium
Population density	<ul style="list-style-type: none"> 0.5 to 1.4 per <i>jerib</i> of agricultural land 	<ul style="list-style-type: none"> 1.5 to 3.4 per <i>jerib</i> of agricultural land 	<ul style="list-style-type: none"> 3.5 to 5 per <i>jerib</i> of agricultural land 	<ul style="list-style-type: none"> Greater than 5 people per <i>jerib</i> of agricultural land
History of poppy cultivation	<ul style="list-style-type: none"> Low percentage of total agricultural land even in peak years of production 	<ul style="list-style-type: none"> Cultivation only since war years In peak years some areas have seen extensive cultivation (>50 percent of agricultural land) 	<ul style="list-style-type: none"> Long history of cultivation High proportion of total landholding allocated to poppy Extent of poppy cultivation and status of local economy very closely entwined Areas in which trade and/or processing were located in past 	<ul style="list-style-type: none"> Long history of cultivation High proportion of total landholding allocated to poppy Extent of poppy cultivation and status of local economy very closely entwined Areas in which trade and/or processing are currently entrenched

	Poppy ban likely to be sustainable	Poppy ban unlikely to be sustained in 2007	Poppy ban no longer sustained in 2006	Poppy ban not complied with in 2005 or 2006
Current levels of poppy cultivation	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Negligible cultivation in 2005 but growing number of small plots of poppy even in accessible areas 	<ul style="list-style-type: none"> Lower levels in 2005 but extensive levels of cultivation (40-80 percent of agricultural land) in 2006 	<ul style="list-style-type: none"> Some households did not cultivate last year but cultivation almost 100 percent of land in 2006
Irrigation	<ul style="list-style-type: none"> Canal or river irrigated Double-cropping area 	<ul style="list-style-type: none"> Canal or river irrigated Double-cropping (but restricted summer crop depending on water availability) 	<ul style="list-style-type: none"> Typically single crop area Vulnerable to water shortages even in winter/spring Irrigated by mountain spring, snow melt or <i>karez</i> with growing reliance on tube well 	<ul style="list-style-type: none"> Double-crop Mountain spring and snow melt
On-farm income	<ul style="list-style-type: none"> Mixed cropping of vegetables, fodder and wheat (some wheat surplus) Sale of milk products in areas in close proximity to city 	<ul style="list-style-type: none"> Some wheat surplus (depending on family size); Limited vegetable production mainly for consumption In some areas evidence of penetration by vegetable traders from provincial centre and Kabul 	<ul style="list-style-type: none"> Wheat and vegetable production for consumption only Limited purchasing power in area for production of high value crops for sale; Where summer crop limited to maize 	<ul style="list-style-type: none"> Opium poppy only Summer crop of maize for consumption
Off-farm income	<ul style="list-style-type: none"> Limited daily wage labour opportunities in vegetable production 	<ul style="list-style-type: none"> Daily wage labour opportunities on government land currently leased to local power elites Seasonal work in poppy harvest in Balkh, Nuristan, Badakhshan, Takhar and other areas in eastern and northern regions where cultivation continues 	<ul style="list-style-type: none"> Seasonal work in poppy harvest and weeding within district 	<ul style="list-style-type: none"> Seasonal work in poppy harvest and weeding within district Collect firewood from mountains for sale locally and in Jalalabad

	Poppy ban likely to be sustainable	Poppy ban unlikely to be sustained in 2007	Poppy ban no longer sustained in 2006	Poppy ban not complied with in 2005 or 2006
Credit	<ul style="list-style-type: none"> Advance payments provided by vegetable traders to some farmers Vegetable production and employment seen as collateral by local shopkeepers; professionals get commodities and services "on tick" 	<ul style="list-style-type: none"> Some access from relatives and shops but becoming limited as capital diminishes; Mortgaging of land in 2005 and 2006 	<ul style="list-style-type: none"> Mortgaging of land in 2005 and 2006 With return to poppy now available but on less attractive terms to farmer than in the past. 	<ul style="list-style-type: none"> Advances payments on opium available Credit available from local shopkeepers to those that grow opium Advances payments on fire wood available in winter months
Sale of assets	<ul style="list-style-type: none"> Limited to prior to vegetable harvest or where household experience shock 	<ul style="list-style-type: none"> Some sales of opium, livestock and high value commodities in 2005 Further sales in 2006 	<ul style="list-style-type: none"> Sold inventories of opium, livestock and high value commodities in 2005 	<ul style="list-style-type: none"> Limited to those that did not cultivate opium poppy in 2005
Livestock	<ul style="list-style-type: none"> Partial restocking of losses of dairy cattle and oxen from drought years 	<ul style="list-style-type: none"> Continue to sell remaining livestock 	<ul style="list-style-type: none"> Sold majority of livestock only few small animals left 	<ul style="list-style-type: none"> Maintain limited dairy cattle Donkey and mules
Yields	<ul style="list-style-type: none"> Wheat: 80 <i>ser/jerib</i> Opium: 9 <i>kg/jerib</i> 	<ul style="list-style-type: none"> Wheat: 60 <i>ser/jerib</i> Opium: 10 <i>kg/jerib</i> 	<ul style="list-style-type: none"> Wheat: 40-50 <i>ser/jerib</i> Opium: 14 <i>kg/jerib</i> 	<ul style="list-style-type: none"> Wheat: 70 <i>ser/jerib</i> Opium: 14 <i>kg/jerib</i>
Employment	<ul style="list-style-type: none"> Daily wage labour opportunities in provincial centre Proximity means can travel each day at no or low cost Have regular income from salaried employment or vehicle for rent. 	<ul style="list-style-type: none"> Some wage labour opportunities within area (private sector/gov't projects) Sufficient male members of family able to travel to find work Typically unskilled daily wage labour in Jalalabad, Kabul, Pakistan or Iran Some members of extended family migrated to Pakistan permanently to find work 	<ul style="list-style-type: none"> Few wage labour opportunities within area (mainly CFW); Typically unskilled daily wage labour in Jalalabad, Kabul, Pakistan or Iran. Some households no male members available to travel to find work 	<ul style="list-style-type: none"> Wage labour opportunities within area (only CFW); Wage labour in border bazaar smuggling licit goods
Examples of geographic areas in Nangarhar	<ul style="list-style-type: none"> Lower Sukhrud, Lower Kama, Behsud, 	<ul style="list-style-type: none"> Lower Shinwar, Upper Surkhrud, Upper Kama, Lower Bati Kot, Khogiani 	<ul style="list-style-type: none"> Lower Achin; Upper Shinwar; 	<ul style="list-style-type: none"> Upper Achin

Appendix B: Returns from Opium and Farm Crops

Opium poppy 2006				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	0.5	kg	0	0
farm power	4	hour	400	1,600
DAP	1	bag	1,200	1,200
urea	1.5	bag	700	1,050
hired labour for weeding	10	person/day	150	1,500
hired labour for harvesting	30	person/day	250	7,500
food				1,800
Total cost				14,650
Total yield (final)	5	ser (1.2kg)	10,000	50,000
stem for fire				1,500
grain (<i>khashkhaash</i>)	25	ser	100	2,500
Net return/<i>jerib</i>	5	ser (1.2kg)	10,000	39,350

Opium poppy 2007				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	0.5	kg	0	0
farm power	4	hour	400	1,600
DAP	1	bag	1200	1,200
urea	1.5	bag	700	1,050
hired labour for weeding	10	person/day	200	2,000
hired labour for harvesting	30	person/day	350	10,500
food				1,800
Total cost				18,150
Total yield (final)	10	ser (1.2kg)	4,500	45,000
stem for fire				1,500
grain (<i>khashkhaash</i>)	50	ser	100	5,000
Net return/<i>jerib</i>	10	ser (1.2kg)	4,500	33,150

Spinach				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	5	kg	150	750
farm power	1	hour	400	400
DAP	0.5	bag	1,200	600
urea	0.5	bag	700	350
hired labour	8	person/day	150	1,200
Total cost				3,300

Total yield	400	ser	30	12,000
	400	ser	50	20,000

Net return/ <i>jerib</i>		ser	30	8,700
		ser	50	16,700

Cucumber				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	1	kg	900	900
farm power(oxen)	4	day	300	1,200
DAP	0.5	bag	1,200	600
urea	1	bag	700	700
hired labour	family labour	person/day	0	0
Total cost				3,400

Total yield	7,000		2	14,000
	10,000		2	20,000

Net return/ <i>jerib</i>	7,000			10,600
	10,000			16,600

Wheat				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed				
farm power	2	hour	400	800
DAP	0.5	bag	1,200	600
urea	1	bag	700	700
hired labour	family labour	person/day	150	0
Total cost				2,100

Total yield	80	ser	80	6,400
	120	ser	80	9,600

wheat straw	160	ser	35	5,600
	240	ser	35	8,400

Net return/ <i>jerib</i>	80	ser		8,500
	120	ser		15,900

Gandana				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	1	kg	1,500	1,500
farm power (oxen)	4	day	300	1,200
DAP	0.5	bag	1,200	600
manure				
hired labour	5	person/day	150	750
Total cost				4,050

Total yield	1,680	ser	30	50,400
	2,100		30	63,000

Net return/ <i>jerib</i>	1,680	ser		46,350
	2,100	ser		58,950

Green bean				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	4	kg	70	280
farm power	3	day	300	900
DAP	0.5	bag	1,200	600
urea	0.5	bag	700	350
hired labour	0	person/day	150	0
Total cost				2,130

Total yield	280	<i>ser</i>	50	14,000
	350	<i>ser</i>	50	17,500

Net return/ <i>jerib</i>	280	<i>ser</i>		11,870
	350	<i>ser</i>		15,370

Maize				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	2	<i>ser</i>	80	160
farm power(oxen)	3	day	300	900
DAP	0.5	bag	1,200	600
urea	1	bag	700	700
hired labour	family	person/day	0	0
Total cost				2,360

Total yield	70	<i>ser</i>	60	4,200
	100		60	6,000

Stem for animals	100	bunch (<i>gaidy</i>)	30	3,000
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Net return/ <i>jerib</i>	70	<i>ser</i>	60	4,840
	100		60	6,640

Onion				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	1	kg	3,000	3,000
farm power	4	day	300	1,200
DAP	1	bag	1,200	1,200
urea	1	bag	700	700
hired labour for weeding and transplanting	15	person/day	200	3,000
food	15	person	60	750
Total cost				9,850

Total yield	1,260	<i>ser</i>	30	37,800
	1,800	<i>ser</i>	35	63,000

Net Return/ <i>jerib</i>	1,260	<i>ser</i>		27,950
	1,800	<i>ser</i>		53,150

Garlic				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	20	<i>ser</i>	150	3,000
farm power	1	hour	500	500
DAP	1	bag	1,200	1,200
urea	1	bag	700	700
hired labour	0	person/day	200	0
Total cost				5,400

Total yield	170	<i>ser</i>	110	18,700
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Net Return/ <i>jerib</i>	1,260	<i>ser</i>		10,300
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Radish				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	4	kg	400	1,600
farm power	1	hour	500	500
DAP	4	ser	1,200	4,800
urea	5	ser	700	3,500
hired labour	0	person/day	150	0
Total cost				10,400
Total yield	750	ser	53	39,750
Net return/ <i>jerib</i>				29,350

Pea				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
Seed	1	ser	300	300
Farm power	1	hour	500	500
DAP	0.5	bag	1,200	600
urea	0.5	bag	700	350
hired labour for harvesting	8	person/day	150	1,200
Total cost				2,950
Total yield	25	ser	300	7,500
Net return/ <i>jerib</i>		ser		4,470

Tomato				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	0.5	kg	3,000	1,500
farm power	3	day	300	900
DAP	0.5	bag	1,200	600
urea	1	bag	700	700
hired labour	0	person/day	200	0
Total cost				3,700
Total yield	500	ser	60	30,000
	800	ser	60	48,000
Net return/ <i>jerib</i>	500	ser		26,300
	800	ser		44,300

Cauliflower				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	0.5	kg	0	0
farm power(oxen)	4	day	300	1,200
DAP	0.5	bag	1,200	600
urea	0.5	bag	700	350
hired labour	family labour	person	0	0
Total cost				2,150
Total yield	1000	unit	10	10,000
Net Return/ <i>jerib</i>				7,850

Spring onion				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	20	ser	80	1,600
farm power	1	hour	400	400
DAP	1	bag	1,200	1,200
urea	1	bag	700	700
hired labour	12	person/day	150	1,800
Total cost				5,700
Total yield	800	ser	35	28,000
Net return/ <i>jerib</i>				22,300

Okra				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	1	ser	50	350
farm power	4	day	300	1,200
DAP	1	bag	1,200	1,200
urea	2	bag	700	1,400
agrochemicals	1	litre	500	500
Total cost				4,650
Total yield	800	ser	50	40,000
Net return/ <i>jerib</i>	800	ser		35,350

Potato				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	50	ser	100	5,000
farm power(oxen)	4	day	300	1,200
DAP	0.5	bag	1,200	600
urea	1	bag	700	700
hired labour	family	person	0	0
Total cost				7,500
Total yield	400	ser	50	20,000
	600	ser	70	42,000
Net return/ <i>jerib</i>	400	ser		12,500
	600	ser		34,500

Ground nut				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	3	ser	400	1,200
farm power	1	hour	500	500
DAP	0.5	bag	1,200	600
urea	0.5	bag	700	350
hired labour		person/day		0
Total cost				2,650
Total yield	80	ser	200	16,000
Net return/ <i>jerib</i>		ser	35	13,350

Rice				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	3	ser	100	300
farm power (oxen)	3	day	300	900
DAP	0.5	bag	1,400	700
urea	1	bag	700	700
hired labour for planting and harvesting	6	person	200	1,200
Total cost				3,800
Total yield	40	ser	150	6,000
	80	ser	90	7,200
rice straw	25	bar	100	2,500
Net return/ <i>jerib</i>	40	ser		4,700
	80	ser		5,900

Cotton				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	1	ser	120	120
farm power	1	hour	500	500
DAP	0.5	bag	1,200	600
urea	0.5	bag	700	350
hired labour	20	person/day	150	3,000
Total cost				4,570
Total yield	65	ser	230	14,950
firewood				3,000
Net return/ <i>jerib</i>				17,950
				13,350

Squash				
Inputs	Amount	Unit	Cost/Unit (Rs)	Total cost (Rs)
seed	0.5	kg	4,000	2,000
farm power	5	day	500	2,500
DAP	1	bag	1,200	1,200
urea	1	bag	700	700
hired labour	0	person/day	150	0
Total cost				6,400
Total yield	1,000	ser	60	60,000
Net Return/ <i>jerib</i>				53,600

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