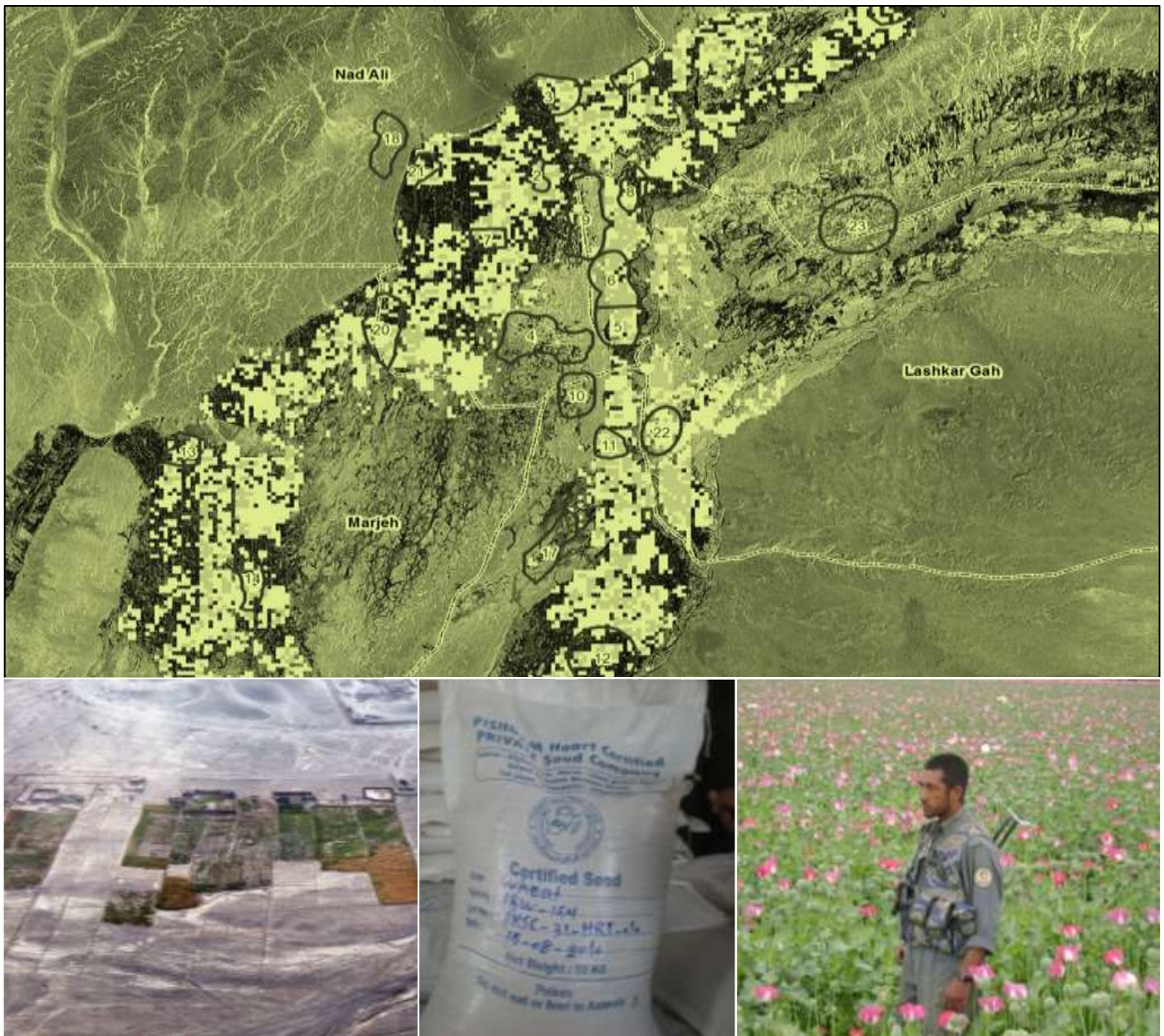


Managing Concurrent and Repeated Risks: Explaining the Reductions in Opium Production in Central Helmand between 2008 and 2011



May 2011

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Acknowledgements

This Report was funded by the Foreign and Commonwealth Office of the Government of the United Kingdom. Thanks go to Ian Paterson and Tom Franey for their continued support for longitudinal analytical work on the role of opium poppy in rural livelihood strategies.

Further thanks go to Paul Fishstein, Anthony Fitzherbert, Philippa Brown, David Macdonald and William Byrd for their comments on earlier drafts of the report. Any mistakes made are the authors and not theirs.

Particular thanks go to both the Organisation for Sustainable Development and Research (OSDR) who continue to conduct fieldwork in increasingly difficult circumstances, and the team at Alcis Ltd who have worked tirelessly on this project over the last few months.

The Project Team

David Mansfield is an independent consultant who has undertaken fieldwork on the role of opium poppy in rural livelihoods in Afghanistan for fourteen consecutive growing seasons. He is currently a Fellow at the Carr Center at the Harvard Kennedy School. David Mansfield was responsible for the research design, managed and analysed the results of the work and wrote the final report.

Alcis Ltd is a specialist in geospatial mapping and analysis and has spent seven years building an unparalleled knowledge of geospatial data in Afghanistan. Richard Brittan (Director) and Tim Buckley were responsible for research design, managed Alcis Ltd's geospatial analysis and mapped products, and supported the development of the final report.

OSDR is an Afghan Non Government Organisation based in Kabul. They specialise in

livelihoods research and have worked across rural Afghanistan for a variety of different donors and organisations. The core team at OSDR have been conducting fieldwork together for over twenty three years.

Disclaimer

The content of this report are the responsibility of the consultants and can in no way be taken to reflect the views of the Foreign and Commonwealth Office of the Government of the United Kingdom.

EXECUTIVE SUMMARY

Headlines

- What has driven recent reductions in poppy cultivation in Helmand and how sustainable are they?
- Household concerns about food security because of high wheat prices were key in driving down poppy cultivation between 2008 and 2009 but...
- The coercive power of the Afghan state and international military forces has been a significant factor in determining levels of cultivation in central Helmand in 2010 and 2011.
- Sustainability of these effects will vary among different communities. Broadly speaking reductions in poppy cultivation are:
 - most sustainable among communities in proximity to urban centres, with access to diverse income opportunities, government support programmes and better security;
 - least sustainable among communities which have responded to the Government's poppy ban but which do not have viable alternatives and continue to be exposed to violence and intimidation by both sides in the conflict;
 - non-existent among a growing number of communities in the desert north of the Boghra Canal where opium production has provided the means by which to own and cultivate land, and where the Taliban is increasingly seen as providing a relatively secure environment in which households can secure income and accumulate assets

Policy makers need urgently to consider:

- the impact of opium bans on communities that are exposed to repeated and concurrent shocks, do not have viable alternatives and where government support for economic development is not in place
- the detrimental impact of eradication on the consent of the population where it is undertaken in areas recently 'cleared' of anti-government elements and where it is conducted in a predatory and corrupt manner by government officials;
- the need to focus development assistance on interventions that will support livelihood diversification in the canal command area in central Helmand;
- the importance of understanding the local socio-economic, political and environmental context in which opium poppy cultivation takes place for the design of effective interventions;
- focusing on measuring livelihood outcomes, including the transition out of opium poppy cultivation, and how these differ by location and socio-economic group.

Background

Since 2008 the amount of land cultivated with opium in Helmand province has fallen by an estimated thirty seven per cent. Further dramatic reductions are anticipated in the canal command area of the province in the 2010/11 growing season. These reductions in opium poppy cultivation in central Helmand have occurred at the same time as the deployment of a growing number of national and international troops in the province, changing levels of violence, dramatic shifts in the terms of trade between opium poppy and wheat, the disbursement of increasing amounts of development assistance and the launch of a counter narcotics effort known as the 'Food Zone Programme'. In this complex environment where so many variables are potentially influencing farmers in their cropping choices, it is difficult to identify the underlying causes of the reduction in opium production without conducting detailed research over a number of years. This Study represents such a body of analytical work and was commissioned to answer two specific questions(1) what has driven the recent reductions in opium poppy cultivation in Helmand province and (2) how sustainable will these reductions be? The Study also offers a series of recommendations for policy development and the implementation of programmes that can deliver a more enduring counter narcotics outcome without undermining current stabilisation efforts.

Methodology

The Study draws on both remote sensing and household data collected over a three year period and focuses on twenty three distinct research sites located in the rural areas of the districts of Nahre Seraj, Nad e Ali, Lashkar Gah, Marjeh and Nawa Barakzai in central Helmand. These particular research sites offer sharply

contrasting socio-economic, political and environmental conditions that allow the reductions in levels of opium poppy cultivation within the province to be examined, as well as the identification of the differing impact of these reductions on households with different resource endowments and divergent exposure to risk and uncertainty. For example, some sites located in the environs of the cities of Gereshk and Lashkar Gah have experienced an improvement in security, gained from enhanced service provision and an expansion in their portfolio of livelihood activities over the period of the Study. Other research sites are located beyond the environs of the urban areas and have been exposed to repeated and concurrent shocks, such as chronic conflict, a ban on opium production, and a dramatic increase in wheat prices, over the period of the research. Finally there are research sites where the Taliban dominate, where opium persists and where livelihood options are severely limited by environmental factors.

Findings

The Study considered the wide range of factors that can impact on levels of opium poppy cultivation in Helmand including rates of eradication, access to labour and agricultural markets, the provision of development assistance, the security environment, food security and environmental stresses. The effect of a more enduring state presence, as well as growing economic opportunities, could already be seen on levels of opium production during the 2007/08 and 2008/09 growing seasons in the environs of Lashkar Gah. However, the Study shows that there have been two primary factors driving the significant decline in opium poppy cultivation since 2008: the dramatic increase in wheat prices and the governor's counter narcotics stance backed by an

increased national and international security presence.

First has been the dramatic increase in wheat prices that occurred in Afghanistan in mid 2007 and through into late 2008. The rise in wheat prices led to growing concerns over food security in Helmand province and in turn to a shift to levels of wheat cultivation that would meet household food requirements. These concerns over food security were in part driven by excessive opium production in 2008 and what had become a growing reliance on wheat flour imports from Pakistan, but also by increasing uncertainty over the supply from Pakistan given the deteriorating security situation across the border and the imposition of higher transportation and transaction costs both within Pakistan and southern Afghanistan.

Between 2008 and 2009 the amount of land cultivated with wheat almost doubled across Helmand province, increasing in areas where wheat seed and fertiliser were not distributed by aid agencies as well as areas where there was little fear of eradication due to the presence of the Taliban. In the canal command area this expansion of wheat production largely occurred at the expense of opium while outside the canal the same rate of expansion of wheat occurred but was largely accommodated through the expansion of the total area under cultivation by means of increasing encroachment into what had been desert land. The Study shows that despite falling wheat prices the residual effect of the increase in wheat prices was felt even in the 2009/10 growing season and deterred farmers in most areas from returning to levels of opium cultivation that would prevent them from producing sufficient wheat to meet their household requirements.

The second factor that has been decisive in reducing levels of opium production in central Helmand particularly in the 2009/10 and the 2010/11 growing season has been the Governor's counter narcotics stance when backed by the coercive power of the Afghan state, or perhaps more importantly, the enhanced international military presence supporting it. By the 2009/10 growing season the enhanced military presence had a significant effect on levels of cultivation in central parts of Nawa Barakzai and Garmsir. In the 2010/11 growing season the same effect can be seen in parts of the canal command area in Nad e Ali and particularly in Marjeh. In fact, in 2010/11 significant reductions in opium poppy cultivation could be seen in the canal command area that are in close proximity to security infrastructure such as checkpoints and forward operating bases.

The Study also found that it is not the act of crop destruction itself but rather the ongoing presence of the state that has determined the level of cultivation in central Helmand in subsequent growing seasons. Where the state has not been able to establish a more permanent presence in an area due to the prevailing security conditions, eradication has been seen by farmers as a random act that can be managed through patronage and corruption which led to increasing resentment. However, where the state has established itself in rural areas and is delivering a range of public goods and services, the threat of crop destruction can be seen to have played a role in raising the risks associated with opium production and supporting livelihood diversification. In fact cultivation was found to have fallen in a number of the research sites in central Helmand even though there had been no eradication or a perceived risk of it. The Study highlights that in

the absence of viable alternatives to opium, and when undertaken in areas where the population is already exposed to high levels of risk and uncertainty, eradication and the coercion not to plant can undermine support for the government and the presence of international forces.

Critically, the Study shows that the populations in those areas that are exposed to repeated and concurrent shocks are the least able to manage a ban on opium production. This is of particular significance in the districts of Marjeh and Nad e Ali where the increase in the number of security forces has succeeded in coercing farmers to reduce levels of planting in the 2010/11 growing season, but as of November 2010 had not led to an improvement in the physical security of the population. To the contrary the Study suggests that the population in these areas believes they are exposed to increasing levels of violence now that they live in contested territory and have the added shock of a ban on opium to manage. Furthermore, many of those beyond the environs of the urban centres report that they are unable to take advantage of development assistance because of Taliban intimidation and due to the patronage systems that governs the distribution of assistance which fuels resentment towards the local administration. The provision of wheat seed and fertiliser in these areas is typically seen as inconsequential and misplaced given the scale of the problems communities face, but is accepted as a form of cash transfer.

Those households that are directly experiencing the cost of the conflict, or perhaps idiosyncratic risks such as death or illness, as well as the loss of income due to the opium ban, and do not have a source of non-farm income, are adopting coping strategies that suggest signs of economic

distress and which will undermine their future earning capacity. They are likely to fully realise the impact of these concurrent shocks once the winter cropping season has finished and they consider the financial implications of the loss of their opium poppy crop over the summer season. The situation of these farmers will stand in stark contrast to the population in the areas north of the Boghra Canal who can continue to cultivate opium poppy, are exposed to lower levels of violence and attribute this to the dominance of the Taliban in the area.

Recommendations

Policy makers should urgently consider:

The impact of opium bans on communities that are exposed to repeated and concurrent shocks, do not have viable alternatives and where government support for economic development is not in place. In the run up to the 2011/12 growing season those looking to deliver counter narcotics and stabilisation effects in central Helmand are confronted with a policy dilemma. Without a reduction in their exposure to risk or effective ways to manage it, many communities in the canal command area may look to return to the risk mitigation strategy that has proven successful in the past - and continues to be for farmers north of the Boghra canal - that of opium poppy cultivation. It is important to ask, if the government and international community seek to prevent a return to cultivation through continued coercion, whether the rural population in these areas will look to reach out to Anti-Government Elements to offer protection from the state and its ban on opium production? After all this is a trend that can be seen at work in other parts of Afghanistan and has created the environment for increasing levels of cultivation in a number

of the southern districts of Nangarhar, as well as in the northern districts of Laghman, Sarobi in Kabul and parts of the province of Balkh in the 2010/11 growing season. Both the penetration of the insurgency and the resurgence in cultivation in those parts of Nangarhar where the population has limited resource endowments and are exposed to concurrent and repeated shocks, are warning signs given the fragility of the situation in an area like central Helmand, where despite better resource endowments the population is subject to chronic conflict and where the Taliban traditionally have a stronger political base.

The detrimental impact of eradication on the consent of the population where it is undertaken in areas recently 'cleared' of anti-government elements and where it is conducted in a predatory and corrupt manner by government officials. Eradication campaigns in Helmand have been subject to allegations of corruption and patronage, and government officials have often been accused of using crop destruction for extracting rent from rural communities. Typically crop destruction in Helmand has tended to target the land of more marginal communities outside the well irrigated parts of central Helmand or more marginal members of communities within the areas of greater agricultural potential. In 2010 eradication was conducted in a more systematic manner in areas within the canal command area that had been subject to military efforts to clear the Taliban. In late 2010 the population in these same areas was subject to considerable pressure to reduce levels of planting. These efforts without being preceded by improvements in both the physical and economic security of the rural population and without sufficient controls on the way the

eradication campaign is conducted are likely to lead to increasing instability.

The need to focus development assistance on interventions that will support livelihood diversification. The Study shows that there is much to be learned from those areas and households in central Helmand whose livelihoods are resilient to a ban on opium production and that diversification has been critical. In the rural areas in close proximity to the cities of Lashkar Gah and Gereshk, growing demand for high value horticulture has supported a process of crop diversification that has spread risk and increased household incomes. Employment and trade opportunities have been more available to the population in these areas, further supporting the transition out of opium production. Improvements in security as well as access to education and health services have bolstered the conditions for a social contract between the population and the state. Beyond the environs of the urban centres where agricultural diversity continues to be limited, it is those households with non-farm income opportunities, which have often been funded from the proceeds of opium production, that are more resilient to the loss of income imposed by the opium ban. Given these findings, much greater emphasis needs to be given to supporting crop diversification and creating employment opportunities for those communities in the canal command area of central Helmand. Investments in wheat seed and fertiliser distribution alone are too limited to enable the necessary diversification.

The importance of understanding the local socio-economic, political and environmental context in which opium poppy cultivation takes place for the design of effective

interventions. The Study highlights the need for designing interventions based on a clear understanding of the different livelihood trajectories that are in place across Helmand: the types of shocks that the population is exposed to; the assets they can draw upon; and whether livelihoods can adapt to shocks or whether significant numbers of households are adopting strategies that undermine their future earning capacity, expose members of their household to physical hazards, and potentially undermine stabilisation efforts. This data is crucial for future planning and in particular identifying the appropriate timing for the implementation of an opium ban in given area.

Focusing on measuring livelihood outcomes, including the transition out of opium poppy cultivation, and how these differ by location and socio-economic groups. It is not wise to reduce the assessment of the lives and livelihoods of the rural population into ordinal data that is used to report for example on the proportion of the population that has answered the latest round of closed questions indicating that they are economically 'better off' or 'support the government' and compares it to the previous quarter. Such measurements are notoriously problematic in chronically insecure environments like central Helmand, and offer few warnings as to the economic and political fault lines that exist within a given area. Nor is it sufficient to measure the quantities of development inputs distributed without understanding who has benefited, who has not, and how the distribution of assistance has impacted upon both the livelihood portfolios of the rural population and the local political environment. Remote sensing data could be used to assess the process of diversification into high value horticulture and to provide an understanding of how farmers are using the

agricultural assistance they have been given, the different income streams they are drawing on, and the resilience of livelihoods to shocks. It would also offer warning signals for areas that persist with low-risk low-return agricultural systems and have been highly dependent on opium production, such as those beyond the environs of the urban areas in the canal command area. As such, geospatial data on cropping patterns should be seen as both a source of impact data and as a diagnostic for identifying areas that require further examination and may require a refocusing of interventions.

1. Introduction

The province of Helmand in Afghanistan has become synonymous with opium production in the minds of many. During the 1990s it was one of the primary opium producing provinces in the country, typically cultivating between 30,000 and 40,000 hectares of opium poppy. With the fall of the Taliban regime and the collapse of the ban on opium production, levels of cultivation increased in Helmand province until they reached a peak of 103,000 ha in the 2007/08 growing season. Over the last three growing seasons, however, levels of opium cultivation in Helmand has fallen by over a third and further reductions are expected in the 2010/11 growing season.

These reductions have largely been concentrated in the central part of the province in areas under the Helmand canal system and coincident with the efforts to reduce both opium production and the threat of the insurgency in the same areas. At the same time there have been a number of other factors that have also favoured a reduction in opium poppy, including the dramatic rise in food prices from mid 2007 until late 2008, and the significant increase in the presence of international military forces in central Helmand beginning in June 2009 in the districts of Nawa Barakzai and Garmsir, and culminating in the spring of 2010 in Marjeh and Nad e Ali.

Other factors have encouraged higher levels of opium poppy cultivation. For instance, the continuing conflict has exposed many communities in Helmand to the risk of injury, illness and death, as well as the potential for damage to property and other assets; it has also hampered the movement of agricultural commodities and constrained the delivery of

public goods such as education and health services. These are the conditions under which households might seek to pursue short term livelihood strategies, such as opium production, as a way of securing income and accumulating assets for both opportunistic and risk mitigation objectives.

The purpose of this work is to answer two major questions: The first is what has driven the recent reductions in opium poppy cultivation in central Helmand province? The second is how sustainable will these reductions be? In answering these questions it is necessary to develop a detailed understanding of the area under Study and its inhabitants, the different policies and shocks that households are exposed to, and the livelihood strategies and outcomes that are produced.

After all, opium poppy cultivation does not take place in a vacuum; it is shaped by local, national and international institutions, as well as a range of different stresses and shocks, such as drought, conflict and economic crises. For the household, opium production is only one livelihood activity in a broader portfolio that might include the cultivation of a variety of field and horticultural crops, tending livestock, and earning cash income working for other farmers on their land and/or through employment in the non-farm sector. Even when the price of opium is high and the risk of crop destruction is low, farmers in Helmand will not monocrop opium but will invest in a range of different activities as a rational strategy for managing the multiple risks they are exposed to.

Given the context of chronic insecurity and the role that opium plays as a risk mitigation strategy, an effective framework for exploring

the cause, or causes, of the recent reductions in opium poppy cultivation in central Helmand is an analysis of the different risks that communities are exposed to, including the risk that a ban on opium production will be successfully imposed. Through this analysis it will be particularly important to identify how these different risks might encourage or discourage opium production and how exposure has varied by location, socio economic group and over the duration of this Study. Finally, it will be necessary to map those areas where the population is most exposed to repeated and concurrent risks and identify which risks have proven to be the most decisive (if any) in reducing the amount of land cultivated with opium poppy over the different areas and growing seasons covered by the Study.

Clearly to answer the second question, that of the sustainability of the current reductions in central Helmand, we have to understand the reasons for the fall in opium production in the first instance. However, there is also a need to understand what has replaced opium, not only in terms of what crop or crops have substituted for opium poppy on a given piece of land, but what activities are now delivering the livelihood outcomes that opium production provided to different socio-economic groups prior to it being abandoned. For example, if opium poppy is no longer grown, how does a household access advance payments or credit when required? Which on-farm, off-farm and non-farm activities generate sufficient cash income to meet both basic needs and also allow assets to be accumulated and help households manage against future shocks or life cycle events such as injury, illness, death or marriage? And what livelihood options are now available to farmers who had previously gained

access to land under sharecropping arrangements and wage labour opportunities during the opium harvest season due to the labour intensive nature of opium production?

The most appropriate way to answer the question of sustainability is to explore how resilient livelihoods in central Helmand are to shocks. A livelihood that is resilient has the flexibility to adapt and recover from exposure to shock, including the shock of a ban on opium production. A livelihood that is not resilient results in households pursuing what are referred to as coping or survival strategies that undermine future earning capacity by depleting productive assets and leaving the household more vulnerable than before (Start and Johnson 2004). In examining the resilience of livelihoods across central Helmand it is necessary to look beyond responses to a ban on opium production per se. It is recognised that in the current environment a ban on opium production is unlikely to occur in isolation and therefore it is not always possible to distinguish between the strategies adopted in response to successful counter narcotics efforts and those pursued due to the other risks that households and communities are regularly exposed to in central Helmand. So it is necessary to examine the cumulative effect of shocks on both the portfolio of livelihood activities of the household and the overall wellbeing of its members.

Identifying those areas where the population is most exposed to concurrent and repeated shocks and where livelihoods are at their least resilient will be critical to developing a better understanding of the sustainability of a ban on opium production and the potential for current counter narcotics efforts to undermine stabilisation efforts. Households that are

exposed to repeated and concurrent shocks and respond to them by adopting strategies that undermine their future earning capacity and/or expose members of their family to hazards should be considered at risk of returning to opium poppy cultivation in the future in the absence of the means of coercion. However, were coercion to continue but without policies or programmes that either reduce household exposure to risk or offer an effective way to manage it, such households would be considered vulnerable to increasing deprivation. Where there is concentration of households in an area where livelihoods are not resilient and where there are increasing signs of deprivation, the social compact between the state and the population has to be considered fragile, particularly where the population believes it is more exposed to risk due to the actions of the state; where the rural elite is both and lacks the support of the people; and where the state (and those supporting it) does not have a monopoly of the means of violence.

To answer these two fundamental policy questions, that of the cause of the reductions in opium cultivation in central Helmand and its ultimate sustainability, this paper will be divided into five further parts. The first outlines the methodology used for this Study. The second provides the context for the Study, offering an overview of Helmand province and the different counter narcotics efforts that have been pursued in the last decade. The third looks at the different risks that households and communities in Helmand are exposed to and how this has changed over time. The fourth examines how resilient livelihoods in different parts of central Helmand are to risks, as well as the responses households have adopted in response to repeated and concurrent risks.

Finally the paper offers a conclusion and recommendations.

2. Methodology

2.1 Approach

Socio-economic, political and environmental conditions can vary across relatively short distances in Afghanistan; more so in Helmand province due to the prevailing security environment. Some areas in Helmand have a reliable source of irrigation year round, fertile land, and are close to urban centres and the agricultural and labour markets that this entails. These areas may be relatively secure and the populations are recipients of a range of government services. Other areas nearby may be subject to an ongoing presence of armed anti-government groups, have poor soils, unreliable (and costly) irrigation, and little public or private sector investment. The tribal make up of an area will also vary with one community consisting largely of tribes with a long history in the province with access to patronage systems within government and insurgent groups. A neighbouring village however may comprise of a multitude of different tribal groups from across the country and find itself marginalised by both state and anti-state actors alike.

Within each of these communities there will be households whose particular resource endowments allow them to manage and recover from the different shocks that are a regular feature of life in rural Afghanistan. They may have access to the political and economic capital that renders them less vulnerable to intimidation by insurgent groups and less likely to be targeted for crop destruction and raids by local security forces. They will also be better placed to take advantage of any public and private sector investments made in their area. In these same communities there will also be households that are disadvantaged because

they are landless; do not have access to local patronage systems; have high dependency ratios; and/or their families have been resettled in Helmand from areas outside the province. These households are potentially more vulnerable to shocks and in response are more likely to adopt coping strategies that undermine their future earning capacity.

Those that cultivate opium poppy in Helmand also defy crude generalisations. Attempts to correlate broad socio-economic and political data with opium production have typically failed to offer adequate explanations as to the complex and multiple factors that influence levels of cultivation and how these vary over time, space and socio-economic group. In Afghanistan opium production has often been attributed to 'poverty', 'greed', 'insecurity' or 'insurgency' but these explanations lack sufficient understanding of the socio-economic political and environmental diversity that exists both across Afghanistan and within individual provinces; these accounts also ignore the role that local factors play in both encouraging and dissuading opium poppy cultivation.

This research looks to explore both the local factors and the wider structures and processes that shape rural livelihoods and levels of opium poppy cultivation in central Helmand. In doing so the research design recognises that undertaking large-scale surveys using probability sampling techniques¹ makes little sense in rural Helmand where there is a dearth

¹ '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.' (Berg, 2007: 42)

of robust data on the most basic variables including population size and its composition (Berg 2007, 42; Kandiyoti, 1999). It also recognises the constraints that the security situation in the province has imposed on research, in particular attempts to generate what are seen as representative samples of the population of the province as a whole. Parts of the province are under the control of insurgent groups and largely inaccessible; in other parts the insurgency maintains an influence and access is restricted and based on existing contacts and experience in a given area. Formal surveys are treated with suspicion by insurgent groups and the rural population. Those conducting surveys are seen to be working for the Afghan government and/or international community and can be subject to punishment, resulting in an understandable bias towards urban and peri-urban areas when data is collected using more quantitative techniques.

In recognition of the inherent constraints in producing a statistically representative sample

in a chronically insecure environment such as the province of Helmand, the research design deploys a number of methods more suited to the environment and the subject matter being examined. First, the research design takes a case study approach focusing specifically on twenty three different research sites in central Helmand province (see Figure 1). These research sites were selected on the basis of maximum variation so as to juxtapose locations where the population has different assets, exposure to stresses and risks, and experiences of interventions, such as the counter narcotics measures delivered under the Helmand Counter Narcotics Plan as well as the ongoing military effort.

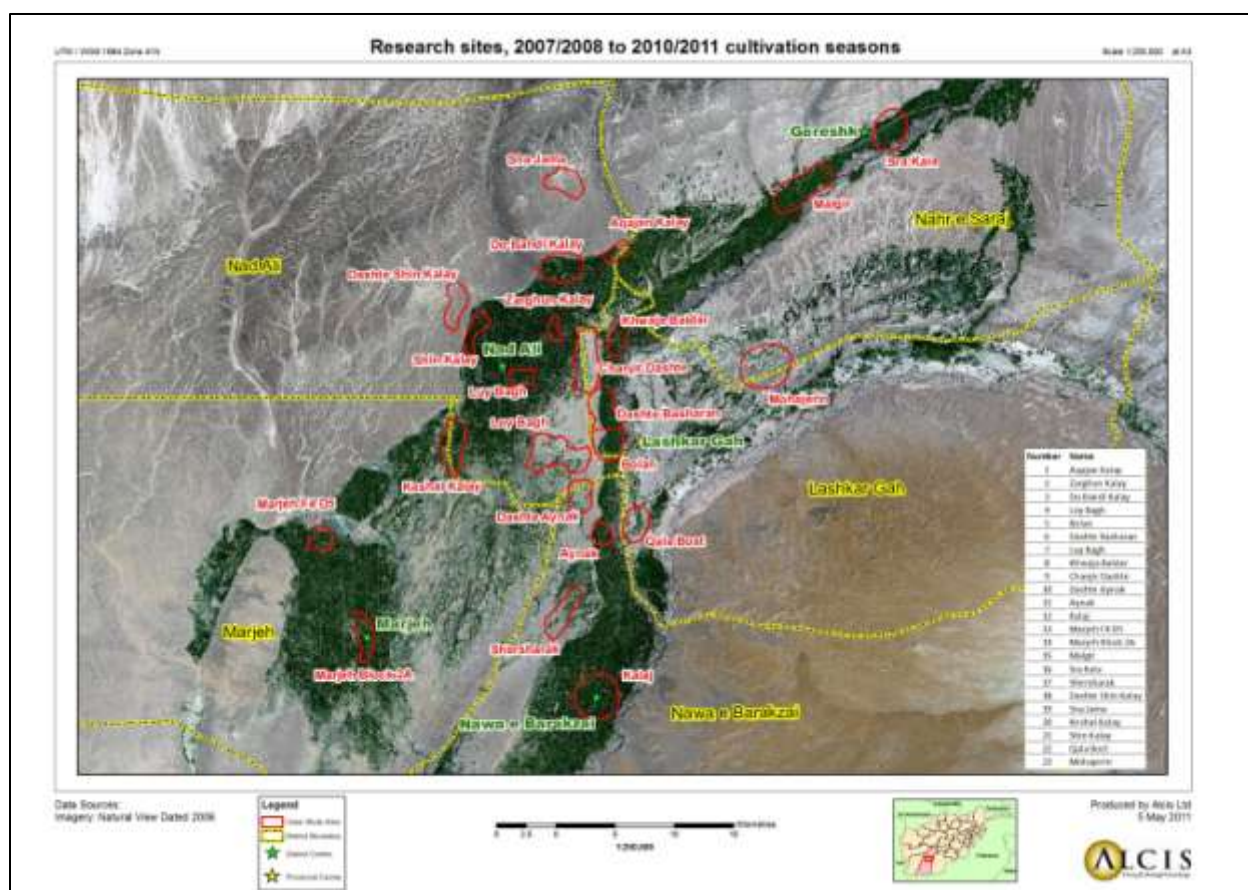


Figure 1: Research sites, 2007/08 to 2010/11.

[To view in high resolution or download this image click here](#)

It is intended that a comparative analysis of levels of cultivation across the research sites between the 2008/09 to 2010/11 growing seasons will identify whether reductions in opium production are specific to areas where the population has similar assets or has perhaps been subject to specific interventions or particular shocks, or whether in fact reductions in levels of opium poppy cultivation in the central region can be seen across the research sites and are therefore due to more generic and possibly exogenous factors. It is anticipated that by identifying the cause, or causes, of the reduction in opium poppy cultivation in these different sites, as well as generating a detailed understanding of how the lives and livelihoods

of the population have changed over the period of this Study, it will be possible to identify whether these reductions in opium poppy cultivation will be sustained.

Secondly, the research design limits the scope of its enquiry to the central region and the districts of Lashkar Gah, Nad e Ali, Nawa Barakzai, Nahre Seraj and Marjeh, where the security situation is more permissive. These are the areas where counter narcotics efforts have been focused in what has become known as the Food Zone Programme (FZP). The inclusion of areas in these districts that have fallen outside the boundaries of the Food Zone, as well as those areas within the Food Zone that have not

been subject to the different interventions planned, allows for a comparison of patterns of cultivation both 'with' and 'without' the counter narcotics programme.

Thirdly, a composite approach is adopted for each research site, drawing on a variety of data including: remote sensing data on the crops cultivated during the winter season; household socio-economic data documenting assets, shocks and livelihood portfolios and; where it was made available, data on the different types of interventions implemented in each of the different sites and in their environs. In each of the research sites historical data is available over the 2007/08 to 2010/11 growing seasons allowing analysis of the change in cropping patterns over time. An initial round of fieldwork was undertaken in April/May 2008. This was followed up with further fieldwork in April/May 2009, November 2009 and in April/May and November 2010. In late 2010 the number of research sites was increased so as to increase the coverage of areas both within the Food Zone and outside. This increase included two areas north of the Boghra canal where the Taliban are seen as the dominant force. Remote sensing data is available for each of the 2007/08, 2008/09 and 2009/10 growing seasons except for Shna Jama (RS19) and Dashte Shin Kalay (RS18) where coverage is not available for 2009.²

² Further fieldwork will be undertaken in April/May 2011 in the same areas in the canal command area and in a larger number of sites north of the Boghra canal. Remote sensing data will also be collected in the spring of 2011 to capture the full extent of the winter crop and the different crops cultivated. Unfortunately none of the data for the second half of the 2010/11 winter crop are available for this study.

Fourthly, the inherent problems with primary data collection when researching an 'illegal' or 'underground' activity are recognised and mitigated by focusing the line of enquiry on household livelihood strategies. The pressure to act against opium cultivation and its trade has made the subject of illicit drugs a more sensitive topic for discussion with farmers and other stakeholders than it was in the 1990s and in the initial years of the twenty-first century. However, the rural household is the most accessible unit of analysis when looking at the opium economy in Afghanistan, and it offers a basis for cross-referencing findings with other work on rural livelihoods in Afghanistan, as well as other research that has been done on the role of opium poppy in rural livelihood strategies in Afghanistan and other opium producing countries.

Interviews focus on the portfolio of livelihood activities and the shocks that households may have experienced. Opium production is considered as a crop within a wider range of activities that households are involved in. This approach recognises that, given the complex and dynamic relationship between the various factors that inform household decision-making and how these are shaped by particular circumstances, it is inappropriate to simply ask households why they do or do not cultivate opium poppy; the reasons for cultivating opium poppy are typically multiple, they are not mutually exclusive and cannot be distilled to a single answer.

Furthermore, to avoid a process in which households seek to 'negotiate' for the replacement of opium poppy in return for development aid, typically exaggerating the returns on opium production to extract greater assistance, no direct questions are asked in

relation to the opium crop. Experience has shown that where opium poppy is cultivated, respondents will typically include it when recounting the different crops that they grow and sell. The fact that interviews are conducted in the field during the planting and harvest season for the winter crops, including opium poppy, allows fieldworkers to verify, and where necessary challenge, the veracity of respondent's answers.

Discussions are also directed to the direct experience of the respondent and their household rather than of a wider geographic area where answers become increasingly more speculative (Swedish Committee for Afghanistan 1992:1).³ Individual interviews with farming households are undertaken in the field as farmers tend their crop. When conducted in the household compound interviews can attract attention from others and become subject to repeated interruption and bias. Group discussions with farmers are avoided as they tend to be dominated by community elites, are inappropriate for discussing sensitive issues and increasingly represent a security threat in rural Helmand (Goodhand 2000: 13; Shairzai et al 1975:13;

³ '[The ASA's national surveys] are based on specific information that a farmer gives directly to the enumerator about his own, and no one else's farming operations. This, we believe, is essential to quantitative data collection. If the respondent is asked questions about his village or district his answer in many cases is likely to be vague simply because the question is extremely difficult to answer with any degree of accuracy. From experience we have also found that generalised agricultural information resulting from group interviews or from village elders is of poor quality when compared to that derived from individual farmers speaking about their own farms' (Swedish Committee for Afghanistan 1992:1).

Stevens and Tarzi 1965: 1⁴). To verify information on crop sales and how agricultural markets function, a range of different wholesale and retail traders were interviewed in each of the main bazaars in the districts covered by the fieldwork as well as in Kandahar and Kabul.

Finally, the research recognises the degree of socio-economic differentiation that exists within communities in central Helmand. Within each research site households are selected for interview based on purposive sampling. Emphasis is placed on obtaining a cross section of different socio-economic and tribal groups within each of the sites selected so as to explore which groups are more likely to benefit from assistance and which are more vulnerable to crop eradication. It is anticipated that by interviewing a cross section of different socio-economic groups within each of the different sites at different times in the growing season (as well as drawing on historical data) it will also be possible to better understand their involvement and reactions to any collective decision-making and responses to the state's efforts to curb opium poppy cultivation.

2.2 Caveats

Research in Afghanistan is always subject to bias and more so in a chronically insecure environment like Helmand where there is a paucity of reliable demographic data with which

⁴ 'At the beginning of the study we chose the names of farmers to be interviewed from lists supplied by the village chief. These names were chosen at random and farmers were usually called to the village chiefs' home where we interviewed them. After following this procedure for several days, however, we changed our method and began contacting farmers in their homes or in their fields without previous knowledge of the village chief. We felt this procedure eliminated some of the bias we seemed to have been getting by the previous method' (Stevens and Tarzi 1965:1).

to establish a representative sample, where both fieldworkers and respondents have legitimate concerns for their own safety, particularly in rural areas, and where it is difficult to provide oversight for data collection in situ. The research methodology outlined above is designed to address these challenges, but it is nevertheless worth offering a number of caveats with regard to the research, particularly given the security environment in Helmand and the types of sensitive issues raised by this Study.

The most important caveat to offer is to highlight the impact that the conflict had on fieldwork even in the central part of the province. During the course of the research fieldworkers have been fired at and robbed by criminals on the main highway, subjected to a number of checks on their mobile phones by Taliban fighters and repeatedly exposed to those that professed to being members of the Taliban either during interviews, travelling between sites in taxis, or when attending Juma prayer. One fieldworker was arrested by a Taliban commander and only released when a respondent in one of the research sites vouched for him. Fieldworkers have also been exposed to firefights between the Afghan National Security Forces (ANSF), international military forces and the Taliban, as well as been subject to intimidation from the Afghan National Police (ANP). These kinds of events are not atypical and reflect the experiences of the rural population of Helmand.

It is these very conditions that limit the geographic coverage of fieldwork (often at short notice), rule out formal structured interviews in the more insecure rural areas and ultimately make central Helmand a sub optimal environment for undertaking field research.

Whilst a focused research design and a core team of experienced local fieldworkers allow fieldwork to be conducted in areas that are exposed to the ongoing conflict, the results of the research are still inevitably shaped by the prevailing security situation. In fact, the security situation has been such that it has not always been possible to visit each research site during each round of the fieldwork. For example, the research sites of Doh Bandi (RS3) and Aqajan Kalay (RS1) on the Boghra canal in the district of Nad e Ali have proven particularly insecure over the duration of the Study. Nevertheless visits have been made to these locations at least once and remote sensing and other geospatial has allowed cropping patterns to be examined over the three growing seasons of 2007/08, 2008/09 and 2009/10 (see Table1).

Donor interest in increasing the geographic coverage of the fieldwork in November 2010 (and subsequently in May 2011) has also led to the inclusion of additional research sites that were not visited during the initial phases of the Study. Again remote sensing data has been used to examine these areas over the three growing seasons covered by the Study. The findings from initial visits to a more limited number of respondents in fewer sites in May 2008 were enhanced with repeat visits in both May and November 2009 which collected data on the 2007/08 and 2008/09 growing seasons.

It is also worth noting that the security situation in the province has prevented the same households from being visited for each round of the fieldwork. Repeated visits to the same households in each research site every six months would arouse suspicions from Anti Government Elements and their supporters operating in the area and would place both fieldworkers and respondents at risk. In the

more insecure areas in the canal command area and north of the Boghra, fieldworkers have had to work with existing contacts in a research site as well as establish new ones without alerting those in the wider community to their work as researchers.

Fieldworkers have had to be discreet, preferring to interview individual farmers who are at work in their fields, where there are no bystanders and where an 'outsiders' presence is not as conspicuous. Notes are not taken during interviews but written up after the fieldworker and respondent have parted company. While this approach presents some challenges with regard to recall or memory bias, it is diminished by the experience of the fieldworkers. The less formal and more conversational style of the interview has also reduced the potential for social desirability bias that has been shown to impact on the results of using more quantitative techniques such as polling in chronically insecure provinces such as Helmand (Pinney 2010).

The research does not profess to offer a representative sample of households or communities in Helmand province, or even central Helmand, as this is unattainable in the current environment. Instead it draws on household livelihood trajectories and geospatial data collected over a three year period in twenty three specific and quite different research sites. It is, however, intended that by merging such detailed and historical household and geospatial data across such diverse areas in central Helmand, the research will produce what Yin (1994:31) has referred to as 'analytic generalization' and offer findings that are relevant to other parts of Helmand and Afghanistan.

Table 1: Remote Sensing and Household data for selected research sites, May 2008 to November 2010

	2007/08 Growing Season		2008/09 Growing Season		2009/10 Growing Season			2010/11 Growing Season
Area	No. of Household Interviews April/May 2008	Remote Sensing	No. of Household Interviews April/May 2009	Remote Sensing	No. of Household Interviews November 2009	No. of Household Interviews April/May 2010	Remote Sensing	No. of Household Interviews November 2010
1. Aqajan Kalay	Insecure	✓	Insecure	✓	Insecure	Insecure	✓	15
2. Zarghun Kalay	6	✓	12	✓	11	12	✓	12
3. Do Bandi Kalay	6	✓	9	✓	10	Insecure	✓	Insecure
4. Loy Bagh	-	✓	-	✓	-	-	✓	12
5. Bolan	6	✓	12	✓	15	10	✓	12
6. Dashte Basharan	-	✓	-	✓	-	-	✓	15
7. Luy Bagh	6	✓	12	✓	12	12	✓	15
8. Khwaja Baidar	-	✓	-	✓	-	-	✓	15
9. Chanjir Dashte	6	✓	9	✓	10	Insecure	✓	15
10. Dashte Aynak	-	✓	-	✓	-	-	✓	15
11. Aynak	-	✓	9	✓	12	12	✓	12
12. Kalaj	-	✓	-	✓	-	-	✓	15
13. Marjeh F4 D5	-	✓	-	✓	-	-	✓	15

Table 1: Remote Sensing and Household data for selected research sites, May 2008 to November 2010

	2007/08 Growing Season		2008/09 Growing Season		2009/10 Growing Season			2010/11 Growing Season
Area	No. of Household Interviews April/May 2008	Remote Sensing	No. of Household Interviews April/May 2009	Remote Sensing	No. of Household Interviews November 2009	No. of Household Interviews April/May 2010	Remote Sensing	No. of Household Interviews November 2010
14. Marjeh A2	-	✓	-	✓	-	-	✓	15
15. Malgir	-	✓	12	✓	11	9	✓	15
16. Sra Kala	-	✓	-	✓	-	-	✓	10
17. Shershorak	-	✓	-	✓	-	-	✓	15
18. Dashte Shin Kalay	-	✓	-		-	-	✓	15
19. Shna Jama	-	✓	-		-	-	✓	15
20. Keshal Kalay	-	✓	-	✓	-	-	✓	15
21. Shin Kalay	-	✓	-	✓	7	-	✓	15
22. Qala Bost	6	✓	12	✓	12	12	✓	12
23. Mohajerin	6	✓	12	✓	12	12	✓	11

3. Context

3.1 Provincial Overview

Helmand is the largest province in Afghanistan, occupying approximately sixty two thousand square kilometres. It has an estimated population of 1.4 million people (CSO/UNFPA 2006) comprising mainly of Pashtuns with some Baloch and Hazaras. The province is located in the southwest of the country and neighbours the provinces of Kandahar, Dai Kundi, Uruzgan, Nimroz, Farah and Ghor. It shares a one hundred and sixty kilometer border with Balochistan, Pakistan. The province is mostly clay or sand desert in the south, and dry rocky mountains in the north. Only four per cent of the land is cultivable and only two and a half per cent is irrigated. Rainfall varies from two to nine inches per year. The summer is hot and dry. Winters are mild with average temperatures above freezing but the number of sub-freezing days hampers the growth of tropical crops and fruit.

Much of the most productive agricultural land, as well as the population, straddles the Helmand river and the irrigation systems it feeds. However, the desert areas brought under cultivation in the 1950s and 1960s though the Helmand Valley Authority – later the Helmand and Arghandab River Authority – suffer from flat gradients, poor soils, high evaporation rates and poor water management resulting in drainage and salination problems. Alluvial or old river terrace soils of moderate to low fertility predominate in the Helmand area (Shairzai et al, 1975: 3). Sub soils are frequently underlain by an impermeable conglomerate and waterlogging has created a persistent weed problem particularly in Nad e Ali and Marjeh (Cullather, 2002). Despite this ‘the hot days and relatively cool nights in summer, the mild climate of winter with good light intensity are

all favourable factors for plant growth in Helmand’ (Cullather, 2002:3).

Economically the province is dependent on agriculture. There are few non-farm income opportunities available in the province and small industry is largely absent (Gordon, 2011: 9). In 2008/09 wheat occupied the greatest amount of active agricultural land during the winter season at an estimated 85,493 ha. Opium poppy was the second most prolific crop with 75,076 ha of land under cultivation (Cranfield, 2009: 24). Other winter crops include fodder crops such as alfalfa or livestock as well as seasonal vegetables which are grown primarily for household consumption in most areas beyond the environs of the urban centres of Lashkar Gah and Gereshk. In the spring and summer there is greater agricultural diversity in the central districts of Helmand. For example water melon is planted in both spring and summer and is considered of a premium quality. Cotton production also persists despite the relatively low prices offered by the state gin that continues to influence the market.

While the province has agricultural potential there are many constraints on its realisation. The main market for agricultural production from the province is not in Lashkar Gah, which only has a population of around 200,000, but in Kandahar city, with onward destinations to Kabul and Quetta, Pakistan (Gordon, 2011: 6). However, insecurity along the main highway between Gereshk and Kandahar city, particularly in the district of Zahre, hampers the movement of goods along this road. Due to the risks of violence or robbery, transportation costs are high in the south. Nuisance taxes are also considerably higher in the provinces of Helmand and Kandahar than they are anywhere else in the country

(Mansfield, 2008b: 45-46; Mansfield, 2009b 63-64).

There is no official border crossing with Pakistan located in Helmand, so government revenues from imports and exports are zero. What crosses these borders unofficially are guns, drugs and people – some of whom are armed and belonging to Anti Government Elements. The border areas currently lay beyond the control of the provincial authorities and any rents to be generated here do not flow to the government.

Politically the province is deeply divided. The rise of the former jihadi commanders that were ejected during the Taliban period such as Sher Mohammed Akhundzada (Alizai), Abdul Rahman Jan (Noorzai), Dad Mohammed Khan (Alikozai), and his brothers Mohammad Daoud, and Gul Mohammad, Haji Abdul “Koka” Wali (Alizai), and Mir Wali (Barakzai) into formal positions of authority within the provincial administration in 2001 alienated much of the rural population. These were names that were already associated with corruption, violence and involvement in the drugs trade (Coghlan, 2009: 121-122 and 126). Their return to power in Helmand after the fall of the Taliban was a surprise to the population who remembered the role the commanders had played in the collapse of the mujahidin government and why the Taliban had swept into the south in the mid 1990s with the support of the rural population. Key tribes such as the Ishaqzai who were prominent in the Taliban regime, along with many other smaller tribes such as the Dawtani and Kakar, found themselves marginalized, and largely ignored in the division of government jobs and patronage that made up the spoils of war.

The lack of progress made across many key development indicators in the province reinforced the view amongst the rural

population that those in the government had little interest in the provision of public goods and were more concerned with increasing their private wealth (Giustozzi, 2007: 215). These sentiments and growing tribal grievances have given the Taliban entry points into rural areas, particularly in the north of the province and areas bordering Pakistan. Counter narcotics efforts that have been criticised for targeting the poor and the powerless in the case of eradication and competitors in the case of interdiction have also been blamed for further undermining support for the provincial authorities (Gordon 2011; Guistozzi 2007).

3.2 Drugs and Counter Narcotics Interventions

Until 2008 levels of opium poppy cultivation in Helmand province showed an upward trajectory, increasing from an estimated 29,579 ha in the 1993/94 growing season to a peak of 103,590 in 2007/08 (see Figure 2). Whilst there have been a number of occasions over the last two decades where farmers in Helmand have experienced significant crop losses due to insects and disease (1995/96, 1997/98, 2003/04, 2009/10) as well as drought (1999/00), there have only been three documented instances where the authorities actively attempted to impose significant reductions in cultivation, these being the Taliban ban in 2000/01, the efforts by Sher Mohammed Akhundzade in 2003/04, and Governor Mangal’s Food Zone Programme which began in the 2008/09 growing season.

Each of these efforts came about through a combination of coercion, persuasion and an offer of increased development assistance. The first two of these efforts, that of the Taliban’s prohibition on opium poppy cultivation in the 2000/01 growing season and the control measures implemented by Governor Sher Mohammed Akhundzade in

2002/03, delivered dramatic reductions in cultivation. However, on both occasions the results proved short-lived. The third and more recent intervention implemented during the tenure of Governor Gulab Mohammed Mangal has been associated with a decline in

cultivation that has endured beyond a single season. This section provides a brief overview of each of these efforts in turn.

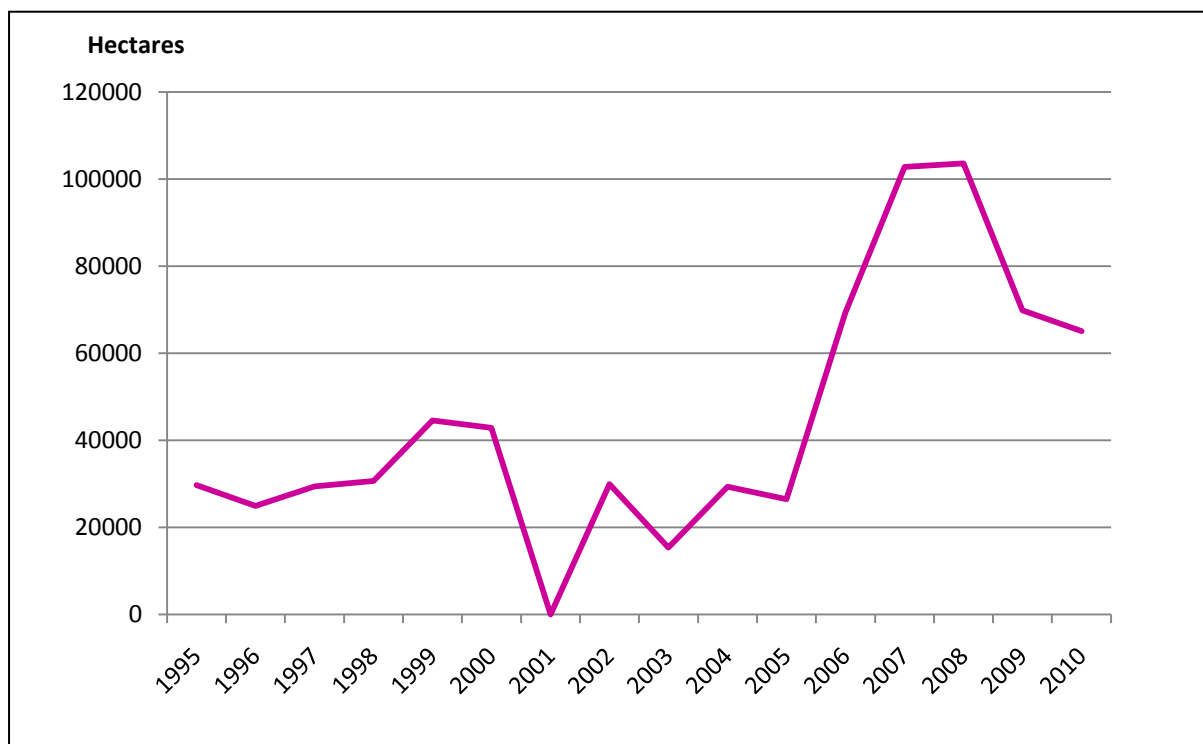


Figure 2: Level of opium poppy cultivation in Helmand Province 1995 – 2010.

3.2.1 Early efforts to reduce opium production: The Taliban and Sher Mohammed Akhundzade

Both the Taliban and Sher Mohammed Akhundzade's counter narcotics efforts focused on dissuading farmers from planting the crop rather than destroying it once it was already in the ground. Promises of development assistance were combined with both the threat of eradication and coercion. Gaining the compliance of key local powerbrokers through negotiation, and where necessary payment, proved critical to success. Governor Sher Mohammed Akhundzade's efforts to reduce opium production were accompanied by accusations that prohibition and eradication were largely targeted at competitors in the drugs trade,

whilst it is often alleged that the Taliban imposed a ban on opium production to drive up opium prices.

The Taliban prohibition imposed the most significant reduction in cultivation.⁵ It was implemented across the entire territory that they controlled in Afghanistan in the 2000/01 growing season, and reduced cultivation in Helmand province alone from an estimated 42,853 ha in the June 2000 to

⁵ For a much more detailed account of the process that underlay the Taliban prohibition and its impact on the rural economy by an author who had worked in Helmand before, during and after the opium ban see the AREU Briefing Paper by Mansfield and Pain (2008) 'Counter Narcotics in Afghanistan: The Failure of Success?'

negligible levels of opium poppy cultivation twelve months later. It also had a significant effect on the rural economy and consequently on support for the Taliban regime. For example, during the course of the ban the price of opium increased from around US\$ 100 to US\$ 500 between September 2000 and July 2001. It also led to a significant rise in the level of opium denominated debt and a dramatic increase in levels of rural unemployment. The economic downturn and problems repaying accumulated debts led to increasing migration to Pakistan, the mortgaging of land and the exchange of daughters as payment for outstanding loans (Mansfield and Pain 2008).

The pressure to return to cultivation in the 2000/01 growing season was intense. At the time, senior Taliban leaders recognised the impact the ban had on the population; they saw that a second consecutive year would require a far more draconian approach and would lead to even greater hardship. Mullah Mohammed Hassan Akhunde, Governor of Kandahar and widely considered one of the most influential leaders in the regime, claimed a second year of the ban would be pursued but implementation would require “many people to be killed and others to face starvation.”⁶ While the senior leadership of the Taliban may have hoped that the ban would result in a massive inflow of development assistance that would mitigate these risks, it ultimately established the socio-economic conditions for a dramatic rise in the price and level of cultivation, not just in areas where opium poppy had been entrenched for some years but also where cultivation had — until 2001 — been rather marginal. It also did

little to bolster support for the Taliban among the rural population in the strategic Pashtun provinces once the events of September 11th 2001 unfolded.

After the Taliban’s collapse, an estimated 29,950 ha of opium poppy were cultivated in the 2001/02 growing season despite attempts to implement compensated eradication in central Helmand province. By the 2002/03 growing season Governor Sher Mohammed Akhonzade had launched his own counter narcotics effort. This did not deliver such a dramatic reduction in cultivation as the Taliban prohibition but did succeed in reducing cultivation by an estimated fifty per cent reduction between 2002 and 2003 (Hafvenstein, 2007: 193). Over this twelve month period reductions were concentrated in the central districts of Nad e Ali, Nawa Barakzai, Sarban Qala as well as in Musa Qala with total cultivation falling from an estimated 29,950 ha in the 2001/02 growing season to 15,371 ha in 2002/03. Even greater reductions would have occurred if it were not for increases in cultivation in the northern districts of Kajaki and Baghran.

By late 2003 the failure to deliver on the promises of development assistance led to a loss of political capital for Governor Akhundzade, and he claimed an inability to push for low levels of cultivation in the 2003/04 growing season (Sher Mohammed Akhundzade, pers comm: 2003). It could also be argued that pressing for continued or further reductions in cultivation in advance of the Presidential election might not have proven an effective campaign strategy for a Governor charged with soliciting votes for the incumbent. By the 2003/04 growing season cultivation had rebounded to an estimated 29,353 ha (Goodhand and Mansfield 2010).

After 2005 levels of opium poppy cultivation increased dramatically in Helmand from an

⁶ He also said the responsibility for this would lie directly with the international community if it failed to deliver sufficient development assistance to the people of Afghanistan. Donor Mission, pers. comm., May 2001.

estimated 26,500 ha in 2004/05 to an unprecedented level of 103,590 ha in the 2007/08 growing season. These rises occurred under Governor Sher Mohammed Akundzade's successors Governor Daud (2006- 2007) and Governor Wafa (2007 - 2008), and coincided with a significant deterioration in the security situation in the province.

3.2.2 The Food Zone Programme 2008/09 to 2010/11

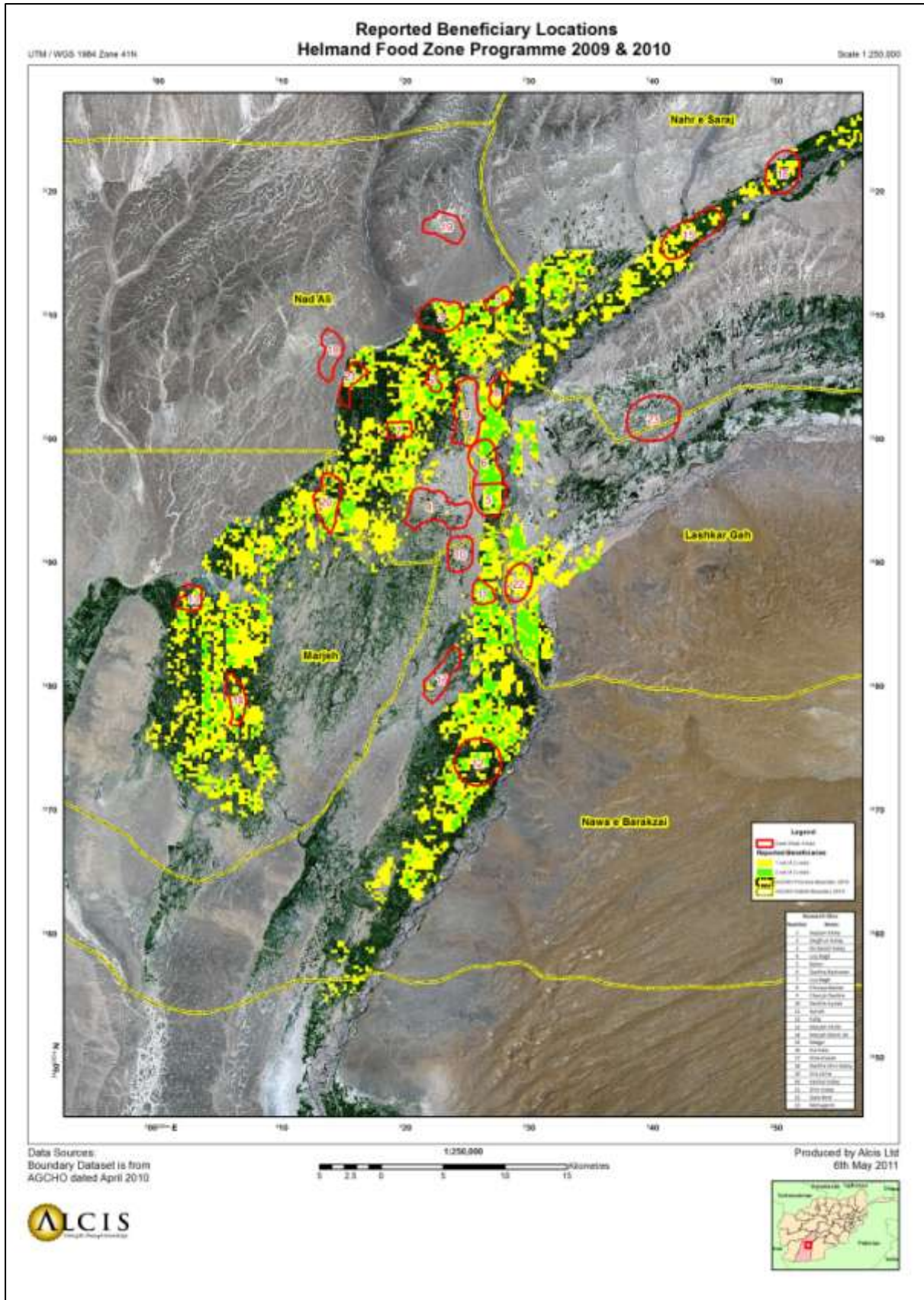
Currently there are a number of development programmes operating in Helmand province aimed at improving the welfare of the population. These include efforts to improve physical and social infrastructure, the business environment, the capacity of government institutions, and the licit livelihood opportunities of the rural population. These interventions are designed to contribute to stabilisation efforts in the province, as well as supporting economic growth and the movement out of opium production.

However, since the 2008/09 growing season there has also been a specific counter narcotics programme. This programme known as the Food Zone Programme (FZP) was initially targeted at reducing the level of opium production within a specified geographic area that included all of the district of Lashkar Gah, and the most fertile parts of the districts of Nad e Ali, Nawa Barakzai, Garmsir and Nahre Seraj. It has now come to include the river-irrigated parts of the districts of Musa Qala, Marjeh, Khan Nishin, Sangin and Nawzad. It was designed to explicitly link the provision of development inputs, primarily wheat seed and fertiliser, through a signed agreement with farmers not to cultivate opium poppy as well as the specific threat of eradication by the authorities for those that did plant opium.

3.2.2.1 Wheat seed and fertiliser distribution

At the heart of the FZP is the provision of wheat seed and fertilizer. This is intended to offer an alternative to opium production for some of the farmers within the Food Zone. Given resource and logistical constraints not all farmers within the Food Zone receive wheat seed and fertilizer each year. Both areas and farmers are prioritized for distribution with emphasis given to the most productive areas. Over the three years of the FZP efforts have been made to target different communities for the distribution of wheat seed and fertilizer, although data from the 2008/09 and 2009/10 campaigns does suggest some overlap and that some areas did receive inputs in both years (See Figure 3).⁷

⁷ The data used to derive this map was produced by a combination of a number of site visits by the organisation responsible for the distribution of wheat seed and fertiliser and other data about the areas targeted by the programme obtained from the Provincial Reconstruction Team and USAID. Security constraints and the challenges of verifying the data collected on beneficiaries mean the data presented in this map should be considered indicative. At the time that this report was completed no data was available regarding the areas in which wheat seed and fertiliser were distributed for the 2010/11 growing season.



The distribution of agricultural inputs has presented a significant logistical and security challenge, particularly in the first two years of the programme when the security environment was less permissive.⁸ Nevertheless, in the 2008/09 season 100 kg of wheat seed was distributed to an estimated 33,000 households, with 15,000 receiving an enhanced package from USAID that included 100 kg of Diammonium Phosphate (DAP) and 200 kg of Urea (Ryder and Read, 2009: Annex D). In the 2009/10 growing season there were 39,640 recipients of wheat seed and fertiliser (Macpherson 2010: 43) and by the fall of 2010 it was estimated that over 48,200 farmers had received agricultural inputs - almost fifty per cent of the estimated population of the targeted districts.

The distribution of agricultural inputs under the FZP typically takes place prior to the winter cropping season. Farmers who are eligible to receive agricultural inputs under the programme are required to visit the district centre to collect them. Eligible farmers are those that own land in the targeted areas and whose names are placed on a beneficiary list produced by the local administration in conjunction with village elders. Farmers are required to make a co-payment for the inputs that they receive. These payments have risen from around seven per cent in the initial year of the programme to thirty five per cent in the

fall of 2010.⁹ They are also required to sign a commitment not to cultivate opium poppy.

The beneficiary lists have presented challenges since the inception of the FZP. The lists are produced by the local administration in conjunction with village elders. It is generally accepted that these lists tend to favour the rural elite and that there is a disproportionate number of names on the list that are direct relatives of elders and local officials. More serious accusations of corruption are also levelled at elders and local officials, with allegations that they have conspired to enter false names on the list and misappropriate inputs for their own advantage (See Box8). Recognising some of the challenges that the beneficiary list presented, Phase III of the FZP in 2010 offered fertiliser and seed for spring and summer vegetables to farmers on a first come first served basis. Prior to the fall of 2010 directives from the Ministry of Agriculture Irrigation and Livestock (MAIL) resulted in a return to the beneficiary lists for the distribution of wheat seed and fertilizer for the 2010/11 growing season.

Given the role that wheat plays as a staple food crop and recognizing the populations preference for higher quality wheat flour from Pakistan there have also been some efforts to expand the range of crops on offer through the FZP and other agricultural programmes. For example in the 2009/10 growing season FZP also offered a package of vegetable seeds for the spring and summer cropping season, along with fertilizer. In the fall of 2010 farmers were offered a choice of a base package of 50 Kg certified wheat seed, 100 kg urea and 100 Kg DAP combined with either a

⁸ In the initial year of the FZP much of the distribution was centred in Lashkar Gah and Gereshk due to the security conditions in many of the districts covered by the programme. In the fall of 2009 with security conditions improving in many of the district centres it was possible to decentralize the distribution to all but the district of Marjeh whose farmers were required to come to Lashkar Gah to receive their wheat seed and fertiliser. In the 2009/10 growing season inputs were distributed in the ten districts covered by the programme, including from a Forward Operating Base in Marjeh.

⁹ This increase was at the behest of MAIL to ensure consistency across the country and compliance with the National Wheat Seed Distribution Programme.

‘Forage Package’ or a ‘Winter Vegetable Package.’¹⁰ The FZP has also been supported by the distribution of grape vine and saplings as well as vegetable seeds, fertiliser and polytunnels under the Afghanistan Vouchers for Increased Production in Agriculture (AVIPA) Plus programme implemented by International Relief and Development.

3.2.2.2 The counter narcotics information campaign

The second element of the FZP is the information campaign. This is also aimed at dissuading the rural population from planting opium poppy in the first place and is typically conducted between July and October in the run up to the winter planting season. The campaign consist of a range of activities that aim to raise the social costs of opium production, highlighting the illegality of opium poppy cultivation; its forbidden status under Islam; as well as the impact opium production has on the user population within the country. The legal and practical implications of producing opium are stressed. The threat of eradication is highlighted as a risk that those farmers cultivating opium poppy will face. The threat of arrest for those cultivating opium poppy has also been a component part of these messages and has become to be seen as more credible as the FZP entered its third year and with the increased presence of ANSF and international military forces in the run up to the 2010/11 growing season.

The counter narcotics information campaign has also highlighted the economic opportunities that might be available in a given area as a way of deterring opium production. The information campaign points to ‘success stories’ or points of contact where

agricultural support might be obtained. There has also been an explicit link between the provision of certain types of development aid and opium production, including a signed agreement from those farmers who receive agricultural inputs that they refrain from opium poppy cultivation.

The primary method for the dissemination of these messages has been tribal shuras, religious institutions, the media and a variety of public information products. The Governor has often played a prominent role in the information campaign, travelling to different district centres to meet village elders prior to the plantings season. In areas of Taliban influence these messages have often not been cascaded to the rural population for fear that the elders will be seen to be acting on behalf of the government and will then be punished. However, radio messages and word of mouth has ensured that the rural population has become increasingly aware of the provincial administration’s position on opium production and the role of the FZP.

3.2.2.3. Crop eradication

While the eradication campaign is the third and final element of the FZP it also predates the programme. In fact, eradication has been conducted in Helmand each year since the Taliban’s prohibition on opium production in the 2000/01 growing season, including a compensated eradication campaign in 2002 after the fall of the Taliban regime. Typically crop destruction in Helmand has been conducted using tractors or All Terrain Vehicles (ATVs), although teams of men wielding sticks were used for eradication in the 2002/03 growing season and in 2003/04 when Sher Mohammed Akhundzade was Governor. Since 2006 eradication has become more institutionalised and has been conducted by two distinct operations. The first is Governor Led Eradication (GLE) and uses a large number of tractors, protected by

¹⁰ The Forage Package contained 10 Kg of Alfalfa seeds and the Winter Vegetable Package consisted seeds for Spinach (500 grams) Cauliflower (100 grams), Cabbage (100 grams), Cucumber (500grams) and White Radish (400 grams).

the Afghan National Police and directed by the Governor of Helmand's Eradication Committee. This operation has continued to implement eradication in the 2010/11 growing season. The second operation, the Afghan Eradication Force (AEF), later renamed the Poppy Eradication Force (PEF), operated between 2005 and 2009 until funding ceased. The AEF/PEF was funded by the United States Government (USG) and implemented by a private contractor. It was deployed from Kabul, consisted of a mix of tractors and ATVs supported by a sizeable security force and logistics, and spent much of its time in Helmand during the eradication season.

Both of these operations have been subject to a significant number of violent attacks over the years and have had personnel killed. There have also been numerous allegations of corruption levelled at both forces, with reports that farmers could elude eradication in return for payment (Gordon 2011:28).

Perhaps understandably given the security environment assessing the amount of crop eradication that has actually taken place has also been a challenge. The fact that eradication has been used as a metric by which to judge the performance and that the Governors have been compensated for the cost of eradication on the basis of the area destroyed, has created the incentives for over reporting. On occasions ground verifiers have been placed under considerable duress to inflate figures. Also the quality of eradication has not been taken into account in the final reporting resulting in some fields being included where much of the crop remains intact. This was particularly a problem in the 2005/06 growing season as Figure 4 illustrates but has become much less of an issue in the 2009/10 growing season where both imagery and farmers reports suggest a much more robust campaign with much less scope for patronage and bribery. What can also be seen

during the 2009/10 growing season, the second year of the FZP, is the increasing concentration of GLE in the more productive land where wheat seed and fertilizer were distributed (see Figure 6). Earlier GLE campaigns typically targeted more marginal communities in less productive land in both 2007 and 2008. Even GLE in 2009 concentrated its efforts in the less well irrigated areas in the east of Nad e Ali and to the west of the city of Lashkar Gah. As can be seen when compared with Figure 3 neither of these areas were beneficiaries of agricultural inputs under the FZP. During the same season PEF concentrated much of its efforts outside the Food Zone in the former desert area to the north of the Boghra. However, by the 2009/10 growing season ninety five per cent of eradication took place within the Food Zone and occurred on what is considered the more productive agricultural land in the province.

In sum, this section shows that there is a history of both opium poppy cultivation and counter narcotics programmes in Helmand province. In fact, over the last decade there have been a number of efforts by the authorities to reduce opium production. However, only three counter narcotics campaigns have led to significant reductions in Helmand province, each of which has sought to utilise a mix of coercion, persuasion and reward. The reductions delivered by the Taliban prohibition in the 2000/01 growing season were dramatic but short-lived. Moreover, the Taliban ban led to an increase in opium denominated debt and rural underemployment and where concurrent with the drought that had been in effect in the south since the late 1990s, led to many rural households experiencing heightened levels of economic distress and deprivation. These conditions did little to win the Taliban favour with the rural population or the rural

elite after the events of September eleventh. The scale of the reduction across the country also led to a significant rise in the farmgate price of opium that stimulated a return to opium production in Helmand and for other provinces to take up cultivation following the collapse of the Taliban regime. Governor Sher Mohammed Akhundzada's efforts to reduce the level of opium poppy cultivation between 2002 and 2003 were less dramatic than the results of the Taliban ban but equally as short lived. The Governor was unwilling to expend his political capital and continue to push for reductions for a second year particularly in the face of the upcoming Presidential election and in the absence of the significant increase in development assistance that the Governor was looking for.

Between the 2007/08 and 2009/10 growing seasons the amount of land cultivated with opium fell by an estimated 38,000 hectares. Further dramatic decreases are expected within the Food Zone in 2010/11 growing

season. Like the counter narcotics efforts of the Taliban and former Governor Sher Mohamed Akhundzade, the FZP implemented under Governor Mangal's tenure, also contains a balance of persuasion, coercion, and some kind of reward. Where it has differed is in that the reward – development assistance – has been distributed at the same time as both efforts to coerce farmers not to plant opium poppy as well as the campaign to destroy the crop if farmers ignore the warning.

The FZP has also been undertaken during a period of considerable risk and uncertainty, with fluctuating wheat and opium prices, increasing concerns over food security, a significant increase in levels of violence in the province and the inflow of international and national military forces. It is the job of this next section to identify how exposure to these different risks has impacted on cultivation in the province between 2008 and 2010.



Figure 4: Eradication in Sangin 2006.

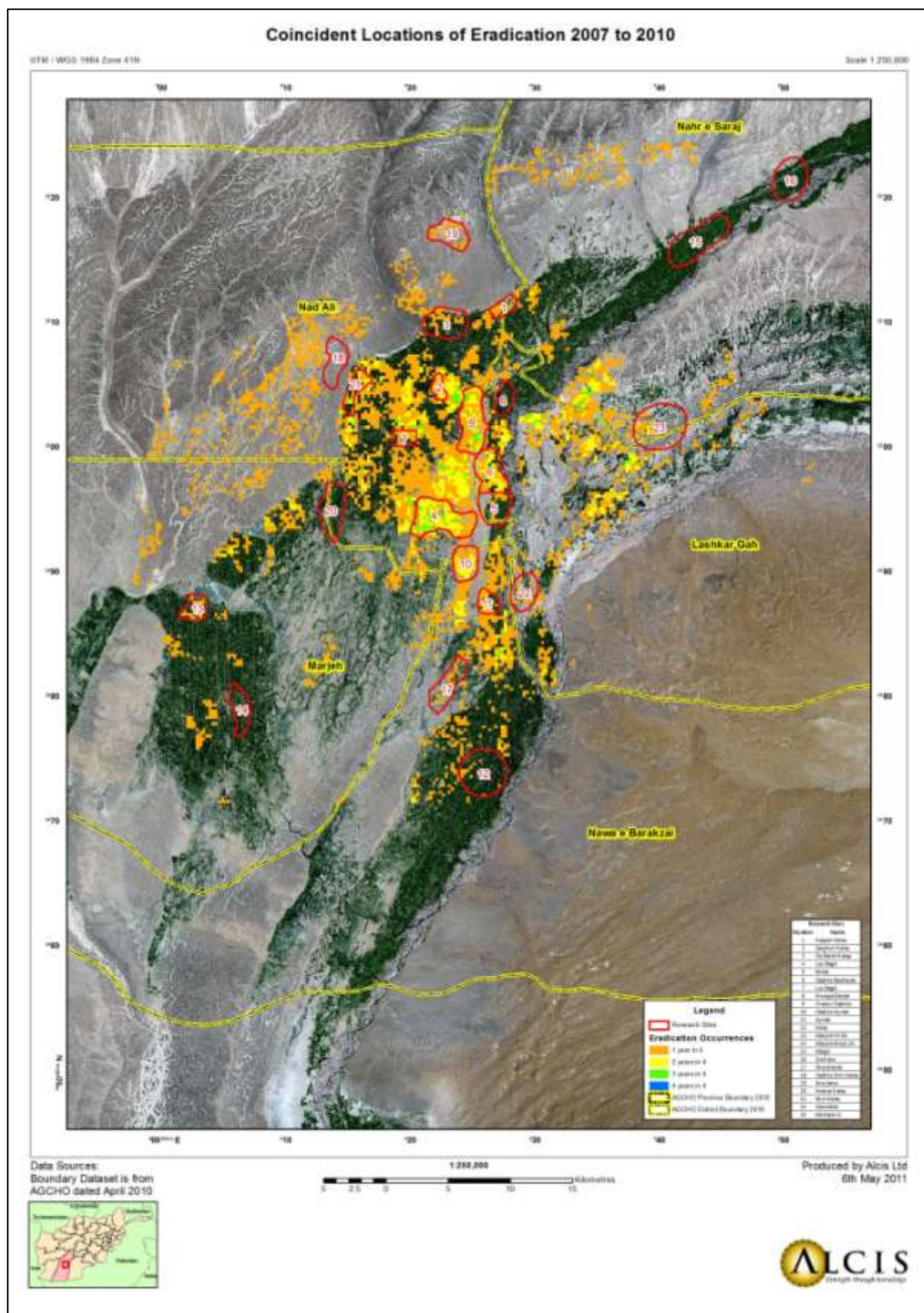


Figure 5: Eradication 2007 to 2010.

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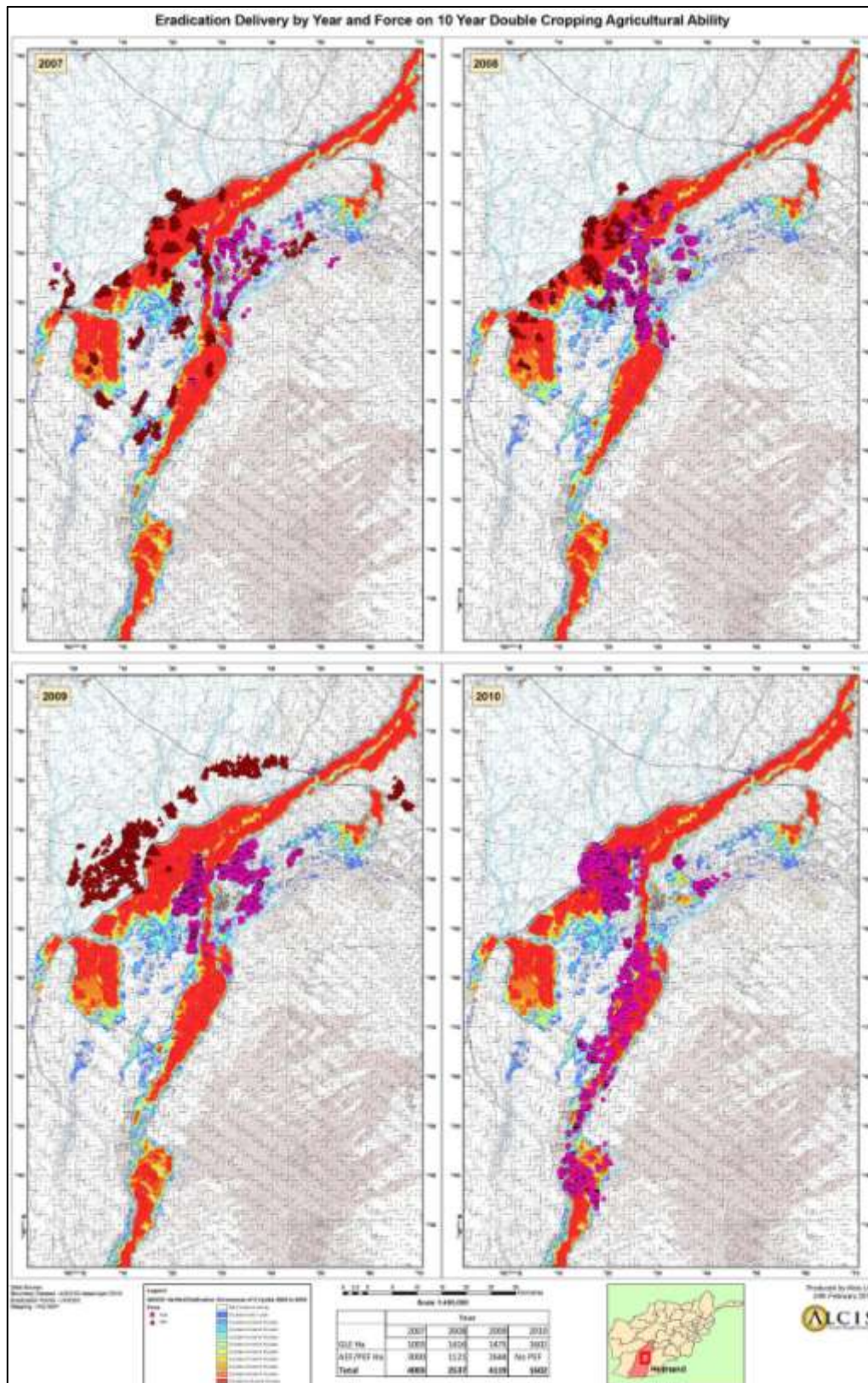


Figure 6: Eradication delivery by year.

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4. Risk, Stress and Shock in Central Helmand

All households in rural Helmand are exposed to risk. Risk signifies the possibility that an undesirable state of reality (adverse effects) will occur as a result of natural events or human activities.¹¹ Stress is the materialization of risk but is ongoing and represents a continuous or slowly increasing pressure that is typically within what might be considered a normal range of variability. Shock is the materialization of that risk but is intense and sudden.

The literature suggests that risks can be natural or the result of human activity; they can impact on individuals (idiosyncratic) or particular groups (covariant), or they can affect most or all of the population (macro). Risks can reoccur over time (repeated) or occur concurrently with other risks (bunched); and they can materialize infrequently but have a dramatic effect on welfare (catastrophic) or occur frequently but have limited impact (non-catastrophic).¹² A household's capacity to manage risk is dependent on its assets and capacities and the nature of the risk or risks it is exposed to.

The implementation of a ban on opium production represents a risk to farmers in Helmand with wider reaching consequences not just for those that cultivate the crop on their own land but also for a range of other socio-economic groups both within and outside the province. Given the levels of opium poppy cultivation in Helmand, the crop represents an important source of on-farm income for many farmers growing the crop the across the province. However, the labour

intensive nature of the crop means that it also provides opportunities for the land poor to either rent or sharecrop land, as well as offering off-farm employment to labourers during the weeding and harvest seasons. The harvest is a particularly busy period when those harvesting the opium crop can receive as much as 1000 Afs per day plus food. Harvesters, including farmers from opium poppy growing districts within Helmand and labourers from non-poppy growing areas both within Helmand and from other provinces, take advantage of the fact that the harvest season is staggered across the province. The disposable income generated by opium production also has a multiplier effect within the province, supporting the sales of food items, agricultural inputs and a range of different consumer goods.

As Table 2 shows, the ban on opium is not the only risk that households and communities are exposed to in Helmand. Moreover, it is not a risk to which all communities or households are equally exposed. The conflict in Helmand is another risk that those in central Helmand are exposed to, and like a ban on opium, it has far reaching consequences to those that are most exposed to it, as well as affecting those who are not currently living in areas of contested space. For example, while the inhabitants of Lashkar Gah have had less direct experience of violent conflict since late 2008, the city has seen an influx of displaced people and some inhabitants have been obliged to offer accommodation to their relatives from districts which have seen an upsurge in levels of fighting, like Marjeh and Nad e Ali. Other risks such as environmental hazards and economic shocks show similar characteristics, whereby exposure to a given risk varies over time, location and socio-economic group.

¹¹ Holzmann, Robert, Lynne Sherburne-Benz and Emil Tesliuc (2003) *Social Risk Management: The World Bank's Approach to Social Protection in a Globalizing World*. World Bank, Washington DC, page 6.

¹² Ibid

Given the range of risks that a household, community or area may be exposed to, it is not possible to analyse either the causes of reductions in opium poppy cultivation or its sustainability in isolation. It is first necessary to understand the range of risks that households and communities might be exposed to and identify how these risks impact on livelihood strategies, including how they may impact on levels of opium poppy production.

This section provides a review of each of the main covariate risks that communities in central Helmand are exposed to the selected research sites, specifically those emanating from: (i) the violent conflict; (ii) environmental risks (iii) the prohibition of opium production; and (iv) the economic shocks imposed by rising food prices. Idiosyncratic risks that would typically impact on individuals such as illness, injury and death are discussed but primarily with reference to the increased exposure that households have in areas of violent conflict. The section concludes that parts of the population in central Helmand have much higher exposure to risk than others. This is largely due to the fact that many of these risks are coincidental and repeated. The role that opium production has played in managing the impact of the conflict, market failures and on-going environmental stresses, renders the population in these particular areas most vulnerable to the imposition of a ban on opium production and least likely to comply over an extended period.

Table 2: Types of risk and effects in central Helmand				
Risk		Effect on Livelihood	Type	Effect on Level of Opium Production
Food Insecurity	Inflation	<ul style="list-style-type: none"> • Dramatic rise in price of wheat favours an increase in food crop production particularly when combined with market failures due to conflict. 	Macro and repeated	Negative
Environment	Drought	<ul style="list-style-type: none"> • Fall in yields of winter crops • Limited potential for summer crops • Increased cost of irrigation due to greater reliance on water pumps and tubewells (rented and owned) • Need to maximize economic returns on winter cash crop 	Covariate and Repeated	Positive
	Soil Depletion	<ul style="list-style-type: none"> • Low yields of horticultural crops • Preference for salt tolerant crops • Input intensive farming including use of fertilizers and tractors • High ground water leading to excessive weeds. 	Covariate and Repeated	Positive
Conflict		<ul style="list-style-type: none"> • Injury and loss of life • Damage to property • Inflationary effect, including on cost of transportation costs and increased rent seeking behaviour • Reluctance to engage in non-farm income opportunities due to concerns over individual and household security • Psychologically leads to activities that favour short term returns and deters investment in activities that yield in medium to longer term • Intimidation by armed non state actors • Limits State and other agencies ability to deliver public goods and development assistance 	Covariate and Repeated	Positive
Drugs Law Enforcement	Poppy Ban	<ul style="list-style-type: none"> • Potential loss in on-farm income • Loss of wage labour opportunities during harvest period • Less land available for cultivation on sharecropping basis for land poor • Rent seeking behavior during eradication campaign • Wider deflationary effects on economy due to fall in disposal incomes 	Covariate and Repeated	Negative

Table 2: Types of risk and effects in central Helmand				
Risk		Effect on Livelihood	Type	Effect on Level of Opium Production
	Seizures in Household Compounds	<ul style="list-style-type: none"> • Loss of investment funds to support expansion of livelihood portfolio • Loss of financial capital to manage shocks or pay for life cycle events 	Idiosyncratic	Negative/Positive
Health	Illness	• High economic costs of treatment especially if patient needs to go to Pakistan	Idiosyncratic	Positive
	Injury	• High economic costs of treatment especially if patient needs to go to Pakistan	Idiosyncratic	Positive
	Death	• High economic cost of funeral and social obligations.	Idiosyncratic	Positive

4.1. The Risk of Violent Conflict

Violent conflict is seen as a cause of chronic poverty (CPRC 2008:1). Aside from the obvious role it plays in increasing the risk of death, injury and poor health, violent conflict impacts on the educational opportunities of the population, the provision of health services and access to other public goods. It also reduces trading opportunities, increases transaction costs and dissuades both public and private investment in agriculture and the business sector, particularly in those activities where the returns will only be fully realised in the longer term (CPRC 2008: 93; Bruick 2001: 60). In many areas violent conflict can disrupt migratory labour opportunities and lead to the displacement of the settled population (Deveraux 2000: 5). It can also erode social networks, systems of reciprocity and trust and when combined with the failure of state services has left the poor with no support networks (Orero et al 2007: 5).

In central Helmand much of the population has direct experience of the risk and effects of violent conflict. Perhaps not surprisingly, those residing in the areas where only one side in the current conflict dominates have been exposed to the lowest level of violence, while those most exposed to it inhabit the contested space in which the government, the international community and the Taliban's military forces fight for control. This contested space has shifted over the period of the Study, exposing different communities to different levels of violence.

These shifts have affected almost all the areas covered in this Study. Even those in the areas close to Lashkar Gah, such as in Qala Bost (RS22), Bolan (RS5) and Mohajerin (RS23) report that they were exposed to the risk of violent conflict through much of 2008 and 2009. For example, during fieldwork in May 2009 the Taliban were seen to be particularly active around Lashkar Gah especially at night,

and those interviewed expressed concerns over their security while in their fields and en route to Lashkar Gah. Attacks in the city were seen as relatively commonplace, and the major Taliban offensive on Lashkar Gah in October 2008 left the population concerned that the government might fall. Respondents in Bolan referred to the Taliban's control over many of the villages in the area. In Mohajerin (RS23) and Qala Bost (RS22) those interviewed referred to repeated attacks along the road into Lashkar Gah. In all three areas respondents anticipated a worsening of the situation in the run up to the Presidential election in August 2009.

However, by May 2010 the security situation was seen as improving in the environs of Lashkar Gah. In Bolan the improvements were attributed to efforts by the government and international forces to clear the Taliban from the area in late 2009; in Qala Bost (RS22) it was the efforts to secure the airport. Respondents reported further improvements in 2010 including greater economic opportunities with the city and a reduced risk of violent attack along the roads. By late 2010 respondents reported that the direct risk of violence to the population in the environs of Lashkar Gah was largely limited to acts of intimidation against some of those that were seen to be taking assistance from the government.

Some progress can also be seen around the city of Gereshk, although reductions in the incidence of violence would appear to have been slower, and the threat of violence and intimidation remains relatively high according to both fieldwork and ISAF data. The reports of Taliban fighters residing in the area, the incidence of firefights and suicide bombs have however declined dramatically since fieldwork in 2008 and 2009, and reports from traders and farmers suggest that the security on the main road to Kandahar has improved in the

latter half of 2010. The Taliban's withdrawal from the environs of Gereshk to the surrounding areas on the periphery of Malgir (RS15) and Sra Kala (RS16) is seen to have reduced the risk of violence to the local population.

In contrast to those around the urban areas, respondents in the canal command area, primarily in Nad e Ali, argue that they have experienced consistently high levels of violent conflict throughout the three growing seasons covered by this Study. Respondents in areas such as Aqajan Kalay (RS1), Doh Bandi (RS3), Zarghun Kalay (RS2), and Luy Bagh (RS7) report incidents of bombing as well as firefights between ISAF, Afghan security forces and Taliban fighters both before and after the military campaign in 2010. Indeed during each round of fieldwork a number of respondents in these areas have cited incidents of death and injury to their immediate family due to armed conflict.

There are also multiple reports of property being damaged and destroyed, livestock killed and crops damaged. Households have incurred the costs of health care for those injured and for funerals where family members have died. Where households have had the means, damaged buildings have been rehabilitated at some expense to the home owners, often paid by incurring debts. The conflict has also had a significant impact on access to education and health services due to a shortage of qualified staff willing to work under such conditions. Those that can afford it transport the sick for treatment in Kandahar or Quetta in Pakistan and send their children to school in Lashkar Gah. In some cases members of the family have migrated to the provincial centre to escape the violence, in others the entire family has sold its land and moved to Lashkar Gah. A common complaint from respondents inhabiting this contested space is the perception of an increased

vulnerability to acts of violence and intimidation from the different armed actors in the conflict as they seek to deny the other side succour in the rural areas.

In 2010 there was a dramatic increase in the presence of both government and international forces in this area as they fought to push Taliban fighters from the districts of Nad e Ali and Marjeh. This has led to the establishment of a network of security infrastructure across the area. Fieldwork in November/December 2010 suggests that the vast majority of farmers in these districts did not believe that the increase in the presence of Afghan National Security Forces (ANSF) and the coalition's military forces had resulted in an improvement in the security situation. To the contrary, across the research sites in Nad e Ali and Marjeh there was an overwhelming view that the security situation had deteriorated between November 2009 and November 2010, and ISAF's records of the reported number of violent acts including assassinations, murders, and mines would support this (see Figure 7 and 8).

In late 2010, respondents in Marjeh reiterated the views expressed during fieldwork at the time of the 2010 opium harvest, and commented on the increase in levels of violence since the departure of the Taliban and the perception of a much more unpredictable environment. Farmers across each of the research sites, including in those areas where opium production has been abandoned such as Bolan (RS5) and Qala Bost (RS22), complained that the upswing in violence in Marjeh and Nad e Ali during the opium harvest had deterred them from travelling to that area in search of work.

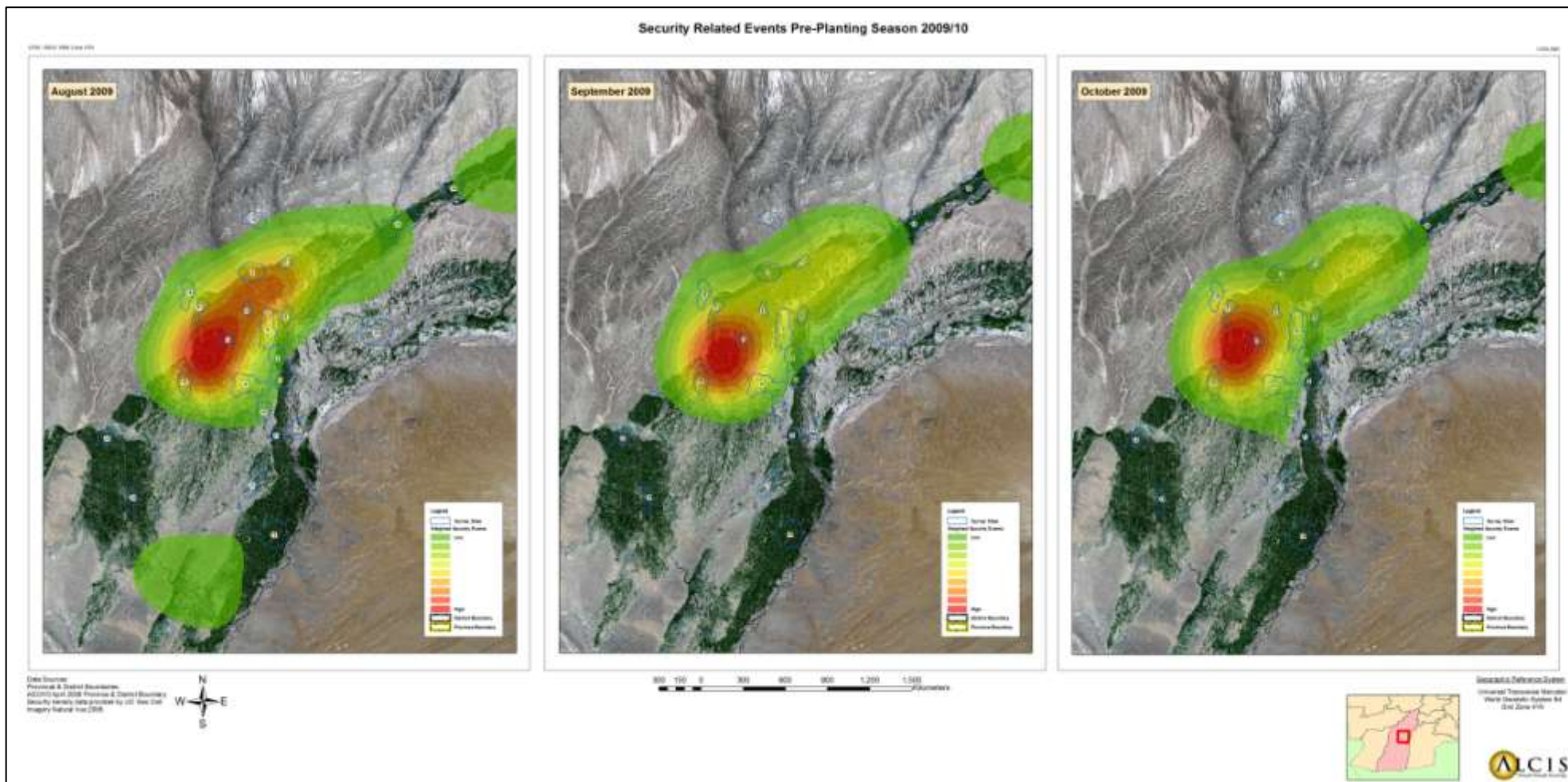


Figure 7: Security events pre-planting season 2009/10.

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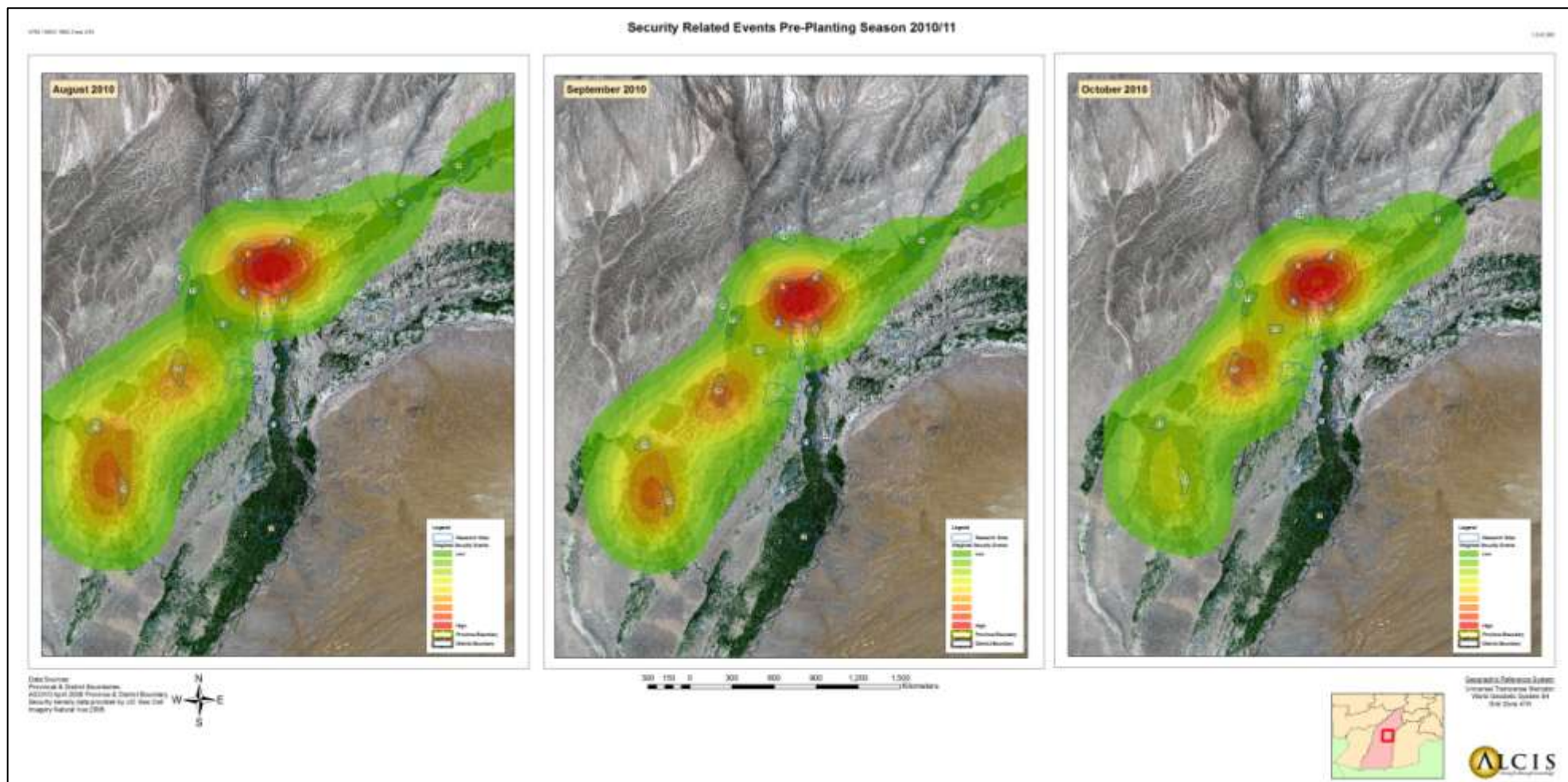


Figure 8: Security events pre-planting season 2010/11.

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Respondents across Nad e Ali and Marjeh cited the risks of mines, suicide bombings, attacks on Afghan bases and checkpoints, aerial bombardment, as well as the arrest and execution of those accused of being informants by the Taliban, as evidence of the deteriorating security situation. Perhaps not surprisingly, a review of ISAF data highlights the coincidence of acts of violence and the presence of security infrastructure such as checkpoints and military bases. Farmers report an unwillingness to cultivate crops that require regular irrigation in such a conflicted environment, being wary of having to leave their household compounds at night to divert the water for their crops.¹³ They also indicate a reluctance to grow vegetables that are more time sensitive with regard to plant husbandry and harvest, and that cannot be stored for extended periods of time. This has deterred vegetable production and favoured crops such as opium, as well as cotton, maize and mung bean which despite relatively low returns are considered relatively robust and can be easily stored for sale at a later date.

Predation by the authorities also continues to be a major challenge for communities affected by the conflict. Respondents refer to robberies and the looting of houses – often accusing the Afghan National Police (ANP) and recently formed local police forces, known locally as ‘Chawarki’, of theft and intimidation during house searches. The seizure of opium from household compounds by the authorities is often referred to as ‘theft’ rather than law enforcement due to the lack of trust in the security forces in the area. Those interviewed in these contested areas refer to the low moral standards of those who work in the government in Helmand and often compare them unfavourably to Afghan

Taliban fighters (See Box 1).¹⁴ The ANP, and in particular the local police, are also blamed for the imposition of ‘taxes’ and the humiliation and beating of farmers who travel by road.

Box 1: Clearing Luy Bagh, November 2010

‘At the start the people were happy that the government came to the area. The people said welcome. But the government did not send good people to the area, they were uneducated. When the villagers went to the district centre to request assistance and see that the people the government had sent were not good and that all they wanted was money, the villagers returned to the Taliban to ask them to solve their problems’.

The continued contested nature of much of Nad e Ali and Marjeh is highlighted by the fact that in November/December 2010 the population still believed the Taliban were very much present and able to make demands on the people across much of the canal command area, even in areas that are in close proximity to military bases and checkpoints. For example, farmers report the mirab in their village in Nad e Ali making annual requests for tax payments on land on behalf of the Taliban,¹⁵ as well as for a post harvest tax on the opium crop.¹⁶ Respondents also referred to the punishments that are meted out to

¹⁴ Respondents will typically differentiate between Afghan and Pakistani Talibs blaming the worst incidents of violence and intimidation on Pakistanis or younger Afghans who were educated in Pakistani madrassas.

¹⁵ In this particular village payments were made per unit of land known as a ‘firma’. In 2008 the tax paid per firma was 12,000 PR, in 2009 it was 4,000 PR and in 2010 it was 6,000 PR.

¹⁶ In 2010 a payment of the value of one to three khord of opium (the equivalent of 110 to 330 grams) was demanded. In this particular village ushr, an agricultural tithe of ten per cent of the crop, was paid to the mullah.

¹³ This is a response that is also heard in Khogiani in Nangarhar; a district with ongoing security problems that have increased since 2008.

those that ignored the Taliban instruction that farmers should not work for the government or take development assistance. Even in Aynak (RS11), farmers report that in early December a Taliban commander was granted the opportunity to speak to the worshippers during Friday prayer. These incidents, combined with the military action of international forces and the behaviour of the national security forces, results in a population that felt particularly vulnerable to acts of violence and predation. *'There is government during the day and at night there is the Taliban'*.

Within these contested areas some groups believe they are more vulnerable to violence than others. The Nar Kilin, for example, which refers to those who have been settled in Helmand from other provinces such as Wardak, Laghman, Nangarhar and Farah, believe that they are subject to greater levels of intimidation from both the Taliban and government forces than those from tribes such as the Barakzai, Ishaqzai and Alikozai. These latter tribes are local and influential due to their numbers within the province and their representation in the political leadership in both the provincial government and among the Taliban. The resource-poor also consider themselves at greater risk from the conflict, unable to afford to migrate to the urban areas to escape the fighting; in desperate need of the income derived from the opium harvest; and without the necessary social and financial capital to deter the predatory behaviour of armed groups.

Those who believe they are least exposed to the risks of violent conflict over the period of the study are those in the area north of the Boghra canal. Respondents in Shna Jama (RS19) and Dashte Shin Kalay (RS18) do not see the conflict as a direct risk at all. They believe that security to the north of the Boghra is better than in the canal command

area to the south. Those interviewed in Shna Jama (RS19) and Dashte Shin Kalay (RS18) during the planting time for the 2010/11 growing season did not report any incidents of injury, death or damage to houses or crops due to fighting and attribute the security conditions north of the canal to the presence of the Taliban. They blame the government and international forces for the conflict in the canal command area.

It is only when these farmers travel in the canal command area that they see the conflict as a risk. The Afghan National Police is accused of intimidating, assaulting and demanding bribes from those living in the area north of the Boghra when they travel within the canal command area. Mines and explosive devices are also seen as a threat and a concern to those travelling to Lashkar Gah or other urban areas to purchase food products, consumer goods or to seek medical care. In fact, those interviewed north of the Boghra canal appear quite content to remain there, aware of the absence of health or education facilities in the area, but are keen to limit their exposure to both the conflict and the prospect of the authorities looking to impose a ban on opium production in the canal command area.

4.2 Environmental Risks

To develop a better understanding of the different environmental risks that communities are exposed to and how they manage them, it is first necessary to recognise the different histories of settlement in central Helmand. For example, some of the areas covered by this Study such as Qala Bost (RS22), Bolan (RS5) and Sra Kala (RS16), are situated in the floodplains of the Helmand river have been under cultivation for centuries, have fertile soils and year round irrigation (Michel 1958: 48). Others such as those in the districts of Marjeh and Nad e Ali were largely desert land until they were

settled in the 1950s. Still other areas within the canal command area such as Dashte Aynak (RS10) and parts of Dashte Basharan (RS6), as well as areas to the east of Lashkar Gah, such as Mohajerin (RS23) and the desert to the north of the Boghra canal, have all

been settled in the last twenty years through a process of land grabs which have increased dramatically since the fall of the Taliban (see Figure 9).

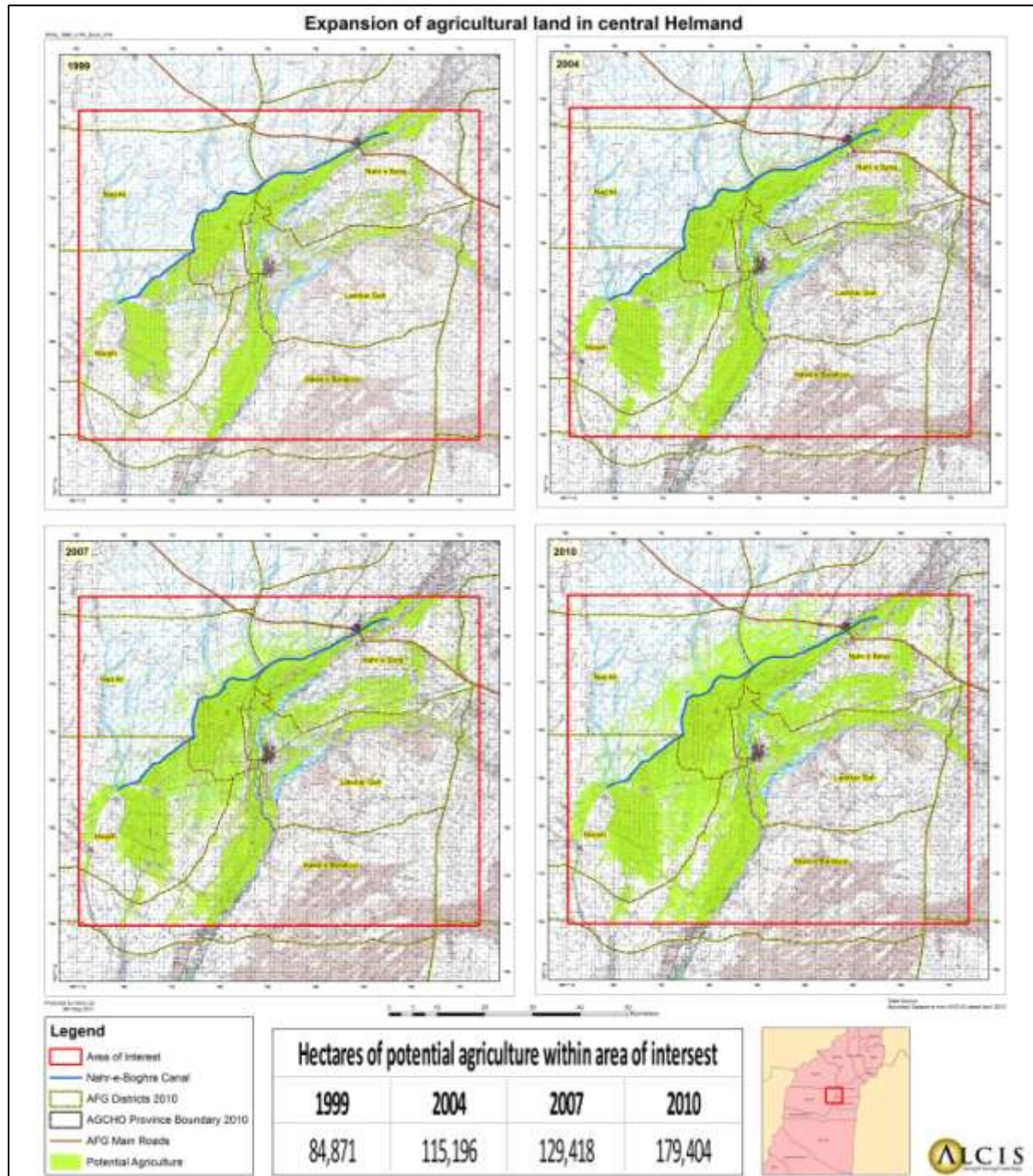


Figure 9: Expansion of agricultural land in central Helmand.

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The population in each of these different areas is exposed to different types of environmental risks and stresses. For example, farmers whose land is not irrigated by either canal or the Helmand River and who cannot afford to irrigate their land by either water pump or tube well are vulnerable to drought and the loss of agricultural land. In 2010 it was estimated that the installation of a tube well would cost around 100,000 to 150,000 PR. Recurrent costs include the costs of diesel for each irrigation, with opium poppy requiring between ten and twelve irrigations

over the season, wheat six to seven and cotton, mung bean and maize from four to six irrigations. Opium production has often provided the finance for the installation and cost of running these wells and thereby has cross subsidized the irrigation of other crops. Where opium production has been curtailed in areas reliant on tube wells, such as in Dashte Aynak (RS10) Dashte Basharan (RS6) and Mohajerin (RS23) there is evidence of a subsequent reduction in the total amount of cultivated land (see Figure 10).

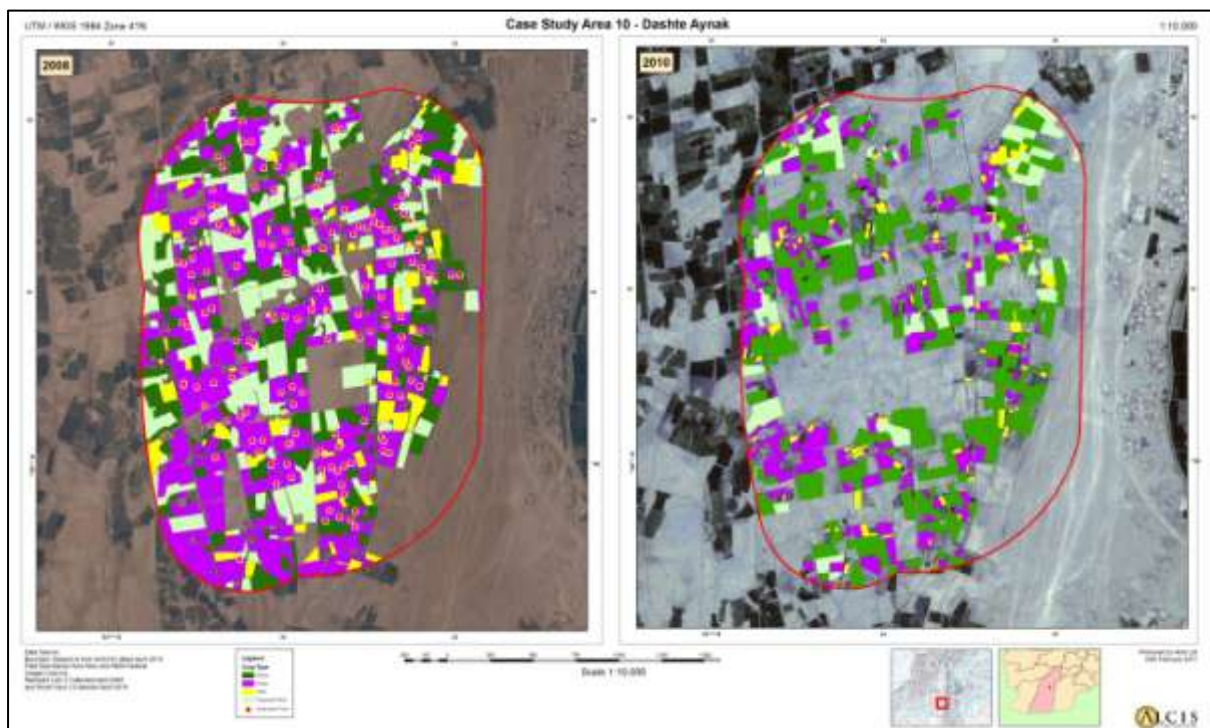


Figure 10: Research site 10 Dashte Aynak.

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In the canal command area communities are not exposed to the risk of a lack of water but of having too much. In fact high ground water and salination have been a problem throughout the history of the development of the Helmand canal system, particularly in Nad e Ali and Marjeh where the soils were considered 'shallow, underlain by dense gravelly subsoils poorly drained and saline in places' (Michel 1958:152). The completion of

the Boghra canal served to raise the water table in both of these areas and led to the accumulation of salt on the soil surface (Ibid: 174). Whilst efforts were made in the 1950s and 1960s to resolve the drainage problem, deposits of salt can still be seen across large tracts of land in Nad e Ali and Marjeh (see Figures 11 and 12).



Figures 11 and 12: Soil salinization.

The soils in Nad e Ali and Marjeh were also considered to be of particularly poor quality. Some of the initial soil surveys conducted in the 1950s classified the majority of the land under the canal command areas in these two districts as at best of 'marginal and restricted

suitability, requiring careful management for even fair to good yields of adapted crops'; much of the remaining land was considered 'of limited use for common tilled crops' (Michel 1959: 170-173).

Even before the war in 1979, farmers in Nad e Ali and Marjeh used tractors and fertiliser to improve the productivity of the land. In fact, surveys in the 1970s revealed that a large proportion of farmers in Nad e Ali used tractors to plough the land due to the hard clay soils in the area and the difficulties of tilling the land with oxen (Scott 1980: 8). During the same period rates of fertiliser use in the district were found to be among the highest in the country (Scott et al 1975: 75). At the time the costs of farming in Nad e Ali were such that the net incomes obtained by farmers were not dissimilar from those in the upper drier parts of Helmand such as Nawzad and Musa Qala (Scott 1980:8), and were lower than those farming under the Shamalan and Darwishan canals (Owens 1971: 59; Clapp-Wincek and Baldwin 1983:14).

During the early period of the settlement of Nad e Ali and Marjeh, the combination of salination, poor soils and high ground water was such that wheat yields in Nad e Ali and Marjeh actually fell (Cullather 2002:33; Scott 1980:7)). Whilst yields recovered in the 1960s and 1970s with the introduction of fertiliser (Owens 1971:34) and improved seed, the land brought under cultivation by the Helmand Valley project has been plagued by environmental problems which only increased with the onset of the war in 1979 and the subsequent loss of the necessary investment and institutional capacity with which to tackle them (Cullather 2002).

In the absence of external intervention both during and after the war, farmers in the canal command area of Helmand have had to find ways to manage the environmental risks that they face. Over the last two decades opium production has clearly become part of the risk management process, offering the resources with which to improve access to agricultural inputs that could improve soil fertility and address the problem of persistent weeds in

areas such as Nad e Ali and Marjeh. For instance, soil fertility problems in the area continues to be tackled with fertiliser, and farmers persist with the application of large amounts of both DAP and Urea, despite the increasing costs of commercial fertiliser. Fieldwork in the 1990s revealed that the cultivation of opium poppy offered farmers access to the necessary financial capital with which to purchase the fertiliser that they needed prior to and during the planting season (Mansfield 2002). For those farmers growing opium poppy but with insufficient cash to purchase fertiliser prior to the planting season credit was available either in the form of cash or in-kind.¹⁷ In more recent years fertiliser has been provided to farmers as part of the Food Zone Programme and wider agricultural support in Helmand.

The cash generated by opium has also given farmers in central Helmand better access to tractors and thereby to a further means for tackling the problem of soil quality. Farmers with larger tracts of land and a surplus of opium have been able to purchase tractors. These have not only been used on their own land but also have been leased to smaller farmers as an important source of cash income. For smaller farmers opium production has provided them with the means to rent tractors and prepare their land for agricultural production. The fact that those growing opium are given preferential access to credit allows the resource-poor to hire a tractor even where they do not have cash reserves.

Opium production has also proven an effective method for tackling the persistent weed problems associated with high ground

¹⁷ This is a practice that persists in areas north of the Boghra canal and in other areas where opium persists in the canal command areas in the 2010/11 growing season.

water in the canal command area. The opium crop is initially broadcast sown but to improve yields, requires thinning in the spring. The process of thinning is also an opportunity to weed the land. In Helmand irrigated land cultivated with opium will typically be weeded three times. If there is insufficient family labour available, including women and children, hired labour will be used to complete the task. Farmers claim that once the land is weeded intensively over the opium poppy season and fertiliser is added to improve its yields, not only will a good summer crop of maize be produced but the land will not need weeding so thoroughly when it is cultivated with wheat the next winter.

Farmers would appear to have managed the problem of salination by growing crops that are relatively salt tolerant. For example, melon and water melon are to some extent salt tolerant and some level of salinity can improve the flavour (Fitzherbert pers comm 2011).¹⁸ Alfalfa is also semi salt tolerant and when cultivated for a period of four to five years will increase the fertility of the soils (Michel 1958: 175-176). These three crops are grown far more extensively in the canal command area beyond the urban areas than in either the more fertile areas around Lashkar Gah or by farmers north of the Boghra canal. Opium poppy would also appear to be relatively tolerant to salinity and research has shown that the application of sodium chloride has been found to increase morphine production (Kapoor 1995:104).

A review of the different environmental risks that communities in central Helmand are exposed to indicates that the province is not the 'bread basket of Afghanistan' that it is

sometimes described as. History shows that the concentration of poor soils, salination and high ground water in the districts of Nad e Ali and Marjeh before the war resulted in farmers incurring high inputs costs for some of the lowest net incomes in Helmand. In the late 1950s Michel (1958:176) suggested 'that the whole problem of handling the problem soils of Nad e Ali is one that transcends the ability and resources of the settlers and highlighted the need for the drainage problem to be solved and for larger landholdings to be given to settlers in Nad Ali and Marjeh so that pasture and hay could be cultivated and the fertility of the soil improved (1958: 175). Over the last three decades the drains have become silted, salination has gotten worse and farm sizes have become progressively smaller, limiting the opportunities for investing in the fertility of the soil as recommended by the Helmand Valley project. During this period it would appear that opium production has flourished and provided settlers with the resources to at least better manage the growing environmental risks they are exposed to in the absence of state support.

4.3 The Risk of a Poppy Ban

Efforts to reduce opium production have been implemented throughout the period of this Study. The focus of these efforts has been the Food Zone Programme which has sought to integrate an information campaign and the provision of agricultural inputs aimed at reducing the incidence of planting with a campaign to destroy the opium crop once it is cultivated. As the objectives of both eradication and the information campaign are to raise the risks that farmers associate with opium production, these will be discussed here. The provision of agricultural inputs will be covered later as part of the analysis of the provision of public goods and social protection mechanisms.

¹⁸ The water melons from Nad e Ali are considered of premium quality.

Fieldwork reveals that by late 2010 there was a growing body of respondents within the canal command area who believed that government could impose a ban on opium production in central Helmand and in the areas to the east of Lashkar Gah straddling the road to Kandahar (See Table 3). This was certainly not the case during the 2008/09 growing season, when respondents believed that the government's capacity to enforce a ban was restricted to the environs of Lashkar Gah, in areas such as Qala Bost (RS22), Bolan (RS5) and Mohajerin (RS23). In each of these areas eradication has been seen as a credible risk by farmers throughout the Study period, even though the actual level of crop destruction has been relatively low.

In other areas respondents assess that the risk of a poppy ban being imposed has increased significantly. In the environs of Gereshk, for example, respondents had little confidence in the government's capacity to enforce a poppy ban in the 2008/09 growing season due to the dominance of the Taliban in areas such as Malgir (RS15) and Sra Kala (RS16). This was a view that was reiterated during the planting season for the 2009/10 crop, when many of those interviewed reported that the government repeatedly issued messages threatening farmers with arrest and the destruction of their crop but that it was not in the position to enforce this ban.

However, by the spring of 2010 farmers in the environs of Gereshk reported that the authorities had implemented an effective eradication campaign that entailed the arrest and imprisonment of farmers cultivating opium poppy in areas such as Malgir (RS15) and the subsequent imposition of crop destruction on the remaining family members. Under this scheme farmers would be held and fined 1,000 PR (US\$12) for each night until the authorities had verified that the crop had been destroyed, upon which an

additional sum of 20,000 to 30,000 PR would be imposed and the farmer released. By the 2010/11 growing season all but those respondents on the periphery of Malgir (RS15) and Sra Kala (RS16) believed that eradication was a risk.

For farmers beyond the environs of the cities of Gereshk and Lashkar Gah the risk of crop eradication has also increased over the period of the Study. In these areas the population perceived the targets of eradication in 2008 and 2009 as those farmers residing near the provincial and district centres and along the main roads. Beyond these areas eradication was seen as less systematic and a risk that farmers could largely manage through systems of corruption, patronage and the non-permissive security environment. In these conditions some households are less likely to lose their crop than others. In fact, those with relatives or contacts in the government still claim they are less vulnerable to eradication and in the past admitted to facilitating contacts with those in the eradication force to help deter crop destruction in the village. More marginal groups within the area, such as those who were settled in Nad e Ali from other provinces, known as the Nar Kilin, as well as the land-poor, believe they face a greater risk of eradication because they do not have the necessary influence in the area and lack the financial means to pay bribes.

Farmers in both the canal command area and the area north of the canal also see insecurity and the presence of the Taliban as important in determining whether their crop is vulnerable to eradication. In the 2008/09 growing season, respondents in Nad e Ali district believed eradication was particularly unlikely, claiming that the eradication force was fearful of entering the area, particularly after a suicide attack killed seventeen in April 2009. The limited eradication efforts in areas such as Doh Bandi (RS3) were viewed with

some suspicion by respondents with reports that an incursion into the area by foreign and Afghan eradication forces in the spring of 2009 had only led to the destruction of a small number of more accessible fields despite significant time spent in the area. During the same season the threat of eradication also appeared to have little resonance with respondents in places such as Aynak (RS11) who did not believe that the authorities would be able to destroy the crop in the area due to the presence of Taliban fighters.

However, the eradication campaign in the 2009/10 growing season was seen as more resolute in the canal command area. Farmers highlighted the fact that when the eradication force came to a village in the spring of 2010, crop destruction was more comprehensive than in earlier campaigns; implementation was far less partial and few fields were spared. Even attempts to bribe the eradication team were reportedly spurned. Where farmers reported that their crop had escaped destruction it was typically attributed to the fact that their land was some distance from the village centre and the eradication team did not have the time to destroy it. Others claimed divine intervention. There were still some respondents who reported that their crop was spared because they had relatives or contacts in the government but these were very much in the minority.

Fieldwork during the planting season for the 2010/11 growing season revealed that those in the canal command area now believe there is a high risk of eradication, even in areas such as Aqajan Kalay (RS1) and Dashte Shin Kalay (RS18) on the Boghra canal where the Taliban are alleged to have had a fairly permanent presence during much of 2008 and 2009. Primarily this change is due to the significant presence of national and international forces across the area. For farmers this increased presence typically manifests in the form of

more ANSF bases, checkpoints and increased military activity by both Afghan and what are often referred to as 'American' forces. Respondents report that there are now military bases near Aqajan Kalay (RS1), and Dashte Shin Kalay (RS18) in Nad e Ali and a major base near Block F4-D5 (RS13) in Marjeh. According to respondents, check points are now littered throughout the canal command area, but especially there are marked increases in areas such as Dashte Chanjir (RS9) and Khwaja Baidar (RS8). To farmers these bases represent a capacity to enforce a ban on opium production and eradicate the crop in many of canal irrigated areas in which these forces are present.

Farmers in the canal command area beyond the environs of the urban centres also cite the threat of arrest and fining of those that cultivate opium as an increased risk associated with the 2010/11 counter narcotics campaign. Many indicate that this is a new message in the information campaign that was not present in the 2009/10 growing season. Arrest is feared in particular, not only because it is associated with physical assault while in custody and the payment of money to obtain release, but also because incarceration of the male of the household can lead to women and children being left unprotected for days on end in an insecure and unpredictable environment. The significant increase in the presence of Afghan National Security Forces and international forces means that the government is believed to have the capacity to make these arrests in the 2010/11 growing season.

The growing perception amongst farmers in the canal command area that the government can impose a ban on opium production is in stark contrast with the views of those interviewed north of the Boghra canal. In this area the government's eradication efforts are seen as irrelevant except in the southern part

of Dasht e Shin Kalay (RS18), where the agricultural land is near to a checkpoint on the Boghra canal. Furthermore, the Taliban is alleged to have actively encouraged opium production in the area, disseminating their message at Friday prayer in the mosques north of the canal and at the markets in Loy Manda and Naray Manda. It is claimed that the district administrator on the other hand disseminates the government's message that opium is banned only with significant military support from both Afghan and national security forces. In Aqajan Kalay (RS1), which is close to both these bazaars, it is the physical presence of a military base located to the east of the area that gives the message resonance. To the north of the canal, like in many areas in the canal command area prior to the significant uplift in military presence, a counter narcotics message without the capacity to enforce it only serves to highlight how weak the government is.

In fact, a common theme across the different research sites over the period of the Study has been the importance of the perception of the government's authority in a given area. The physical act of crop destruction itself is clearly evidence of the government's capacity to enforce its will but it is not seen as sufficient to deter cultivation. Without a more permanent and resounding physical presence, crop destruction in itself has typically not been seen as a high enough risk to deter cultivation, particularly in the absence of other livelihood options.

Remote sensing data illustrate that the experience and results of crop destruction with regards to levels of cultivation have been inconsistent both within and between areas over the course of this Study. For example, many farmers who have experienced eradication both in the canal command area and in the area north of the Boghra canal in the 2007/08 and 2008/09 growing season

continued to cultivate opium poppy in subsequent years, but did reduce cultivation in the wake of a significant shift in the terms of trade between opium and wheat and growing concerns over food security in the 2008/09 growing season. Areas such as Aqajan Kalay (RS1), for instance, have seen cultivation fall by seventy per cent between the 2007/08 growing season and 2009/2010 yet experienced the destruction of twenty three hectares of a one hundred and three hectares of opium crop in the area in the 2007/08 growing season. None of the standing crop was destroyed in Aqajan Kalay during the eradication campaign in 2009 yet cultivation continued to fall. The area of Khwaja Baidar (RS8) has not experienced eradication at all yet cultivation has fallen by almost ninety five per cent between 2008 and 2010; and the amount of land cultivated with opium poppy in Marjeh A2 (RS14) fell by fifteen per cent between 2007/08 and 2008/09 despite no crop destruction occurring and the dominance of the Taliban in the area.

In contrast to evidence from the canal command area and the area north of the Boghra canal, data from the environs of the urban areas of Lashkar Gah suggest farmers did not necessarily need to experience crop destruction to reduce or abandon opium production in the 2007/08 growing season. Khalaj (RS12) for example did not see any eradication in the 2007/08 and 2008/09 growing seasons, but cultivation fell by ninety nine per cent with the increased presence of national and international forces in the area and development investments. Furthermore, cultivation in areas such as Mohajerin (RS23), Bolan (RS5) and Qala Bost (RS22) had already begun its downward trajectory before experiencing what would appear to be relatively small amounts of eradication in the 2007/08 and 2008/09 growing season.

In sum, a farmer's perception of the risk of the government successfully enforcing a ban on opium does not appear to be directly related to the level of eradication that occurs in a given area and certainly not on the level of eradication in the province of Helmand or in the country as a whole. In Helmand some farmers have often found ways to manage the risk of eradication in areas where the government does not have a more permanent presence. The eradication force itself has in the past been keen to minimise its exposure to acts of violence by reducing its time in the field and has therefore achieved only limited crop damage (See Figure 6). If the eradication force can extract rent from farmers in the process, unwatched by other state institutions or international forces, they tend to benefit from this advantage.

Fieldwork during the course of this Study does not suggest that eradication has increased the

legitimacy of the government in contested spaces. In fact, in the 2010/11 growing season farmers in the canal command area associate contact with the government with greater exposure to violent conflict and the risk of a loss of income due to the implementation of an effective opium ban. Farmers also anticipate a heightened risk of the loss of any opium they may have stored, as well as other items of value due to an increase in house to house searches by the ANSF. Farmers in the canal command area also see their situation in stark contrast to those north of the canal who are not as exposed to the predatory behaviour of the ANP, can continue to cultivate opium poppy, and experience lower levels of violence - all of which is attributed to the Taliban's dominance in the area.

Table 3: Quotes from respondents reflecting the increasing risk of the imposition of a poppy ban between the 2008/09 and 2010/11 growing seasons				
Location	May 2009	November 2009	May 2010	November 2010
Zarghun Kalay (RS2)	<p><i>After the suicide attack [the eradication team] were afraid to come here. The Taliban does not allow them to come here'</i></p> <p><i>'Last year they destroyed half a jerib of my land. I contacted a relative in the government and the rest was left.</i></p> <p><i>Our behaviour [growing poppy] will never change. We are against the government. If the government collapse it will be good'</i></p>	<p><i>I heard that the ANA would be involved in eradication this year but it is impossible to implement in this area.</i></p> <p><i>We are far from the road. They only eradicate those areas near to the road – it is only for show.</i></p> <p><i>For five years they announce [the ban]. Those that pay money never face this problem.</i></p>	<p><i>When Government and NATO came at the time of operation. They destroyed poppy near the road but not mine'</i></p> <p><i>I will cultivate poppy next year. Maybe less, maybe more but I will cultivate it'</i></p> <p><i>If the government becomes strong I will cultivate melon or water melon and cotton but if it stays the same I will cultivate part of my land with poppy'</i></p>	<p><i>'The Government is under the control of the foreigners. If the foreigners say destroy the wheat – [the government] would do that also!'</i></p> <p><i>Those people who lost their crop last year are against the government; those who got a yield are not opposite, up til now'</i></p> <p><i>'The eradication campaign came to the village but they only destroyed near the road and district centre'</i></p> <p><i>'If this situation continues I will take a gun against this government'</i></p>

Table 3: Quotes from respondents reflecting the increasing risk of the imposition of a poppy ban between the 2008/09 and 2010/11 growing seasons				
Location	May 2009	November 2009	May 2010	November 2010
Loy Bagh (RS6)	<p><i>It is impossible to eradicate poppy in this area. We know that the Taliban will come again'</i></p> <p><i>'When day by day the security in this area becomes worse how will they conduct an eradication campaign in this area?'</i></p> <p><i>We heard from the radio and people about the ban on poppy: that the governor had announced a ban and the government would not allow it to be grown and would eradicate. But there is not any power of the government here'</i></p> <p><i>I am afraid my land is on the road, I am not able to cultivate poppy but other people in the area cultivate it'</i></p>		<p><i>I will cultivate in the future. In the time of Zahir Shah when the country was under control of the government we cultivated now the government doesn't have any authority to destroy the crop'</i></p> <p><i>'My brother's crop was destroyed by the Dah Kheli Kafir.¹⁹ It is his mistake he cultivated too close to the road'</i></p> <p><i>Each year the same statement. Each year they threaten to destroy the crop but each year they cannot do anything'</i></p>	<p><i>'Because of the poppy ban the government has lost the support of the people'</i></p> <p><i>'I am not opposite with the government but I am unhappy with eradication and the poppy ban'</i></p> <p><i>I lost my poppy, I don't have food, I don't have bread for my children, I don't have money. This government is the enemy of my head'</i></p> <p><i>I am very poor if I had money I would have paid the eradication team. I asked them and they wanted 10,000 PR. I went to the Haji and asked for the money. He didn't have it but said he would try and get it. But by the next day my crop was destroyed.</i></p>

¹⁹ This respondent was referring to the Afghan National Police. The literal translation of Dah Kheli Kafir is 'the internal non believers'.

Table 3: Quotes from respondents reflecting the increasing risk of the imposition of a poppy ban between the 2008/09 and 2010/11 growing seasons				
Location	May 2009	November 2009	May 2010	November 2010
Aynak (RS11)	<p><i>They (the Government) are only wasting their time saying they can eradicate poppy’.</i></p> <p><i>The Taliban will never allow the government to come here and destroy the land’</i></p> <p><i>Day by day there attacks by the Taliban increase in our area – the Taliban have taken control of several villages.</i></p> <p><i>I have heard about the ban from the mullah. I cultivate poppy. It has no affect on my cultivation’</i></p> <p><i>Every year they announce this and every year they don’t take any action’</i></p>	<p><i>Every year they announce and every year they don’t take any action. The government thinks that all the people in this area are Taliban.</i></p> <p><i>I heard about eradication last year but the crop was not destroyed. The government is weak it is not able to destroy the poppy. If you pay money to the police then they will not eradicate the crop.</i></p> <p><i>This year they announced “don’t grow poppy we will distribute seed to you” but it is not the reality, they are cheating us</i></p>	<p><i>When they came to the village [the eradication force] threatened to destroy my crop. I explained I only had one jerib [of poppy] and they did not destroy it. I am pleased that they listened to the problems of the people’</i></p> <p><i>The government has banned poppy. They are not true people. They don’t heard the voice of the poor people’</i></p> <p><i>The government is weak they can’t provide security. They start their operation then they go back. They create more security problems as the Taliban return and threaten the people: ‘you support the government, you work for the government’</i></p> <p><i>‘For whom will they destroy this crop? There are a lot of government people who grow poppy in this area’</i></p>	<p><i>‘When my crop was destroyed I got a lot of problems. Now I can’t provide good food for my family or send my children to school. I have no interest with the government. It is a good chance for the Taliban. From one side the government came and destroyed the crop on the other it has not provided an alternative. The problem is with the government making promises it cannot deliver’</i></p> <p><i>‘By the eradication of poppy the government has lost the support of the people’</i></p> <p><i>‘The government is responsible to find an alternative then ban poppy but we don’t have an alternative and they banned poppy’</i></p>

Table 3: Quotes from respondents reflecting the increasing risk of the imposition of a poppy ban between the 2008/09 and 2010/11 growing seasons				
Location	May 2009	November 2009	May 2010	November 2010
Bolan (RS5)	<p><i>It is the big cheat of the government that they eradicate the land of the poor people who have no support in the government'</i></p> <p><i>I don't know maybe they eradicate maybe they do not I have not cultivated poppy since 2007. I don't have any interest in it</i></p> <p><i>The Taliban have control of several villages near here. If the election is won by Karzai we know we will lose our land and we will have to migrate to Pakistan.....I don't know about eradication as no one cultivates opium poppy in our village</i></p> <p><i>It is impossible to eradicate in Helmand this year due to the [presidential] election</i></p> <p><i>Eradication is common here. It is not right that eradication takes place only in areas near the city'</i></p>	<p><i>I am aware of the ban. No one can cultivate here. It is on the main road and near to the city</i></p> <p><i>There is no eradication as I have not planted</i></p> <p><i>Saying [about eradication] is easy doing it is difficult!</i></p> <p><i>When the eradication force goes outside into remote areas the Taliban will kill them'</i></p>	<p><i>When we lost poppy [in 2008] our income suddenly decreased. But now life is getting better we have vegetables and my son has a job as a driver</i></p> <p><i>Poppy is not a good crop when I cultivated it I got a lot of income but my life was not so good. Every time I needed money I got a loan from someone. When I finished poppy my life became better. Now I have a beautiful house and good food due to money from our shop' The government of Karzai does not provide a service but it provides an opportunity. Now I have a shop in the city we have benefit from this'</i></p> <p><i>In 2007 one jerib of my poppy was destroyed. After that I did not cultivate poppy. They eradicated the crop of those who did not have a relationship with the government – those who did [have a relationship] their crop was saved'</i></p>	<p><i>There is no poppy in the area. It is under government control</i></p> <p><i>There is no poppy this year of last year. It is haram I will not cultivate it.</i></p> <p><i>I am happy with my life as I can buy fruit and meat; my two sons and two daughters go to school in Lashkar Gah. I want to support this government. In the future I will also cultivate vegetables and continue my life'</i></p>

4.4 The Risk of Food Insecurity

Wheat is an integral part of rural livelihoods in Afghanistan and in Helmand province. Wheat grain is a staple crop consumed by household members, and their livestock consumes wheat straw. Wheat straw is also used in the construction of walls and roofs in household compounds. Few farmers would elect not to grow the crop and rely solely on the market for supply as this would expose the household to unnecessary risk were the price of wheat to rise or supplies from Afghanistan's neighbours be curtailed.

In central Helmand the market for wheat grain has been weak. High transport costs and commodity prices due to insecurity, as well as the inflationary effect of the concentration of opium production, has typically rendered those farmers in Helmand that can produce a marketable surplus uncompetitive compared with better quality imports from Pakistan and Kazakhstan.²⁰ Within Helmand province, consumers express a preference for wheat flour from Pakistan, and increasingly Kazakhstan, rather than local wheat that is milled in mobile mills (AG Consulting 2010: 45, 53; Mansfield 2010). Consequently wheat is typically grown for consumption and not for sale. Farmers will often calculate how much land they need to cultivate with wheat to meet household food requirements, with some residual for social obligations and potential losses, and plant accordingly.

However, in the 2008/09 growing season there was a dramatic increase in the amount of land allocated to wheat compared to the previous season. The shift to wheat did not just take place in the canal command area,

but occurred across the province of Helmand. In fact, analysis by Cranfield University estimated that the total amount of land allocated to wheat increased from 43,292 ha in the 2007/08 growing season to 85,493 ha in 2008/09, an increase of ninety seven per cent (See Table 4).

²⁰ Wheat prices in the south are typically higher than the national average and in Kabul. See the "Agricultural Commodity Price Bulletins" by the Ministry of Agriculture, Irrigation and Livestock.

Table 4: Patterns of cultivation inside and outside the Helmand Food Zone, 2007-2009

	2007	2008	2009	Change 2008-2009 (ha)	Change 2008-2009 (%)
Helmand Food Zone					
Opium Poppy	38,235	33,937	21,452	-12,485	-37%
Wheat	15,924	18,603	36,591	17,987	97%
Other	40,488	45,514	38,685	-6,829	-15%
Active agriculture	94,646	98,054	96,728	-1,326	-1%
Outside Helmand Food Zone					
Opium Poppy	50,418	49,872	53,624	3,752	8%
Wheat	23,339	24,689	48,902	24,213	98%
Other	111,105	114,557	107,962	-6,596	-6%
Active agriculture	184,861	189,118	210,488	21,370	11%
Helmand, Total					
Opium Poppy	88,652	83,809	75,076	-8,733	-10%
Wheat	39,262	43,292	85,493	42,201	97%
Other	151,593	160,072	146,647	-13,425	-8%
Active agriculture	279,507	287,172	307,216	20,044	7%

At the time, much of the attention of the international community was on the impact that this shift to wheat production had on levels of opium poppy cultivation and how this differed between areas inside what was known as the Food Zone - where agricultural inputs, in particular wheat seed, were provided to farmers - and areas outside where no assistance was offered. The thirty seven per cent fall in the amount of land allocated to opium poppy within the Food Zone between 2007/08 and 2008/09, compared with an eight per cent increase in the level of opium poppy in those areas outside, was taken as evidence of the success of the

counter narcotics efforts in Helmand that year.²¹

The analysis offered by Cranfield University at the time presented a picture in which farmers favoured wheat cultivation in the 2008/09 growing season regardless of location and circumstance. In fact, levels of wheat

²¹ Cranfield University provided estimates of the amount of land cultivated with both wheat and opium poppy for the 2007/08 and 2008/09 growing seasons, disaggregating between those areas within and outside the Food Zone. UNODC provided estimates only for the amount of opium poppy cultivated and did not differentiate between those areas within and outside the Food Zone. UNODC estimated that 69,833 ha of opium poppy were cultivated in 2009.

cultivation almost doubled within the Food Zone and outside. However, while the ninety seven percent increase in wheat cultivation within the Food Zone was achieved through lower levels of opium poppy cultivation and some reductions in cultivation of annual horticultural crops, outside the Food Zone the increase was predominantly on land that had not been cultivated in 2008 but was planted in 2009 due to better precipitation and an expansion in the amount of land being brought under cultivation through the settlement of former desert land.

Box 2: Sarkawal, Lashkar Gah, Nov 2009

In October 2008 I got six jeribs of land from Mohammed Khan as a sharecropper. After two months Mohammed Khan came to the land and started arguing with me. He said that he wanted the land back and that I should leave as he had no need for me. I told him that I had worked and spent money on the land. It was clear to me that he wanted the land because of the high price of wheat. We fought and I broke his tooth. I left the land after I had harvested my winter crop but the conflict is continuing. Mohammed Khan says I should give him my daughter because I broke his tooth.

A review of both remote sensing data and the findings from fieldwork in the 2007/08 and 2008/09 growing season offers a more in-depth account of developments on the ground at the time. What can be seen is a shift to wheat across all of the research sites for which there is data.²² In each of the research sites, except Qala Bost (RS22), the cultivation of wheat expanded by at least forty per cent, often considerably more. In the

canal command area much of this expansion occurred at the expense of opium production, even in those areas where the population had not experienced crop destruction the previous year and where they did not fear the prospect of eradication in 2008/09. Doh Bandi (RS3) for example is an area where there was no eradication in either the spring of 2008 or in 2009, and where the Taliban were considered very much entrenched in the 2008/09 growing season, yet opium cultivation fell by almost seventeen per cent and wheat production rose by over fifty per cent. Both research sites in Marjeh (RS13 & RS14) also saw contractions in the amount of land cultivated with opium poppy and a significant expansion in the amount of land cultivated with wheat over this same time period, despite the Taliban's dominance in the area.

The move to wheat production in the 2008/09 growing season was not just evident amongst those in Helmand who had previously cultivated opium poppy. Farmers in areas nearer the cities of Lashkar Gah and Gereshk, such as Bolan (RS5), Sra Kala (RS16) and Mohajerin (RS23), and where opium poppy was already contracting, reduced the amount of land devoted to a variety of different cash crops to sow more wheat in the 2008/09 growing season.

Fieldwork suggests that this overwhelming preference for wheat cultivation across Helmand had less to do with counter narcotics efforts and was primarily driven by farmer's concerns over food security in the face of a significant rise in food prices. For instance, between May 2007 and April 2008 there was a rise in the price of bread and cereals of 183 percent.²³ At the same time, the farm-gate price of opium fell to levels that had not been observed since before the Taliban declared

²² There is no data for Dashte Shin Kalay (RS18) and Shna Jama (RS19) for the 2008/09 growing season.

²³ MAIL, "Agricultural Commodity Price Bulletin Year 4: Volume 5" (Kabul: 2008), 1.

their prohibition on opium production in July 2000. The decline in the terms of trade between opium and wheat was such that in parts of the central and northeastern regions of Afghanistan, where opium yields are more marginal, farmers were able to obtain more wheat by growing it on their own land than by producing opium, selling it and then purchasing wheat, as had been the case in these areas since 2001. In Helmand, the relative prices were such that the net returns on opium and wheat were comparable (Mansfield, 2009: 48).

With the price of wheat reaching as high as 35 Afghanis (Afs) per kilogram in Helmand in November 2008 and opium prices having fallen to 20,000 Pakistani Rupees (Rs)²⁴ per man²⁵ at harvest time in May that year, some reprioritisation in the 2008/09 growing season was inevitable. The rise in the price of cereals due to growing insecurity in Pakistan and a continued ban on the export of wheat flour fuelled concerns that prices would rise further.

The problems farmers faced purchasing wheat both locally and in Lashkar Gah in mid-2008 highlighted that many had overextended their opium crop and needed to give greater priority to ensuring that they cultivated enough wheat to meet their household needs.

By the 2009/10 planting season the price of wheat had fallen back to 15.5 Afs per kg from 35 Afs per kg twelve months prior. However, farmers remained preoccupied by the price of wheat and the possibility that it would rise again. At the time of planting most respondents in central Helmand anticipated

that prices would increase in 2010 due to the high price of wheat flour in Pakistan,²⁶ an increase in the cost of smuggling goods through the Federally Administered Tribal Areas (FATA) in Pakistan, and the expectation that there would be a further deterioration in the security situation in Pakistan.

Interviews revealed that the negative impact that prioritising opium production over wheat had on household food security in the 2007/08 growing season remained a vivid memory and continued to influence farmer's cropping decisions in many areas (see Box 3 & 4).

While some reductions in wheat cultivation did occur in the 2009/10 growing season in a number of the research sites, it was not uniform and it typically was not accompanied with an expansion in the amount of land allocated with opium poppy but rather an increase in the amount of land cultivated with spring crops such as melon, water melon and cotton.

At the time the price of opium continued to fall. Prices for wet opium in Helmand in November 2009 were between 12,000 and 14,000 Rs per man, down from 16,000 to 18,000 Rs²⁷ during the early harvest period in April 2009 and from 20,000 Rs²⁸ in April 2008. At the time of planting farmers did not expect the price of opium to rise in the foreseeable future – a prognosis that was to prove wildly inaccurate in the spring of 2010 when dramatic price increases accompanied the outbreak of a 'blight' on the opium crop.

²⁴ Prices in southern Afghanistan are typically cited in Pakistani Rupees. In May 2008, US\$1 was the equivalent of 64 Rs.

²⁵ A man is a traditional unit of measure in Afghanistan. In Kandahar, a man is the equivalent of 4.5 kilograms.

²⁶ In November 2009, wheat flour was selling at the equivalent of between 18 and 32 Afs per kg in Peshawar, depending on quality.

²⁷ In May 2009 US\$1 was the equivalent of 80.5 Rs.

²⁸ In April 2008, US\$1 was the equivalent of 64 Rs.

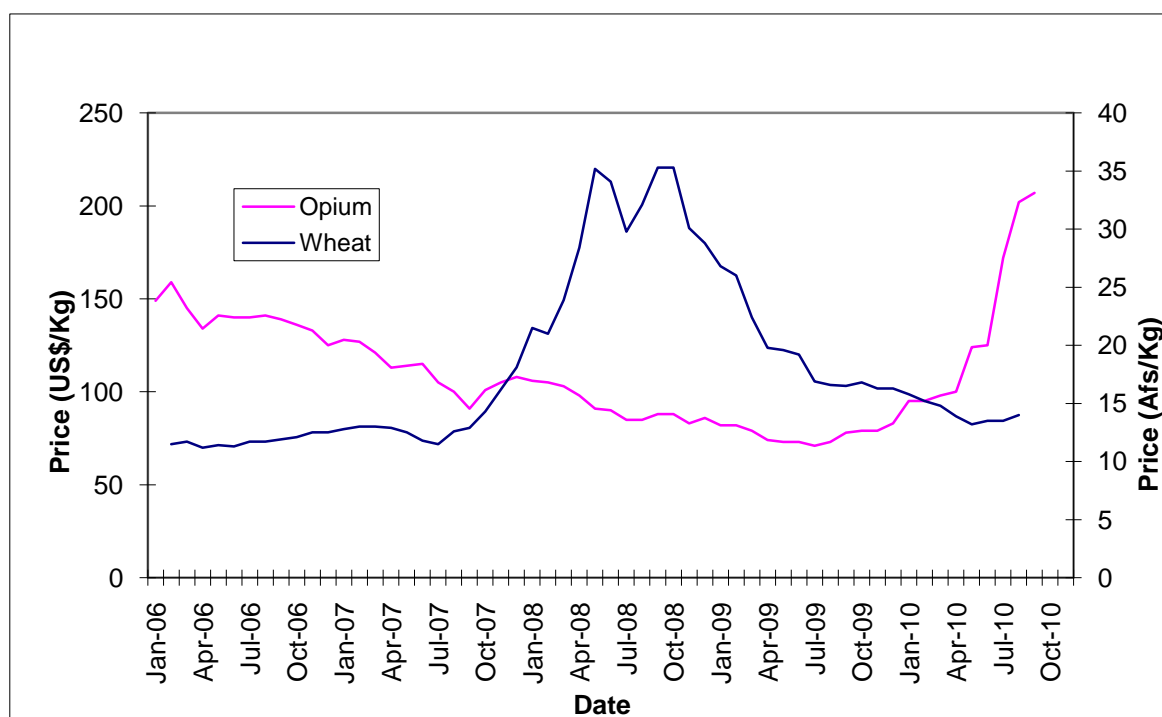


Figure 13: Price of dry opium and wheat in Afghanistan, January 2006 to November 2010

Box 3: Nahre Seraj, Helmand, Nov. 2009

I am 38 years old. We are nine people in my family and I have eight jeribs of land. I used to cultivate three jeribs of wheat and five jeribs of poppy during the winter. The yield of these three jeribs of wheat was enough for us. But when the foreigners started their mission in Garmsir in June [2009] eleven members of my brother's family came to live in my home as their house had been destroyed. For four months all their expenditures were paid for from my pocket. My wheat was finished and I had to buy a lot of wheat flour from the bazaar. Now they have said they will stay here and build a home. I have to grow more wheat so as to feed these people as well. This year [2009/10] I am growing five jeribs of wheat and three jeribs of poppy.

Box 4: Luy Bagh Helmand, Nov. 2009

In 2007/08 I cultivated my land with six jeribs of poppy and only one jerib of wheat. It was not enough wheat for my family. At harvest time I asked my neighbours to sell their wheat to us, as the price of wheat in the city [Lashkar Gah] was too high. At that time we did not have enough money to buy wheat in the city as our opium was still fresh and we would have got a low price. But my neighbours refused. I had to borrow money from another person to buy wheat flour in Lashkar Gah. In 2008/09 I decided to grow three jeribs of poppy and four jeribs of wheat so I never face this problem again. I have cultivated the same this year [2009/10].

The literature on rural economics suggests that there should be little surprise that farmers made a shift to wheat production following such a dramatic rise in wheat prices in late 2007 through to late 2008 (Scott 1976; Popkin 1979; Chayanov 1955; Ellis 2000). Farmers are known for their risk averse nature and have a preference for subsistence security over high income - what Scott has referred to as 'safety first' (Scott 1976). Fafchamps (1992: 90) argues that *'because staples constitute a large share of total consumption and have low income elasticity, farmers are adamant to protect themselves against food price risk. In most cases this is optimally achieved by emphasising food self-sufficiency'*. The same is true of those farmers that cultivate illicit drug crops. For example, Miles (1979) has shown that in northern Thailand the Lisu were known to forego further work on their opium crop to clear land for their grain swiddens.

In Afghanistan, Phillips (1995) reported that once wheat becomes too expensive or too difficult to purchase, farmers will reduce the amount of land planted with poppy and increase wheat production to ensure food security. The persistence of wheat in areas like Bolan (RS5) and Qala Bost (RS22) highlights the continuing importance that farmers give to managing food security even in an area of considerable economic potential for cash crops. The significant increase in wheat cultivation in 2008/09 and the contraction in the amount of land cultivated with cash crops (both opium and horticultural crops such as melon and water melon) compared with 2007/08 reinforce this point.

For the vast majority of farmers in Helmand, expanding wheat cultivation in the 2008/09 growing season was not a strategy aimed at maximising the economic returns on their land but at guarding against the risk of food insecurity. Those households with enough land typically cultivated a level of wheat that

was commensurate with household requirements to attain self-sufficiency. Those without sufficient land increased the amount of land allocated to wheat to reduce some of the risks and costs involved in purchasing wheat flour at the market, but on the whole incurred a dramatic increase in their cost of living due to their inability to grow enough wheat to meet their families' needs.

In the current circumstances it is clear that wheat is not a viable and sustainable alternative to opium poppy for most farmers in Helmand and that some source of cash income is required from livestock, cash crops or wage labour.²⁹ It remains a daunting challenge that in the light of the increase in international soldiers and the ANSF in central Helmand in 2009 and 2010 and the concomitant pressure to reduce opium production, wheat has become the dominant crop in the canal command area and the amount of land allocated to perennial or annual horticultural crops remains rather limited beyond the environs of the cities of Lashkar Gah and Gereshk. In the 2010/11 growing season many farmers in the canal command area face the prospect of being self-sufficient in wheat but lacking the necessary cash income to meet their other basic needs. The full impact of the ban on opium will ultimately depend on the other shocks that households and communities are

²⁹ "The characteristics of wheat—relatively low value, low labour intensity and correspondingly high usage of Afghanistan's scarce land and water resources—make it a poor and unsustainable alternative to poppy in the Afghan context. Moreover given that in good harvest years the country already comes close to self sufficiency in wheat and there are no export prospects, stimulating substantial increases in wheat production would be counterproductive." In Ward et al, "Afghanistan: Economic Incentives and Development Initiatives to Reduce Opium Production" (World Bank/DFID), 29.

exposed to in the 2010/11 growing season as well as the assets households can draw upon when required.

4.5 Exposure to Concurrent and Repeated Risks

It is clear from this section that the population of Helmand is not only exposed to a variety of different risks but has different levels of exposure that vary by location, socio-economic group and over time. Each of these risks has been found to have a distinct and sometimes contrary effect on the livelihood options of farmers, including the amount of opium poppy grown.

The particular characteristics of opium poppy and the kinds of risks that communities are exposed to have meant that opium production has been well suited as a risk mitigation strategy for many farmers across central Helmand. Opium production has helped finance soil improvements in areas that suffer from salinity, high ground water and poor soils; it has funded the installation and running costs of shallow wells in areas that are not under the canal and are without consistent irrigation; and it has allowed for the repair of property, the care of the injured and the burial of the dead in those areas most affected by violent conflict. Opium production has also provided a cushion against both idiosyncratic risks such as illness and death, and life cycle events including marriage.

It is also apparent that some areas and socio-economic groups in central Helmand have experienced far greater exposure to risk than others due to the repeated and concurrent nature of the risks that they are subject to. Some communities have been exposed to the same risks over an extended period. For example, the environmental risks that most communities are exposed to in Helmand are enduring and have to be managed on an

ongoing basis. The impact of the dramatic rise in wheat prices in 2007 and 2008 was felt across the research sites in Helmand for an eighteen month period but has subsequently lessened.

The exposure to other risks has varied over time. The population's experience of the conflict has changed quite dramatically in some areas over the period of this Study, with parts of Lashkar Gah and Nawa Barakzai seeing a decrease in the levels of violence they are exposed to over the last three seasons whilst those in Nad e Ali and Marjeh experiencing an increasing intensity as state and armed non state actors continue to compete for the control of territory. The population's exposure to the opium ban has also changed over the course of the last three growing seasons, expanding from those areas in close proximity to Lashkar Gah in the 2007/08 growing season and penetrating into much of Nawa Barakzai and Nad e Ali and Marjeh with the incursion of military forces and the establishment of a permanent presence in these districts.

It is where these different risks overlap that communities are most vulnerable, particularly in areas where opium production has served as a risk mitigation strategy. It is those located near the cities of Lashkar Gah and Gereshk that are currently the least exposed to risk. The population in these areas cultivate on fertile land and have seen the threat of violence decline compared with levels in 2008 and early 2009. The population in this area have however been more at risk of a poppy ban being implemented and have curbed levels of cultivation, even though levels of crop destruction have been negligible over the last four growing seasons.

Another area where the population considers that it has a relatively low exposure to risk is north of the Boghra canal. While this is an

area under environmental pressure due to the rapid growth in the amount of land being settled and the increase in the number of tubewells, opium production has mitigated the risk of drought through its financing of installation and recurrent costs and has helped cross subsidise the irrigation of food and fodder crops. The population in this area does not believe it is directly exposed to violent conflict or at risk from a ban on opium production due to the dominance of the Taliban in the area. The experience of travel within the canal command area where those from north of the Boghra canal are subject to intimidation and the threat of violence, and where they are aware of current efforts to ban opium production, only serves to reinforce their opposition to the government and international community.

It is those in the canal command area located beyond the environs of the urban areas who currently have the greatest exposure to risk. Despite being relatively well placed in terms of endowments of irrigated land, these communities experience repeated and concurrent risk due to the confluence of violent conflict and the environmental stresses that they are exposed to. In the 2009/10 growing season, communities in Nawa Barkzai and in the more accessible parts of Nad e Ali came under increasing pressure to reduce opium poppy cultivation and abandon what has become an effective way of better managing the risks that they have been repeatedly exposed to. In the 2010/11 growing season the pressure to reduce opium production has intensified in the districts of Marjeh and Nad e Ali and has become closely associated with the inflow and presence of foreign soldiers. Household and community responses to this ban will largely depend on how resilient livelihoods in these areas are to these concurrent shocks, and on whether the government and international community can

maintain its current security presence without a more inclusive political settlement.

5. Livelihood Resilience and the Sustainability of Opium Reductions

Experience shows that household's responses to the efforts of the government and international community to deter opium production will vary by location and socio-economic group. Responses typically vary by the capabilities and assets that households can draw upon as well as the other shocks that households and communities are exposed to (Mansfield 2011). Some livelihoods are resilient to shocks, and households can abandon opium poppy cultivation and experience little immediate loss to welfare by drawing on and further investing in a number of different livelihood options. These households tend to be located in areas better endowed with natural resources, most importantly irrigated land, and are in close proximity to the labour and agricultural markets of regional economic hubs. They can also take advantage of their privileged access to a range of public goods including education and health services, as well as other forms of development assistance that are available.

Other households respond to a ban on opium production and other shocks by adopting coping strategies that reflect high levels of economic stress and will harm their future earning capacity. Livelihood responses include curtailing the frequency and quality of food consumed, postponing health related expenditure, selling long term productive assets such as livestock and land, removing children from school and seeking hazardous forms of employment (Mansfield 2011). These households are typically located in remote areas that are vulnerable to a range of different shocks including the effects of drought and conflict, which can often occur simultaneously. Households in these areas are typically land poor, have few non-farm income opportunities, and experience high

transportation and transaction costs that deter licit cash crop production. These are the areas in which households are the most reliant on opium production and typically cultivate the crop as a way of better managing the repeated and concurrent risks that they are exposed to.

In contrast to communities in more remote and resource poor areas of Afghanistan, or indeed Helmand, the population in central Helmand is often seen as one that can abandon opium poppy without experiencing significant losses in welfare and subsequent destitution. This is in part due to the natural resource endowments in the canal command area, where the bulk of the population can obtain both a good winter and summer crop each year. Furthermore, on average a household in the canal area will own a relatively generous amount of irrigated land compared with other parts of Afghanistan. The concentration of opium production in central Helmand for well over a decade has also provided rural households a relatively assured cash crop, while providing an economic stimulus to those trading consumer goods or providing services such as construction. Given the relatively large landholdings and the extent of cultivation in the province over the years, it is often assumed that farmers have accumulated stocks of opium that they can draw upon.

However, data from both remote sensing and qualitative research suggest that despite assumptions regarding both the relative wealth of the population and the perception that rural livelihoods are largely uniform, the population in central Helmand has diverse assets and capacities, and as we have seen quite different levels of exposure to asset-depleting risks. While some households in central Helmand have livelihoods that are

more resilient to shocks, including the impact of a ban on opium production, others are likely to be far more vulnerable to the impact of dramatic reductions in opium poppy cultivation than has typically been expected, particularly when a ban on opium production is imposed concurrently on communities that are also experiencing the effects of other shocks.

Livelihood diversification is the primary way in which rural households accumulate assets and manage risks. This includes on-farm diversity - the maintenance or expansion of a spread of crop and livestock production activities as well as employment in the non-farm sector (Ellis 2000). Diversification can give households the flexibility to respond to risks as they materialize. While some households may diversify their livelihoods proactively as a way of building resilience to future hazards, others may diversify as a coping strategy after a shock has occurred. Access to public goods, such as health and education, as well as social protection mechanisms, also helps build resilience and cushion the impact of asset depleting risks.

It is the purpose of this section to distinguish between areas in central Helmand in which livelihoods are resilient and in which diversification is a strategy for accumulating assets, and areas where households are adopting copings strategies (including livelihood diversification) that undermine their future earning capacity and expose household members to greater risks (Marschke and Berkes 2006). To achieve its aim this section will draw on data collected from the twenty three research sites in central Helmand over the last four growing seasons. The data from remote sensing will be used to examine the degree of crop diversification in the different sites and how this has changed over the period of the Study. The results of fieldwork conducted between

May 2008 and November 2010 will be used to develop a more detailed picture of the extent of crop diversification in the different research sites, as well as to investigate diversification into the non-farm sector and the nature of employment. Finally data from household interviews will be used to explore access to public goods and social protection mechanisms and how this varies across the different research sites.

To help structure the rest of the paper, as well as to identify the most salient themes concerning livelihood resilience that stems from the data, the twenty three research sites in central Helmand have been classified into three distinct zones. The first zone is located around the environs of urban centres. It is characterised by the high degree of income diversification amongst the population with the majority of households drawing on sales of a multitude of different crops as well as non-farm incomes. This area has seen progressive reductions in opium production since 2007 and has all but abandoned opium production in the 2010//11 growing season. Both public and private investment are concentrated in this zone and have offered employment opportunities as well as public services which appear to have provided some support to the minority of farmers who have not diversified their crops and continue to substitute wheat for opium production

The second zone is north of the Boghra canal. This is an area that is heavily dependent on opium production and where the population shows little evidence of other sources of income. Agricultural production comes at a high price due the need for tubewells (with concomitant establishment and recurrent costs), fertiliser inputs, and high transport and transaction costs associated with travelling to the markets in the provincial centre. There is little evidence of the population having access to non-farm income and opium continues to

be cultivated extensively within this zone. Public goods are not available and development assistance is only obtained by farmers within the zone who have access to patronage from those in the canal command area. While under the control of the Taliban, the population in this zone does not perceive itself as experiencing the levels of violence that the population in the canal command area is exposed to. Despite lower levels of opium poppy cultivation this season the population in this area anticipates a rise in their income and standard of living due to the dramatic rise in opium prices over the last twelve months.

The third zone is an intermediate zone located between the environs of the urban centres and the area north of the Boghra canal. There are some signs of agricultural diversification in this zone but it remains limited. There is evidence of dramatic reductions in opium production in the 2010/11 growing season. However, opium has largely been replaced by heightened levels of wheat production and increases in the amount of land allocated to cash crops such as cotton, melon and water melon. Insecurity constrains livelihood options, inflates living costs and exposes households to risk. Development investments are being made in this area but access is largely a function of government patronage and the benefits are constrained by Taliban intimidation. This is an area where the population is exposed to high levels of risk primarily related to the conflict. In this zone some of the population is already showing signs of economic distress and most anticipate a fall in their income and living standards in the 2010/11 growing season.

The rest of this section will discuss each of these zones in turn and examine the resilience of livelihoods in each, as well as the sustainability of the current reduction opium poppy cultivation in these areas.

5.1 Zone 1: The environs of the urban centres

There are a number of research sites which show far higher levels of crop diversification and better access to non-farm income than any others. These are Bolan, Qala Bost (RS22) and Mohajerin (RS23) in the district of Lashkar Gah, Sra Kala (RS16) in Nahre Seraj district and Khalaj (RS12) in the district of Nawa Barakzai. Bolan (RS5), Qala Bost (RS22) and Mohajerin (RS23) are within eight kilometres of the city of Lashkar Gah; Sra Kala (RS16) is in the environs of Gereshk; and Khalaj (RS12) is the district centre of Nawa Barakzai (see Figure 1). These are areas that have been cultivated for centuries, have good soils, strong market linkages and where development assistance has been concentrated over the last few years; they are not dependent on opium production, and generally livelihoods have shown resilience despite the population's exposure to high wheat prices (2007/08), violent conflict (2008-2009) and the imposition of a ban on opium production over the period of this Study (2008-2010).

5.1.1 Livelihood diversification

Two major changes in cropping patterns can be noted in this Zone: the first is the continuing decline in the amount of land cultivated with opium poppy in each of the research sites, the most dramatic of which occurred in 2008/09 in Khalaj (RS12); the second is the dramatic increase in the amount of land allocated to wheat in the same year. While some of this expansion was at the expense of opium poppy significant amounts of land that had been cultivated with horticultural crops in Bolan (RS5), Sra Kala (RS16), Mohajerin (RS23) and Qala Bost (RS22) in 2007/08 were shifted to wheat the following year. The subsequent return to horticultural production in 2009/10 highlights

the impact of the significant rise in wheat prices in late 2007 and 2008.

In reviewing the imagery of the sites in this Zone it is important to recognise that there has consistently been a wide range of crops cultivated in this Zone in the winter, spring and summer seasons. No single cash crop dominates; instead, farmers typically cultivate a range of different vegetables and legumes, alongside wheat in the winter and maize in the summer. It is not unusual for farmers to cultivate five different crops over the year with some farmers cultivating as many as nine; and as opposed to other parts of central Helmand there is a tendency to maximise the use of land and not leave land idle during the fall. For example, in Qala Bost (RS22), Bolan (RS5) and Sra Kala (RS16) short season crops, such as celery, turnip, water cress and spinach, are grown prior to the planting of spring crops. It is also possible to find a number of farmers in this Zone that focus exclusively on cash crop production and do not cultivate either wheat or maize.

Cash crops such as melon and water melon are grown extensively in the spring, covering as much as forty per cent of the land of some farmers in this Zone in the 2010/11 growing season. A few farmers persist with a lower yielding summer crop of melon and/or water melon but these tend to be a minority and have often planted the crop following a winter crop of either wheat or opium poppy. Tomato, egg plant, potato, cucumber and okra are common spring crops. Gandana is also becoming an increasing popular crop, offering multiple harvests throughout the year.

In the summer maize is grown by the majority of farmers but typically covers only one third of cultivable land; considerably less land than it does in the areas north of the Boghra canal and in the 'intermediate Zone'. A further

third of household land is cultivated with mung bean during the summer months. Crops such as spinach, cauliflower, radish, bean, and tobacco are grown and can occupy between one and two jeribs of household land during the summer months. Small plots of marijuana are seen, sometimes intercropped with cotton as it is in northern Afghanistan.³⁰ In fact, cotton does not appear to have the presence in the environs of the urban centres that it has in the rest of the canal command area except in Sra Kala where it is grown with marijuana.

Each of the research sites in this Zone benefits from its proximity to urban centres and the market for fresh vegetables. The population benefits from the sale of cash crops and better access to non-farm income than in other parts of the canal command area and in the area north of the Boghra canal. Farmers in the environs of the urban areas sell an expansive range of cash crops (see Table 5). Since late 2009 security has improved on the roads to market and predation by the Afghan National Police is not as extensive as it was before. Traders purchase agricultural products at the farmgate in Bolan (RS5) and Qala Bost (RS22). Farmers also transport their products to Lashkar Gah and Gereshk using their own vehicles or by hiring a ziranj, tractor or car locally. Some households have purchased shops or handcarts and sell their own vegetables in the city.

³⁰ In Balkh it is claimed that the marijuana crop deters telia, an insect that attacks the cotton crop.

Table 5: Gross returns reported on crops in the environs of the urban centres of Lashkar Gah, Gereshk and Khalaj in the 2009/10 growing season (Afs/jerib)

Season	Crop	Area				
		Bolan	Mohajerin	Qala Bost	Sra Qala	Kalaj
Fall						
	Spinach	25,000	38,000	-	10,500 - 28,000	-
	Wheat	10,800 - 12,000	9,000 - 11,500	9,450 - 11,500	9,450 - 11,500	14,000 – 16,560
	Cucumber	42,000	40,000	-	-	
	Turnip	-	-	-	-	25,000 - 30,000
Spring						
	Melon	18,500 - 45,000	20,000 - 50,000	40,000	37,500 - 55,000	20,500 - 32,000
	Water melon	-	-	30,000	28,000	21,000 - 30,000
	Potato	25,000	43,300	30,000	32,000	25,000
	Onion	-	32,000 - 45,000	32,000	31,000	-
	Tomato	35,000	25,000	25,000	24,000 - 32,000	-
Summer						
	Maize	6,800 - 8,500	6,400 - 8,000	6,400 - 8,000	6,000 – 9,000	4,400 - 6,500
	M/Bean	8,700 - 16,000	8,100 - 15,500	8,700 - 16,000	8,700 - 16,250	8,400 - 14,000
	Water melon	-	-	-	10,000	19,000
	Melon	-	-	-	-	22,000
	Cucumber	-	-	-	18,000	-
	Okra	35,000	-	-	-	-
	Cauliflower	-	55,000	-	-	-

Table 5: Gross returns reported on crops in the environs of the urban centres of Lashkar Gah, Gereshk and Khalaj in the 2009/10 growing season (Afs/jerib)

Season	Crop	Area				
	Onion	-	12,000	-	-	-
	Bean	-	-	-	12,000	-
	Carrot	-	2,500	-	-	-
	Radish	-	-	-	11,500	-
	Celery	-	-	-	24,000	-
	Egg plant	-	-	-	20,000 - 22,000	-
Year round						
	Alfalfa		6,000			
	Gandana	-	-	28,000	-	-

During May and November 2010, both traders and farmers in this Zone reported an increase in the demand for fresh vegetables in Lashkar Gah citing the growth in the civilian population and the increased presence of Afghan National Security Forces as the primary reason. In Gereshk traders report that improved security on the roads north and an increase in the demand for agricultural products in the northern districts has led to increasing amounts of trade to Musa Qala and Sangin. Improvements in the security on Highway One to Kandahar city have also aided trade in 2010. This growth in demand and improved trading conditions in Lashkar Gah and Gereshk in 2010 follow on from more challenging years in 2008 and 2009, blamed on insecurity and the fall in sales associated with the rise in wheat prices and falling levels of opium production.

The population in this Zone has also gained greater access to non-farm income due its proximity to the cities of Lashkar Gah and Gereshk. In November 2010 more than half of those interviewed in this Zone had a family member working in the non-farm sector. Some farmers have family members with shops in the bazaar or salaried employment with the government, including in the Afghan National Police. Others are employed in the private sector working in hotels, restaurants, shops or working as mechanics. There are also increasing opportunities for wage labour both skilled and unskilled, including in the construction industry. In Khalaj (RS12) over half of those interviewed worked in donor-funded cash for work programmes in 2010.

A popular diversification strategy in this Zone has been to purchase a vehicle to use as a taxi or a ziranj to transport passengers or goods around the city. Farmers reported financing these purchases through the sale of cash crops such as opium, as well as livestock, and in some cases by incurring debt. Those

working as drivers report an increase in revenues during the opium poppy harvest season due to the high demand for transport to rural areas.

Other businesses also report that they continue to benefit from the multiplier effect of the opium economy despite the negligible levels of cultivation within the area. Respondents owning shops, as well as the wheat and vegetable traders interviewed, gained from increased sales in part due to the disposable income generated by the opium economy in the province. Farmers in Mohajerin (RS23) and Sra Kala (RS16) also report sending family members to neighbouring districts and to Kandahar and Farah to work during the opium harvest.

Direct benefits from the production of opium are now less apparent in this Zone. Cultivation is largely limited to the more inaccessible areas. None of those interviewed in Bolan (RS5) and Qala Bost (RS22) in November 2010 had grown opium poppy in the 2009/10 growing season or were growing it in 2010/11r. In Moharjerin (RS23) only two respondents cultivated opium last year; both had only five jeribs of land and cultivated only one jerib of opium poppy. Neither had planted opium poppy in the 2010/11 growing season. In Khalaj (RS12) in Nawa Barakzai opium poppy was cultivated by those with land some distance from the district centre in the 2009/10 growing season but most claimed their crop had been destroyed. None reported that they had planted opium in the 2010/11 growing season.

In Sra Qala (RS16) some cultivation persisted in the 2009/10 growing season but farmers complained that they had had been compelled to destroy their crop by the authorities. One farmer reported that he had been imprisoned until his family destroyed his crop and had paid a 30,000 PR fine. Despite

these efforts there are reports of some residual cultivation in the 2010/11 growing season in Sra Qala (RS16). A respondent in Qala Bost (RS22) claims to have returned to opium production in the 2010/11 growing season. He was unsure whether his crop would be destroyed or not but had an outstanding loan of 200,000 Afs that required repaying. He had used this money to purchase a car which he used as a taxi, earning on average 400 Afs per day. While he had income from his taxi and from the cultivation of tomato, gandana and potato, this respondent saw little option for the repayment of his loan but to return to opium production in the 2010/11 growing season.

5.1.2 Public Goods and Social Protection

Those interviewed in this Zone are generally beneficiaries of a number of different public goods, including education, health and in many cases some form of agricultural support. Farmers highlight the advantages of being near to the city and having their children educated. For example, the children of more than half of those interviewed in this Zone in November 2010 attended school or madrassa; and many indicate that both boys and girls are attending school.

Development assistance has also been concentrated in the urban centres of Lashkar Gah, Gereshk and more recently Khalaj (RS12). Agricultural inputs such as wheat seed and fertiliser have been distributed each year since October/November 2008. In the spring of 2010 further assistance was provided in the form of maize seed, fertiliser and vegetable seeds and polytunnels. More than half of those interviewed in November 2010 had received wheat seed and fertiliser in the fall of 2010, as well as in previous years. Farmers also point to recent improvements in the security situation: *'In the past we could not go to Lashkar Gah because of the Taliban, now*

the number of ANA and ANP has increased we are not afraid of the Taliban'.

However, while public services are more available, respondents complain about the quality of services and problems of access for more marginal groups. For example, the primary reason for not attending school related to the socio economic position of the household. In Sra Kala (RS16) and around the city of Gereshk there was a higher incidence of children studying in madrassas and a number of complaints about the poor quality of teaching. Health provision is available in Lashkar Gah, Gereshk and in Khalaj (RS12); however, it was often referred to as of 'poor quality' and not as well as perceived as education services. Respondents with family members with serious injuries or illnesses typically travel to Kandahar and Quetta for treatment.

Farmers also report some incidences of Taliban intimidation of those in receipt of government or international assistance, and even refer to negotiations with local Taliban commanders to allow education facilities or women's vocational programmes to continue. Despite these incidents the population typically has better access to services than in the other zones covered by fieldwork and is not as subject to the intimidation and patronage that are far more apparent in the rest of the canal command area.

Respondents in this Zone who have sufficient and varied sources of income and have avoided shocks, generally remained supportive of the government's efforts. In many cases the combination of crop diversification and non-farm income had allowed them to prosper despite the abandonment of opium poppy, and when combined with the concentration of public goods of improved security, education and health provision and agricultural support,

these respondents believed that their situation would improve over the course of the 2010/11 growing season. The concentration of development efforts and the economic opportunities around Lashkar Gah in the villages of Bolan (RS5) and Qala Bost (RS22), and in Khalaj (RS12) in Nawa Barakzai are reflected in the more positive attitudes to the government.

However, there were also a small number of cases of farmers who expressed little support for the government. These individuals typically had sizeable outstanding loans incurred due to marriage commitments³¹ and/or sickness or injury within the family, and did not see how they would be able to meet their financial obligations even with the non-farm income and the sale of cash crops they had available. Others had family members who were sick but could not afford treatment. This particular group of respondents expressed frustration that without opium production or assistance from the government their situation would deteriorate further. There were also a number of cases in Sra Kala (RS16), near the city of Gereshk, where there was continued resentment associated with the 2009/10 eradication effort and the perceived failure of the government to deliver on its promises. Some of these farmers persisted with opium poppy cultivation in the 2010/11 growing season and felt resentful at the prospect that their crop could be destroyed again. These examples highlight the challenges for the government and its international backers where they are perceived to have exposed the population to greater risk, a point that will be

returned to while examining developments in the intermediate Zone.

5.2 Zone 2: North of the Boghra Canal

The exact chronology of the settlement of the land north of the Boghra canal remains unclear. Reports suggest that land was initially brought under cultivation post 2002 through a series of land grabs by powerful commanders, many of them linked with officials in the central and provincial government. It is reported that the land acquired by these commanders was subsequently gifted to their families, associates or sold.

³¹ Marriage debts might include outstanding bride payments known as walwar, or the costs of the wedding ceremony itself. Loans for walwar ranged from 300,000 to 400,000 Afs. The total cost of marriage in Helmand can often range between 800,000 and 1,200,000 PR.

Box 5: The Transition out of opium in the environs of the urban centres

'Last year my son worked and got 200 PR (US\$ 2.38) per day but this year he has a job with a construction company and is getting paid 500 PR (US\$ 5.95) a day. On one side we have lost poppy but on the other my son has gained a well paid job. We now have fruit and meat once a week. I have now bought two carpets worth 12,000 PR (US\$ 143) each and crockery for 9000 PR (US\$107)' Qala Bost, May 2010

'When poppy was banned two years ago we had a lot of problems. I sold two jeribs of land (leaving 9 jeribs) for 120,000 PR (US\$ 1,428). I bought twelve goats. After six months there were two kids for every goat and after one year thirty six goats. I sold some of them and bought a ziranj for my son. Each day he earns 300 to 400 PR (US\$3.57 to US\$ 4.76). Now I have married my son; we have a lot of milk and yoghurt for the family to sell; we have income from the ziranj and enough wheat to eat. I am happier now than when we had poppy – it [poppy] was not so good' Qala Bost, May 2010

'I am happy with life as I can buy fruit and meat. My two sons and two daughters go to school in Lashkar Gah. I want to support the government. In the future I will also cultivate vegetables and continue my life' Bolan, Nov 2010

'I have cultivated poppy for thirty years but there was no improvement in my life. I did not get any capital. When the government announced a ban in 2004 I stopped growing poppy and started growing vegetables. At that time I had only three jeribs of land in Qala Bost. When I cultivated vegetables and got a yield I saw that it was better than poppy. After two years I bought two jeribs of land, a cow and two sheep, and built some more rooms in my house. I also married my two sons. Now I have two shops in Lashkar Gah bazaar and I am very happy with my life. Based on my experience vegetables are better than poppy. I have one daughter who is married and in Charburjak district in Nimroz. One month ago I went there. After a few days I became familiar with the village and the mullah in the mosque. One day when I was in the mosque a Talib asked me "Where are you from?" I told him that I was from Lashkar Gah. "You come from small America!" he said. He asked me "What is happening there? Did you cultivate poppy this year?" I told him that I had not grown poppy for several years. The Talib said "We know this is because you are American. America has distributed a lot of dollars to you so that you will not cultivate poppy!" I told him "That this is your idea but I am not American. I get more benefit from vegetables." He asked me how this was possible. I explained my story to him and that this year I had received 120,000 PR from one jerib of Tomato. The Talib did not accept this. He said "It was the force of the dollar that banned poppy' Qala Bost, Nov 2010

Reports from the area suggest that this initial land grab during the early years of the Karzai government has been followed up by a dramatic increase in the amount of land settled in 2007. Data derived from remote sensing suggests that the amount of land under cultivation in this area has increased from 834 hectares in 1999 to 11, 579 ha in 2007; and that between 2007 and 2010 there was a further one hundred and thirty per cent increase in the amount of land under cultivation in this area north of the Boghra canal (see Figure 9). Evidence suggests that households settling land north of the Boghra canal during this later stage have been drawn both by the success of those who moved into the area in the initial years and by increasing levels of violence in the canal command area. The vast majority were landless and had been sharecropping land in the canal command area before settling north of the Boghra. Some originate from the districts of Nawzad and Washir and moved to the canal command area during the drought in the final years of the Taliban regime, before relocating north of the canal after 2002.

Most of those located north of the Boghra would seem to have links with those who have already settled in the area, either through the commanders who captured the area during the initial phase of settlement post 2002, or through relatives who have taken or bought land subsequently. Many of those moving into the areas claim to have existing tribal claims over the land. Fieldwork from the 1970s suggests that the area between the Boghra and Highway One had a number of wells that were established by different tribal groups and used as winter camps by the migratory groups of Kuchi (Scott 1980; 29).³² It is reported that there are clear

patterns of ownership over these established wells which belonged to the Nurzai, Ishaqzai, Barakzai, Alikozai, Khanikhail and Dagai. Fieldwork in Shna Jama (RS19) and Dashte Shin Kalay (RS18) reflects these tribal claims over the land with the prevalence of Noorzai, Ishakzai, Alikozai and Barakzai amongst those interviewed.

5.2.1 Livelihood Diversification

Sources of cash income north of the canal are limited and the population is heavily dependent on the revenue from opium sales. There is little evidence of rural households with non-farm income opportunities. Some revenue is earned through the sale of livestock but this is limited.

The land north of the canal is irrigated by tubewells (see Figure 14). During the winter season up to one third of the land is left idle; this increases to over one half in the summer. Wheat and opium poppy occupy around ninety per cent of the land that is actually cultivated in the winter months. A small proportion of land is dedicated to fodder crops, typically alfalfa. Wheat is grown for home consumption and not for sale; it is typically grown at a level that is commensurate with household food requirements.³³ Wheat yields are lower than in the canal area at around fifty to seventy seers per jerib, as opposed to between ninety and one hundred and thirty seers.

³² Richard Scott (1980) Tribal and Ethnic Groups in the Helmand valley Afghanistan Council, the Asia Society, Occasional Paper #21.

³³ In November 2010 wheat was grown by all but two of the farmers. These two households had the two smallest land holdings of those interviewed north of the canal with only 4 jeribs and 5 jeribs. The household with four jeribs – an owner cultivator - monocropped opium poppy in both 2010 and 2010/11. The farmer with five jeribs sharecropped four jeribs of opium poppy and one jerib of alfalfa.



Figure 14: Tube well from north of the Boghra Canal.

Opium poppy is cultivated by all those interviewed north of the Boghra canal (n30), and in the 2010/11 growing season typically covered around half of the cultivable land. Despite the dramatic increase in the farmgate price of opium over the previous twelve months most of those interviewed (n 21) reported that the amount of land dedicated to opium poppy would actually fall in the 2010/11 growing season. This was largely attributed to the cultivation of insufficient wheat for household consumption in the 2009/10 growing season, although farmers with land in the southern parts of Dasht e Shin Kalay (RS18) did express concerns about the proximity of the military base on the Boghra canal and the possibility of eradication. Most farmers were looking to ensure food security through the cultivation of sufficient wheat

and the cash income they could derive from what is a considerably higher value opium crop than it was twelve months ago.

At the time of planting in 2010/11, the price of opium in the area north of the Boghra canal had reached as high as 120,000 PR/man, compared to between 18,000 and 20,000 PR/man in the same area in November 2009.³⁴ Opium was sold within the village in this area. Those interviewed complained of lower opium yields in the 2009/10 growing season due to disease but anticipated a rise in their income and quality of life during 2011 due to the dramatic rise in opium prices. In contrast to those in the canal command area, there

³⁴ Prices in the desert area north of the canal are higher than in the canal command area due to the premium quality opium.

were no complaints from respondents north of the Boghra canal with regard to deterioration in either the quality or the amount of food currently consumed or what they anticipated consuming later in the season.

For most farmers north of the Boghra canal, as much as half of the land they cultivate in the winter is left fallow during the summer months. Maize is the dominant crop in the summer, grown by all those interviewed and typically occupying on average sixty per cent of the cultivated land. Mung bean is grown by some farmers but it is not as common as in the canal command area and is grown far more frequently in Dasht e Shin Kalay (RS18) than in Shna Jama (RS19). Melon is cultivated but only in small amounts, and farmers report that this is a low yielding summer crop grown for family consumption. Small amounts of cotton were grown, only by a minority of those interviewed (n2). The yields of summer crops are lower than in the canal area. Respondents report yields of only 50 seers per jerib for maize and around 80 seer for mung bean. Cotton yields were only 50 to 60 seers per jerib. Alfalfa is grown throughout the year but typically occupies only one half of one jerib to one jerib of the land of those cultivating it north of the Boghra canal (n19).

The sale of licit agricultural crops is largely confined to maize, mung bean and small amounts of cotton. Only one farmer reported that he had sold wheat, selling 300 seer in Shna Jama for 80Afs/ seer. Some farmers report a small surplus but a reluctance to sell the crop due to concerns over food security. Maize is consumed by the household, but part of the crop is sold to kuchi travelling through the area for between 55 and 70 Afs/seer. Those willing and able to travel to Lashkar Gah reported receiving from 80 to 85 Afs/seer

for their maize crop, but few reported doing so.

A minority of farmers interviewed sold mung bean - more from Dasht e Shin Kalay than in Shna Jama. Mung bean is typically sold in Lashkar Gah for between 280 and 320 Afs/seer. Cotton was grown by only two of those interviewed, and was sold mixed with seed in Lashkar Gar for between 260 and 280 Afs per seer. Despite the considerably lower returns, cotton was grown as a spring crop – cutting across the opium poppy season and reducing the amount of land available for opium production. Farmers complained of the risk of mines on the roads, fighting between ISAF/GoIRA and Taliban forces and the threat of intimidation from the ANP when travelling to market in the canal command area.

Only one respondent in the area north of the canal had a member of the household with a non-farm income. This individual was a mechanic in Lashkar Gah earning 500 PR per day. All the other households interviewed relied solely on agricultural income, primarily opium production.

5.2.2. Public Goods and Social Protection

Those living in the area consider the territory north of the Boghra canal to be under Taliban control and believe that the government has little influence. It was claimed that the Maliks from the area did not live in the village but reside in Lashkar Gah, fearful of Taliban reprisals. During fieldwork in November 2010, armed men could be seen in the village of Shna Jama (RS18). In Dasht e Shin Kalay (RS18) the Taliban presence was a little more circumspect and weapons are typically not on display. The Taliban are nevertheless seen as the dominant force in the village.

There are no public services in the area north of the canal, and government presence appears to be limited to the actions of the

security forces. A number of respondents (n4) did report that they received agricultural inputs prior to the 2010/11 growing season, but this was largely through their contacts in the canal command area. Where inputs were received, respondents sold them in Nad e Ali at the point of distribution, fearful of the repercussions from the Taliban.

Although the public sector is largely absent from the area north of the Boghra canal, there

is increasing provision by the private sector. Markets such as Naray Manda and Shawal that lie on the 'desert' side of Boghra canal appear to have expanded since 2009 (see Figure 15). Respondents on both sides of the canal report that this has largely been due to the growing population north of the Boghra and their increasing purchasing power.

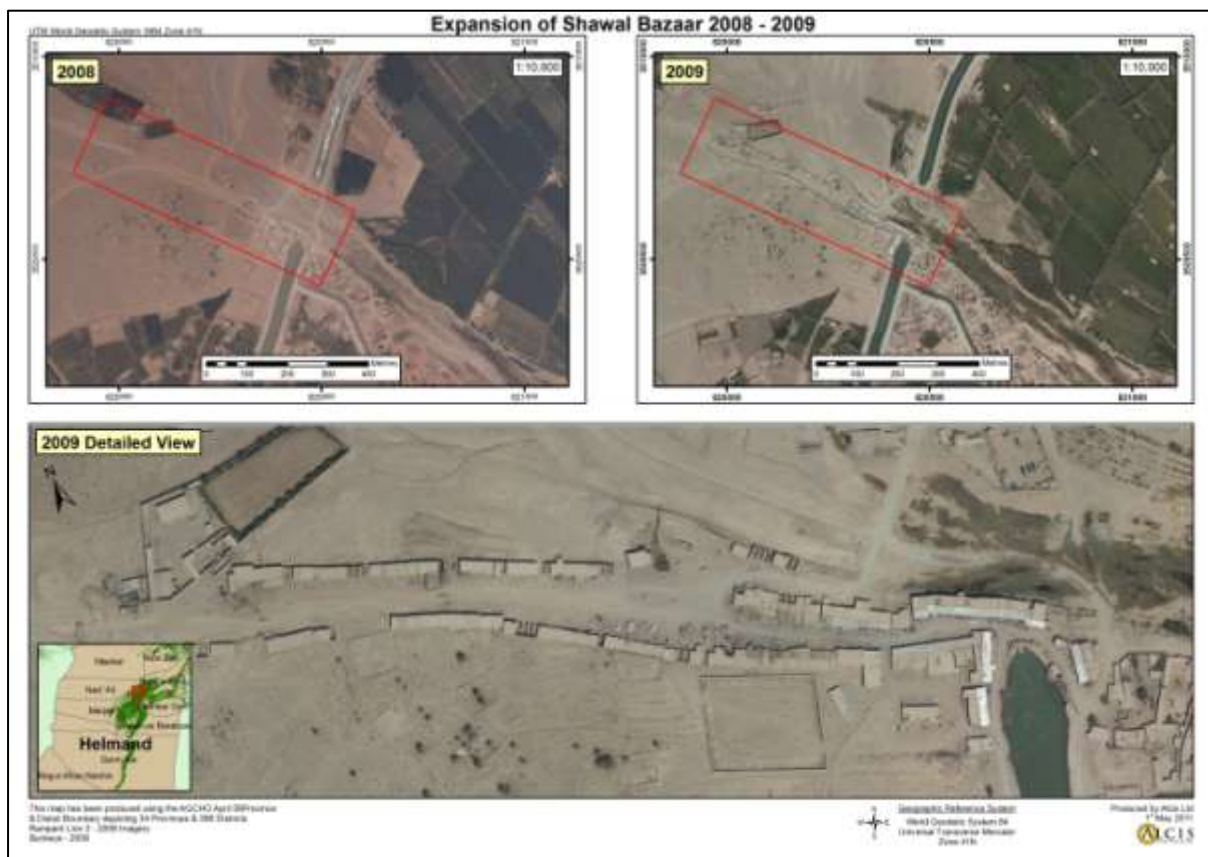


Figure 15: Expansion of Shawal Bazaar 2008-2009.

[To view in high resolution or download this image click here](#)

In sum, in the areas north of the canal livelihoods are resilient as long as there is opium production. Were opium poppy to fail or be destroyed, the population would lose its primary source of income and its capacity to irrigate the land to produce the food crops - which can occupy more land than opium poppy. Farmers in these areas have limited exposure to the government and what they

do have is not positive. Currently they seem content to live relatively secluded existences north of the canal rather than risk intimidation and violence in the canal command area. Efforts to ban opium production, particularly through crop eradication, are likely to have far reaching negative consequences given the population's

dependence on the crop and the dominance of the Taliban in the area.

5.3 Zone 3: The Intermediate Zone

The intermediate Zone is located within the canal command area but beyond the environs of the urban centres of Lashkar Gah, Gereshk and Nawa Barakzai. It consists of sixteen research sites: Aqajan Kalay (RS1), Zarghun Kalay (RS2), Do Bandi Kalay (RS3) Loy Bagh (RS4), Dashte Basharan (RS6), Luy Bagh (RS7), Khwaja Baidar (RS8), Chanjir Dashte (RS9), Keshal Kalay (RS20) and Shin Kalay (RS21) in the district of Nad e Ali; Dashte Aynak (RS10), Aynak (RS11) and Shersharak (RS17) in Nawa Barakzai; Marjeh A2 (RS14) and Marjeh F4 D5 (RS13); and Malgir (RS15) in Nahre Seraj. While opium poppy was cultivated, livelihoods in these areas proved resilient to shocks and stresses. However, without opium poppy there are growing signs of economic distress and of households adopting coping strategies that will undermine their future earning capacity.

5.3.1 Livelihood Diversification

This is a Zone in which despite agricultural potential there is little evidence of crop diversification. Wheat and, until recently, poppy has dominated the landscape, covering between eighty and ninety per cent of the land cultivated in the winter season. There has been growing evidence of farmers shifting to a low risk - low return cropping pattern in this Zone in the 2009/10 in the 2010/11 growing seasons as the ANSF and international forces have consolidated their position in central Helmand and the provincial authorities counter narcotics campaign has taken effect. In the absence of opium poppy farmers have typically cultivated increasing amounts of wheat in the winter, followed by a combination of cotton, melon and/or water melon in the spring, and a summer crop of maize and mung bean. Those with livestock typically cultivate no more than one jerib of

alfalfa. None of these crops offers high returns, but they are easily stored and are not as vulnerable to damage during transportation.

There is evidence that levels of opium poppy cultivation have been falling in most of the research sites in this Zone since the 2007/08 growing season,³⁵ initially replaced by wheat in 2008/09, and subsequently by a shift to a combination of both increased levels of wheat and growing amounts of cotton, melon or water melon, depending on the location. Reductions in opium production have also prompted a move to leave land fallow in the fall and plant cotton, melon and water melon in the spring, rather than cultivate it as a lower yielding summer crop following either wheat or opium poppy. Consequently, as the imagery shows there has been a marked increase in the amount of land left fallow in a number of the research sites in the intermediate Zone, particularly in the 2009/10 growing season when wheat prices began to fall and when there were increasing pressures to reduce levels of opium production in the more accessible areas.

For example, in areas such as Luy Bagh (RS7) the amount of land left fallow between October and March increased from four percent in 2007/08 to thirty two percent in the 2009/10 growing season. Much of this land was planted with cotton in spring, and it is anticipated that more cotton will be cultivated in the 2010/11 growing season with the growing pressure for further reductions in opium production. Fieldwork in November 2010 suggests that with significant reductions

³⁵ While levels of opium poppy cultivation fell in all of the research sites between 2007/08 and 2008/09, only Doh Bandi Kalay (RS3), Marjeh F4D5 (RS13), Marjeh 2A (RS14) and Shin Kalay (RS21) showed an upswing in the amount of land cultivated with opium in the 2009/10 growing season.

in opium production in the intermediate Zone in the 2010/11 growing season, other research sites, such as Zarghun Kalay (RS2), Marjeh F4D5 (RS13), Marjeh 2A (RS14), Shin Kalay (RS21), Kheshal Kalay (RS20), and parts of Malgir (RS15), will see increased levels of wheat cultivation in the winter and larger amounts of land left fallow for planting in the spring of 2011.

Many farmers in this Zone are conscious that their economic prospects look bleak without opium production in the 2010/11 growing season. This is largely due to the prevalence of wheat cultivation amongst respondents, and the limited opportunities to generate cash income through the production of cash crops or wage labour opportunities in the area. Fieldwork suggests that there are increasing amounts of wheat being sold in this Zone, but for most farmers it remains a crop to be consumed and given a choice most would not look to produce a surplus for sale due to the limited market and low returns. Of those interviewed in late 2010, one-third produced a surplus of wheat and sold it. Two thirds of this group sold five hundred seers or less, earning around 46,000 Afs.

Cotton tends to persist in this Zone despite low prices and returns. Gross returns from cotton in 2010 ranged from 16,000 to 22,000 Afs per jeribs. Alfalfa continues to be favoured due to its tolerance to salt, the role it plays in improving soil fertility and its use value as a fodder crop for livestock. In the summer, maize and mung bean occupy on average seventy five per cent of the land cultivated in this Zone. Yet in 2010 mung bean earned only 14,000 to 16,000 Afs per jerib, while the returns on maize could be as little as 6,000 to 8,000 Afs per jerib.

Water melon is one of the few crops that can generate a reasonable return, with a spring crop of watermelon earning between 45,000

to 60,000 Afs per jerib in 2010, compared to a summer crop of only 25,000 to 35,000 Afs per jerib. However, reflecting market constraints the cultivation of these crops rarely exceeds twenty five per cent of the land cultivated by a single household and typically consists of no more than two jeribs.

Evidence of an expansion in the cultivation of the kind of high value horticulture that is seen in the environs of Lashkar Gah and Gereshk is limited within this Zone. In parts of Malgir (RS15) and in Zarghun Kalay (RS2) there are growing signs of agricultural diversification, including cultivation of spinach, cucumber, onion and potato but it remains limited in scope and tends to be concentrated in those areas nearest the bazaar. This lack of diversification is despite efforts by development agencies to encourage the production of high value horticulture through provision of agricultural inputs such as improved seeds and polytunnels. Farmers in this Zone typically cite the lack of sufficient demand for these crops in Lashkar Gah and Gereshk, low market prices, as well as high transport and transaction costs, rendering them uncompetitive compared to those farmers living nearer the cities such as Bolan (RS5) and Qala Bost (RS22).

The dearth of income earning opportunities in the intermediate Zone is further exacerbated by a shortage of employment and wage labour opportunities in the area. For example, less than a quarter (n49) of those interviewed in this Zone had a member of the household with a salary or earning a daily wage. Low levels of employment amongst respondents in this Zone would appear to be a function of the security situation. Those interviewed report an unwillingness to travel to find work, leaving family members alone, given the threat of violence in the area. Those with only one male member of the household of working age were especially constrained

given the cultural context and the fact that it is inappropriate for the head of the household to leave female members of the household and children unattended. Farmers also noted that they were unwilling to work in the districts of Marjeh and Nad e Ali during the opium poppy harvest in April/May 2010 due to the military operations at the time.

Those that did have non-farm income in the Intermediate Zone were typically involved in trade or daily wage labour. Those with a trade often had a village shop, sold vegetables in the bazaar or had a business in Lashkar Gah (n18). Some of these were large business, such as trading in cotton or selling cars, but most only earned around 4,000 to 8,000 Afs a month and this might entail more than one family member working full time. Other income earning opportunities included leasing out tractors (n 4) and the use of cars as taxis (n3) to transporting passengers to Lashkar Gah. Where respondents were more forthcoming about their non-farm income, it was clear that the diversification into these businesses had been funded by opium production. Only two respondents reported that they had a household member with salaried income: one whose son worked for an NGO, and a further respondent with three sons in the ANP.³⁶

Daily wage labour opportunities (n11) were largely limited to Lashkar Gah and Kandahar city and restricted to those households with more than one male of working age. Those with a skill, such as masonry (n2) earned 500 Afs per day, whilst unskilled labourers (n9) were typically paid between 200 and 250 Afs per day. Cash for work (n5) also paid 250 Afs per day but was largely limited to Keshal Kalay

(RS 20) and Shersherak (RS17). Remittances from Iran and Pakistan were potentially more remunerative but infrequent (n5).

In the absence of opium poppy in the 2010/11 growing season and with limited wage labour opportunities in Lashkar Gah it is anticipated that more families will look to send their sons to find work in Kandahar and across the border into Pakistan and Iran to find work. Those without an income but with relatively liquid assets are beginning to sell them. For some this means the sale of opium stocks if they have them, for others livestock, any valuable items that they may have or for those with accumulated debts daughters into early marriage. As early as November 2010 a number of households reported that they had sold their only dairy cow, typically an early sign of economic distress. Those with opium stocks are pleased about the rise in prices that accompanied the blight but are increasingly concerned about the increased capacity of both national security forces and the international military to search their properties and confiscate what is likely to be an important asset in the absence of opium production in the 2010/11 growing season.

5.3.2 Public Goods and Social Protection

Access to public goods, such as health and education, as well as social protection mechanisms, is one way in which households can build resilience and cushion the impact of asset depleting risks. However, farmers in the intermediate Zone describe a situation in which access to public goods and services is typically constrained and always subject to negotiation. For example, respondents refer to a situation in which they have to negotiate with interlocutors from both sides of the conflict, initially to gain access to assistance with both government officials and the village elite, before negotiating with local Taliban commanders with regard to whether that assistance can be actually used.

³⁶ This individual was the only respondent in Luy Bagh (RS6) that reported that he had increased the amount of land with opium poppy in the 2010/11 growing season.

Box 6: Intimidation in Malgir, Nov. 2010

Jan Mohammed came from Dehrawud. His father was a policeman. He was killed by the Taliban one year ago. Jan Mohammed came with his family to Gereshk and got land as a sharecropper. In September he worked for one month as a labourer on a road construction project and received 9,000 Afs. After he was paid Jan Mohammed was arrested by the Taliban. They asked him why he had worked on the project. They beat him and held him captive for two days. They demanded 10,000 PR as payment for his release. Jan Mohammed told them that he did not have the money and that he still had 30,000 PR in unpaid debts in Dehrawud. The Taliban took Jan Mohammed back to his house to get the money. Jan Mohammed had to get a loan from his neighbour to pay the Taliban the money they demanded. Now Jan Mohammed is injured and cannot work because of the beating. He needs medical treatment. He has given his young daughter [seven years old] into marriage for 300,000 PR so that he can pay for his medical treatment and living expenses.

In fact, reports of intimidation by the Taliban within this Zone are widespread (see Box 6). In Malgir (RS15) two respondents reported that threats from the Taliban had led to their family members abandoning the cash for work programme and migrating across the border in search of employment. Another farmer in Malgir (RS15) claimed that he did not risk travelling the twelve kilometres to Gereshk to receive wheat seed and fertiliser for fear that he would be punished by the Taliban. Another respondent in Malgir (RS15) reported that he had been fined 60,000 PR for receiving wheat seed and fertiliser. Others reported that they had received assistance

but did not speak openly about it for fear of reprisals.

In Marjeh A2 (RS14) there were reports of a young man being tied and dragged behind a motorcycle for working on a canal cleaning project. Farmers in the districts of Marjeh and Nad e Ali claimed that they had received vegetables seeds along with poly tunnels but claimed they had stored the poly tunnel in their houses unable to use it for fear of punishment by the Taliban. A review of aerial imagery supports these claims suggesting that despite the distribution of over 50,000 polytunnels across the districts of Lashkar Gah, Nahre Seraj, Nawa Barakzai, Nad e Ali and Marjeh their use is limited to a few specific areas, many of which are close to the urban centres or checkpoints or military bases (see Figure 16)³⁷. In Marjeh the tunnels would appear to be restricted to the area close to the military base to the north of the district (see Figure 17). Wheat seed and fertiliser, distributed as part of the 2010/11 Food Zone Programme, was also subject to intimidation with some farmers selling the seed on at the point of distribution rather than risk returning to their village with it and risk being punished by local Taliban commanders (see Box 8).

Allegations of corruption against those responsible for the distribution of development assistance, in particular agricultural inputs, are commonplace in the intermediate Zone.

³⁷ These maps are based on a helicopter reconnaissance over central Helmand in February 2011, the ideal time for polytunnels to be used in the production of off-season vegetables.

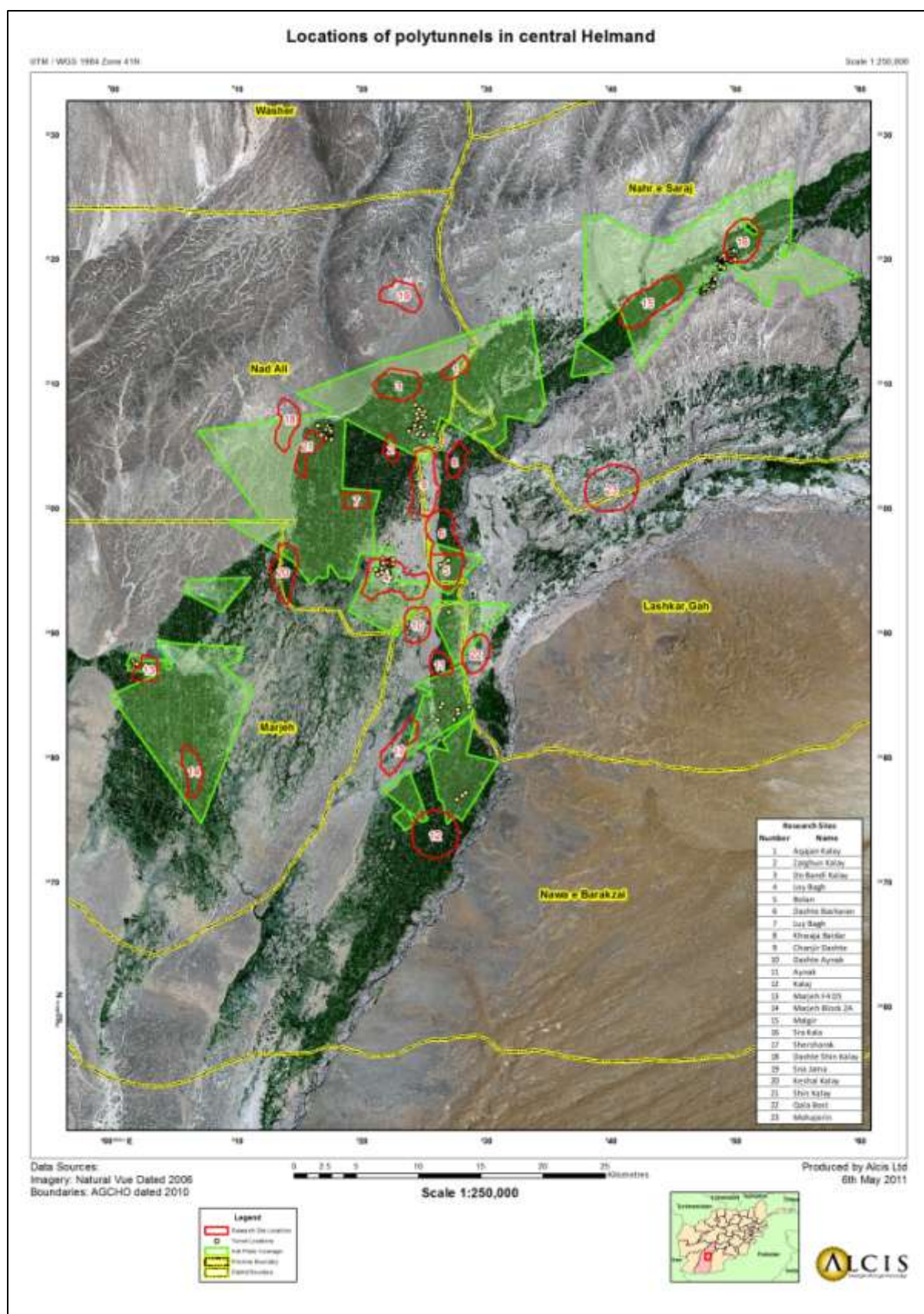


Figure 16: Locations of polytunnels in central Helmand, February 2011.

[To view in high resolution or download this image click here](#)

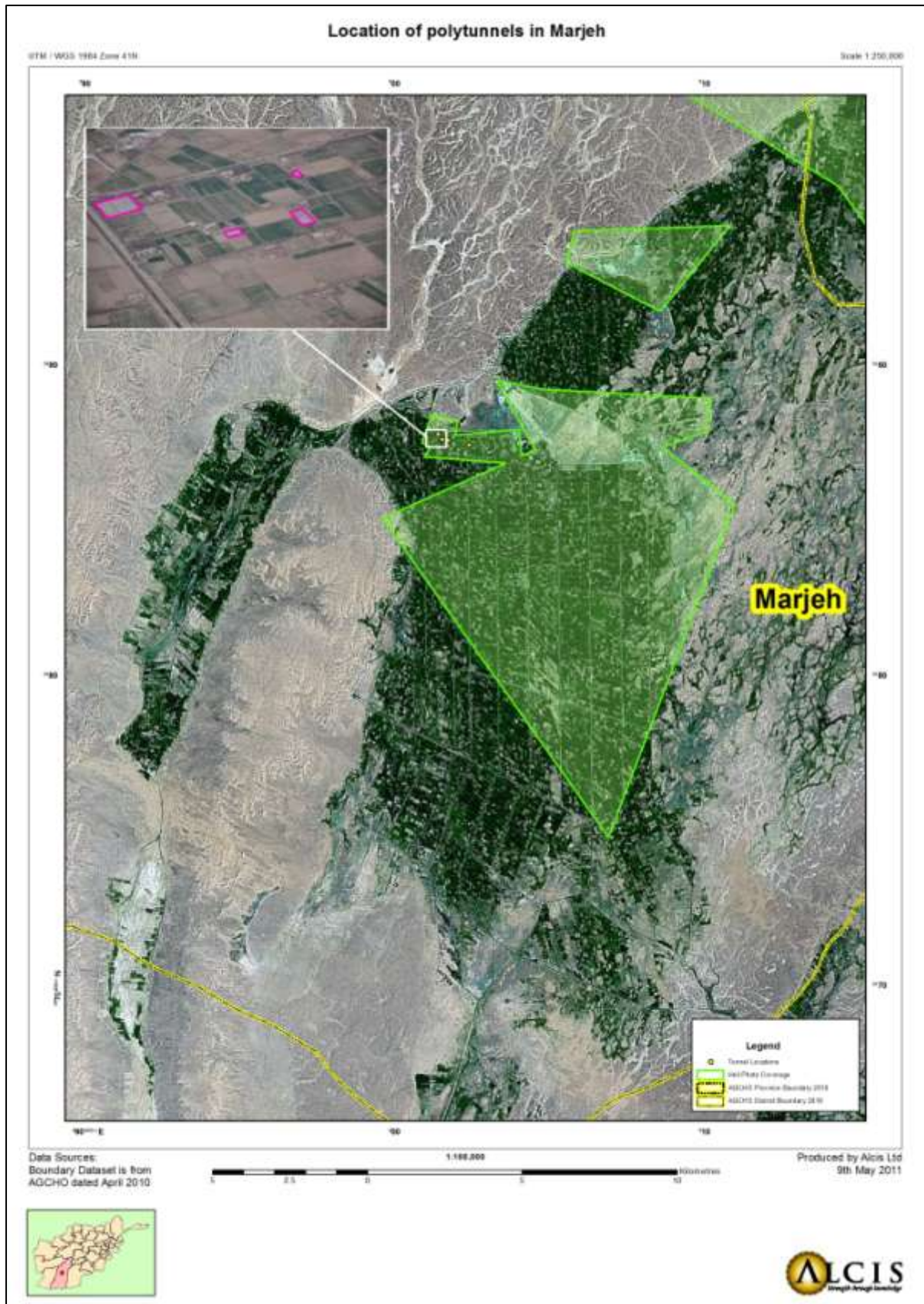


Figure 17: Locations of polytunnels in Marjeh, February 2011.

[To view in high resolution or download this image click here](#)

Respondents suggest that the bulk of assistance is accrued by government officials and the rural elite. For example, imagery of those who have actually erected polytunnels shows that some households have as many as sixty to eighty tunnels, yet it was recommended that those on the beneficiary list should receive only two to four.³⁸ In Luy Bagh (RS6) it is claimed that a local commander received as many as four hundred tunnels. It is also reported that these polytunnels are resold after distribution and end up for sale in the bazaar.³⁹

Those interviewed in this Zone are resentful but fearful. Much of their anger is directed at a government that they believe has failed to protect them and has established patronage systems that concentrate the benefits of development assistance in the hands of a favoured few. Services such as education and health are often dismissed as being of poor quality due to a lack of skilled staff. The vast majority of farmers interviewed in this Zone (n188 of 216) report that their children do not attend school because of the quality of education, fear of the Taliban, suspicion with regard to the type of education offered and the need for their children to help them on the land. Others complain that the nearest school is too far to travel to, particularly given the security situation in the area. Those with sufficient resources send their children to

Lashkar Ghar for education and to Kandahar or Quetta if they are sick or injured.

Complaints against the ANP remain commonplace across this Zone and there were repeated references to the 'poor character' of those who had been sent to work for the government in Helmand following the 2010 military operations. While there were cases where it was reported that complaints to the Governor had resulted in the replacement of locally recruited police, respondents in this Zone typically view those working for the government with disdain. Seizures of opium by the ANP are typically seen as theft and farmers believe they are sold rather than confiscated and destroyed. Examples of rent extraction by the ANP are numerous (see Box 7). The enhanced capacity to enforce a ban on opium within the canal command areas is causing particular resentment towards the ANSF and the provincial administration.

With such limited on-farm and off-farm income opportunities and restricted access to public goods and social protection those most affected by the ban on opium production in the intermediate Zone are those without a non-farm income to draw upon. Households that lost their crop during the eradication campaign in 2010 are even more vulnerable. The loss of stocks through law enforcement activities further reduces a household's capacity to absorb the shock of the ban on opium production in 2010/11.

The high cost of living has added to the economic burden of those who have reduced levels of opium production. Farmers point to the debts that they have incurred due to injury, illness, death, or the damage of their property during the conflict.

³⁸ In Nawa Barakzai, Lashkar Gah, Garmsir, Nahre Seraj and Nad e Ali beneficiaries were to receive only two polytunnels, while in Marjeh beneficiaries could obtain a maximum of four.

³⁹ It is claimed that a farmer who makes a co-payment of 5,500 Afs for a high tunnel can receive a payment of 2,000 PR for each tunnel he resells to a commissionkar upon departing the distribution centre. It is alleged that the polytunnels are often broken down into their constituent parts with the polythene sold in the bazaar and used in the repair or the roofs of Kacha houses and the iron sold to the blacksmith and made into beds, amongst other things.

Box 7: Selling Opium in Nad e Ali, Nov. 2010.

'Twenty days ago in Aynak there were rumours that the American soldiers were searching houses looking for opium. I was worried that the two man [9kg] of opium I had stored in my house would be found. My neighbor told me that I should take the opium to Nad e Ali bazaar where there is a trader who is originally from our village. I travelled with my son to Nad e Ali by motorbike, hiding the opium under my patoo. When I got to the bazaar I got down from the motorbike and went in search of the shop of the trader from our village. When I was walking in the bazaar someone shouted: "Where do you take that Haji Sahib?" I was scared but it was a shopkeeper who wanted to buy it. I went to the man's shop and asked about the price of opium. He said "the price is 90,000 PR per man but I will check [the quality of] it" He paid 92,000 PR per man. He brought tea and food. I asked him: "in our village we are all afraid to have opium but here you are not". He said "Don't ask about this Haji Sahib! Here each shopkeeper pays the Police 6,000 PR each month and when the Americans come to the bazaar the Police tell us to hide the opium and ban it from the bazaar."

The costs of marriage are also high with bride payments of between 400,000 and 700,000 PR, and respondents report an inability to fulfil their wedding obligations in the absence of opium production.⁴⁰ By November 2010 most respondents in the intermediate Zone had lowered their household expenditures through reducing their intake of fruit and

meat, not killing their sheep for landi as is the tradition in winter, and leaving those members of the household who were sick or unwell, sometimes with serious conditions, untreated. There are a few cases (n3) of what would be considered relatively wealth households withdrawing their children from school in Lashkar Gah. These responses suggest growing signs of economic distress within the intermediate Zone and the potential for the opium ban, particularly when coincident with other asset depleting risks, to lead to households adopting coping strategies that will undermine their future earning capacity.

Ultimately the government and Governor Mangal himself are seen as having expended significant political capital on the opium ban and it is increasingly associated with the international presence: *'The foreigners make the ban [on opium] and implement it by Afghan people'*. Some farmers openly discuss their opposition to the government: *'The government is cruel and Allah will destroy them because they destroy the poppy. The people are poor what are they to do?'*; *'Allah will beat the government and remove them. The Taliban was better than the government as they allowed me to cultivate poppy'*; *'If the government remove the Taliban from the area we will get a lot of problems. The government are kafir'*. A smaller group of respondents talk about taking up arms against the government in support of the Taliban: *'If the situation continues I will take a gun against the government'*; *'If I get the chance I will slit the throat of the government people'*; *'If the government continues the ban on poppy maybe a lot of people will join the Taliban'*

⁴⁰ 'It is usual for brideprice payments to be made over several years, thereby requiring a long-term commitment of all household members to a marriage strategy' (Tapper 2006, p103)

Box 8: Distributing Wheat Seed and Fertiliser in the Intermediate Zone

Although farmers in the intermediate Zone have travelled to the district centre or provincial centre to receive the agricultural inputs distributed as part of the Food Zone, programme the views of those interviewed for this Study were often dismissive and sometimes hostile toward the wheat seed distribution. Those who have been more positive about the distribution of wheat seed and fertiliser welcomed free inputs when the price of wheat was particularly high at the beginning of the 2008/09 growing season, even if many did complain that they received the seed after the planting season and remained unsure as to the quality of the seed. However, for most the programme requirement that those farmers that received the wheat seed should abandon opium poppy was seen as unrealistic given the differing roles of opium and wheat in the household economy, the absence of alternative sources of cash income for many recipients, and the prevailing security situation in many parts of the districts of Nad e Ali, Lashkar Gah, Nawa Barakzai and Nahre Seraj.

In areas where the conflict has been at its most acute in the intermediate Zone farmers have considered the provision of wheat seed and fertiliser inconsequential and reflecting poor judgement. Many have considered the scale and nature of the assistance inadequate given the development needs and the security situation in their area. The fact that farmers have had to travel to the district centre to receive agricultural inputs and that they have not been distributed in rural areas has been viewed as indicative of the limited writ of the government. Latterly with the emergence in a market for the resale of the agricultural inputs distributed, farmers have looked upon the wheat seed and fertiliser distribution as a cash transfer mechanism.

Patronage, corruption and insecurity are viewed as the primary factors shaping the distribution and subsequent use of the agricultural inputs provided. The distribution mechanism is largely seen as benefitting those with positions of authority and influence within the village, provincial government and line departments. Farmers believe contacts within the provincial or district administration and with the village elders, or Maliks, responsible for producing the list of beneficiaries as a prerequisite to receiving support from the programme. Typically, the Maliks are accused of producing village lists that favour their own family and relatives. Farmers that are not relatives or do not have a direct relationship with the Malik complain that they are required to pay half of the inputs to the Malik to have their name on the village list and receive the inputs. There are also allegations of more systematic corruption levelled at the Maliks and the authorities involving the submission of fictitious names on lists and the employment of 'wage labourers' to collect the wheat seed and fertiliser for subsequent resale. There are claims from both farmers and the truck drivers involved in transporting the agricultural inputs that the quantities of wheat seed and fertiliser diverted in this way can be significant. It is evident from the comments of respondents in the intermediate zone that the allegations of patronage and corruption associated with the distribution of wheat seed and fertiliser further fuels hostility felt towards those in the rural elite who are seen to be favoured by the authorities, as well as towards the district and provincial administration, particularly amongst those who are not recipients of the assistance.

Box 8: Distributing Wheat seed and Fertiliser in the Intermediate Zone (cont.)

Security has also impacted on the distribution of development assistance particularly in the intermediate Zone. Over the three years of the Study, farmers have consistently claimed that they are fearful of receiving agricultural inputs because the risk that they will be punished by the Taliban. Some report being so intimidated that they do not tell anyone that they have received wheat seed and fertiliser, suggesting that there may be an issue of under reporting by respondents. Others report of being fined and beaten or having the agricultural inputs dumped into the canal or river by local Taliban commanders.

Due to the ban the Taliban have placed on farmers receiving assistance from the government, there have been consistent reports throughout the duration of this Study of farmers repackaging the wheat seed in the district centres. Repackaging has allowed farmers to transport the wheat seed back to their farms without it being identified as assistance from the government or international community. Farmers report that the seed distributed is initially packaged in bags that identify the variety of seed, the date of production, and the seed enterprise responsible for it. Those interviewed report that this information, written in Pashto, Dari and English, identifies the seed as having been distributed by either national or international development organisations since it is not a product that is commercially available. This is not the case for the fertiliser distributed which is packaged the same as that which is commercially available and typically has a higher rate of use by farmers.

Aside from Taliban intimidation, concerns over the quality of wheat seed have also reduced the numbers of farmers who claim to have actually used the wheat seed that is distributed. For example, in the fall of 2010 half of those interviewed in the intermediate zone (n109 of 216) had received agricultural inputs, and of these just less half (n51) report that they had actually planted the wheat seed. Almost a third (n32) of those that had received wheat seed in the intermediate zone report that they did not use it, arguing they were unclear about the quality of the seeds. Those that had obtained a good yield from their own wheat crop the year before favoured seeds from their own crop, rather than using the seed distributed by the government and others, despite the quality assurances. Three respondents reported that they had offered the wheat seed to their sharecropper to plant, only for it to be refused. Others report feeding the wheat seed to their animals.

To bypass concerns about both Taliban intimidation and uncertainty over the quality of wheat seed, farmers also report reselling the agricultural inputs immediately after receiving them from the distribution centre. By the fall of 2010 it was reported that the resale of agricultural inputs had turned into a thriving business, with farmers being approached to sell their wheat seed and fertiliser by buyers immediately upon leaving the distribution centre. It is claimed that these buyers typically work for shop keepers from Lashkar Gah and Gereshk on a commission basis. Of those in the intermediate Zone that had received agricultural inputs in the fall of 2010, almost one quarter (n26) reported that they had sold the wheat seed and fertiliser, receiving around 10,000 PR (the equivalent of 5,500 Afs) for a 'one package' of agricultural inputs that had cost them only 2,000 Afs.

5.4. The Risk of Resurgence

To examine the resilience of livelihoods to the reductions in opium production in Helmand, this section has explored both livelihood diversification and access to public goods and social protection mechanisms across three distinct zones. It has used data from both remote sensing and fieldwork in twenty three different research sites.

As summarised in Table 6, the data suggests that there is much greater diversification in livelihood activities in areas around the urban centres of Lashkar Gah, Gereshk and Khakaj. These areas have better access to government services and development assistance. The population is not subject to the same levels of intimidation by the Taliban, and either due to better knowledge of what is available or by having better access to patronage systems people are able to both obtain and use the assistance that is distributed. Moreover, although households in this Zone are exposed to risks, they are of a considerably lower order and frequency than the risks faced by those located in the canal command area some distance from the urban areas. While illness, injury and death continue to pose a risk to the welfare of individual households in these areas, as they do across rural Afghanistan, there is considerably less probability that the population as a whole will experience the intensity of conflict that has beset those in the canal command area.

In contrast, many in the intermediate Zone have not been able to absorb the multiple shocks that they have been exposed to in the 2009/10 and 2010/11 growing seasons. The combined effect of violent conflict and the implementation of a ban on opium production have imposed significant costs. Typically, those farmers that lost their opium crop to eradication in 2010 and have not cultivated opium poppy in the 2010/11 growing season anticipate a significant fall in income.

Increased law enforcement activity across the Zone means that households also risk the loss of any stocks that they might have accrued, which is creating further uncertainty.

The shift to a low risk-low return cropping strategy of wheat in the winter, cotton, melon and water melon in the spring, and a summer crop of mung bean and maize, reflects the limited market opportunities for high value horticulture in the intermediate Zone. Non-farm income opportunities remain limited across the area and are largely the preserve of those households who had obtained a sufficient surplus of opium production that they could invest in trade opportunities. There is the potential for those who still have opium stocks to invest in a business venture that would support them in the absence of opium production. However, the loss of these stocks would inhibit livelihood diversification and the capacity of households to absorb the impact of the ban on opium production.

At the beginning of the 2010/11 planting season, there were already signs of economic distress amongst those farmers in the intermediate Zone who did not have sufficient stocks or access to non-farm income. The reduction in the quantity and quality of food consumed is the most apparent sign of hardship and was commonplace across the Zone. The removal of children from school so that they can be sent in search of paid work, particularly by wealthier families who had sent their children to Lashkar Gah, highlights the far reaching effect of the reductions in opium production in the area. The postponement of wedding ceremonies reflects both the financial and social costs that the ban imposes.

Farmers in the intermediate Zone will not begin to realise the full financial implications of the ban on opium production until the end of the winter cropping season in May 2011.

Those with seasonal debts will be requested to repay and will either need to reschedule their loans or sell assets to meet their payments. For those that were coerced not to plant opium and cultivated wheat and other low return crops in 2010/11, the feeling of financial loss will be exacerbated by the fact that those farmers in the canal command area who reside in more remote and insecure areas, or who have links with the government are likely to obtain a crop. The differential between those in the canal command area and those north of the Boghra canal is likely to be all the more stark. This is likely to provoke further resentment towards the government unless there are improvements in security and a significant increase in income earning opportunities.

Farmers north of the Boghra canal have been the least exposed to risk in the 2010/11 growing season, as a ban on opium

production has not been imposed and there are typically fewer violent incidents there than in the canal area. However, it is worth noting that livelihoods north of the Boghra are the least resilient to a ban on opium production. The purchase of land, its improvement, and consequently all agricultural production in this former desert area has been largely financed by opium production. Moreover, because of opium production a large and growing group of previously landless farmers, some of whom were initially displaced by drought in the 1990s and subsequently by fighting in the last few years, have for the first time become landowners, built houses, and improved their quality of life. Given the terrain, the expensive method of irrigation, and the lack of viable agricultural alternatives in this area, the population north of the Boghra canal has the most to lose from a ban on opium production, including their houses, land and villages.

Table 6: Livelihood Diversification and Access to Public Goods and Government Services				
		Zone 1: The Environs	Zone 2: North of the Boghra	Zone 3: The Intermediate Zone
Crops	Winter	Wheat and short season horticultural crops Residual poppy only	Opium poppy limited to areas away from the road and insecure locations within the canal.	Primarily wheat (70%) and some alfalfa, with increase in land left fallow
	Spring	Melon, water melon and extensive spring vegetable production	-	Cotton, Melon and/or Water Melon
	Summer	Maize and Mung bean plus summer vegetables	Primarily Maize and Mung Bean	Primarily Maize and Mung Bean
Non-Farm income		High – range of trade and employment opportunities in cities with access to wage labour opportunities aided by proximity CFW not subject to intimidation	Rare	Low – Primarily trade opportunities originally financed by opium production Wage labour in Lashkar Gah and Gereshk for those with sufficient males in the household CFW subject to intimidation

Table 6: Livelihood Diversification and Access to Public Goods and Government Services				
Health		Full range of services in Lashkar Gah and Gereshk Those with sufficient resources and serious conditions travel to Kandahar and Pakistan	Private Doctors and Pharmacies in bazaar Those with sufficient resources and serious conditions travel to Kandahar and Pakistan	Health clinics but complaints regarding quality of service and lack of medicine Those with sufficient resources and serious conditions travel to Kandahar and Pakistan
Education		Full range of schools with demand from outside the area	No Schools	Schools but low levels of attendance due to quality, security and labour demands of rural households Those with resources send children to Lashkar Gah
Security		Government/ISAF dominance	Taliban Dominance	Contested Space
Access to agricultural Assistance		Low levels of patronage and intimidation	Only available to those with access to elites south of the canal. Subject to high levels of intimidation by Taliban	Subject to patronage and corruption by government officials and rural elite and vulnerable to high levels of intimidation by Taliban

6. Conclusion

The province of Helmand in Afghanistan has become synonymous with opium production in the minds of many. During the 1990s it was one of the primary opium producing provinces in the country, typically cultivating between 30,000 and 40,000 hectares of opium poppy every year. With the fall of the Taliban regime and the collapse of their one year ban on opium production, levels of cultivation subsequently increased in Helmand until they reached a peak of 103,000 ha in the 2007/08 growing season. However, over the last three growing seasons levels of opium cultivation have fallen by over a third, and further reductions are expected in the 2010/11 growing season. These declines have largely been concentrated in the central part of the province in those areas under the Helmand canal system and coincident with the efforts to reduce both opium production and the threat of the insurgency in these areas.

Over this same period, a number of external factors have also worked in favour of a contraction in the area devoted to opium poppy cultivation. The dramatic increase in the global price of wheat in late 2007 and much of 2008, combined with the restrictions on the flow of wheat flour imports from Pakistan, led to farmer's prioritising wheat production over cash crops. The fall in the price of opium in Afghanistan, particularly in the southern region, further diminished the purchasing capacity of those farmers that were no longer self-sufficient in wheat and were relying on the sale of their opium crop to purchase wheat flour. This shift in the term of trade between wheat and opium encouraged further wheat production in 2007/08 and affected farmers' price expectations into 2009/10.

In the canal command area, the increase in the area dedicated to wheat in the 2008/09 growing season typically occurred at the expense of lower levels of opium poppy cultivation due to the finite amount of land available and the small proportion of land allocated to horticultural crops beyond the environs of the urban centres. In areas north of the canal land grabs and incursions into 'government land' have supported a dramatic increase in the amount of land cultivated with wheat, accompanied by much smaller increases in opium poppy. Despite significant increases in the amount of land brought under cultivation in these newly settled areas, farmers' still favoured wheat, even in those areas where they did not receive wheat seed and fertiliser and where communities had little to fear from eradication due to the dominance of the Taliban.

By the 2009/10 planting season there was a reversal in the terms of trade between wheat and poppy with a fall in the price of wheat in Afghanistan. However, the response to this varied by location. For example, farmers in central Nad e Ali and the district of Lashkar Gah did not increase opium production, uncertain as to whether wheat prices would rise and they would once again face food security problems as they did in mid-2008, but also aware of both the downward trajectory in the price of opium and the continuing efforts of the Governor and international community to tackle opium production in the province. In central areas of Nawa Barakzai and Garmsir, there were significant reductions in the level of planting in late 2009 that were closely associated with the uplift in the international military presence in the district that began in June of the same year.

Raids on household compounds, primarily for security and counter insurgency objectives, also raised the risks associated with storing opium in many of these areas. In the district of Marjeh, however, there was an upswing in opium production in the 2009/10 growing season, an area where during the planting season the population anticipated the much publicised arrival of significant numbers of foreign soldiers in early 2010 and where they had been told by local interlocutors that opium production would be tolerated that year.

In the spring of 2010 there were further dramatic changes in the socio-economic and political environment in central Helmand. The influx of foreign soldiers into Marjeh in February 2010, as well as renewed efforts to rout the Taliban from Nad e Ali, increased international military presence in two of the most prolific opium poppy growing districts in the country. At the same time the Governor's eradication efforts, while still rather limited in coverage, were more comprehensive in those areas of Nad e Ali, Lashkar Gah and Nawa Barakzai and around the city of Gereshk that were targeted for crop destruction. As opposed to previous efforts at crop destruction, this campaign was not accompanied with the same allegations of predation and patronage that had given the farmers in central Helmand the impression that eradication was a risk that could be managed by the use of social and financial capital.

The spring of 2010 also saw the outbreak of disease in the opium crop in much of central Helmand, which reduced yields by as much as forty percent. For those that cultivated opium poppy, what they lost in production they more than gained in returns due to the fourfold increase in the farmgate price that

accompanied the disease. Those that did not plant, or lost their crop to eradication, felt particularly aggrieved due to the direct losses they believe they incurred and the sense that those that did cultivate the crop had prospered. By late 2010 and the time of the 2010/11 planting season, the price of opium was almost six times higher than it had been prior to the previous planting season in November 2009, challenging the veracity of claims that significant stockpiles of opium had accumulated in Afghanistan. Even with a thirty per cent rise in wheat prices following floods in Pakistan and the damage to the wheat crop in Russia, the terms of trade favoured a return to opium production the following season.

The 2010/11 growing season has been shaped by two strong and opposing forces. The dramatic rise in opium prices favoured a return to opium production. However, this has been largely countered by the significant increase in international military presence within the canal command area, which has successfully deterred cultivation well beyond the more limited coverage of previous counter narcotics efforts. What this demonstrates, as seen in the environs of Lashkar Gah in 2008/09, and central Garmsir and Nawa Barakzai in 2009/10, is that the act of crop destruction itself has been a much less significant determinant of opium poppy cultivation than the state establishing the kind of physical presence and outreach that is necessary to convince the population that the authorities have the capacity to enforce a ban on opium production over a given geographic space. In those areas where the state does not have a robust presence, eradication has typically been seen by farmers as transitory and a risk that can be managed through bribery and corruption. Moreover, the authority of the state can be undermined further when officials

require farmers to travel into the district centre to receive agricultural inputs and counter narcotics messages due to concerns for the official's security. The marked increase in the presence of international and national military forces in the canal command area, symbolised in the minds of Afghan farmers by the expansion in security infrastructure, has clearly served to convince the population of the coercive power of the state prior to the 2010/11 growing season.

In the 2010/11 growing season, farmers in the canal command area have adopted the risk management strategies that have been seen before, cultivating behind walled compounds, intercropping wheat and opium poppy, and delaying planting to see how the government and international community would respond. Even members of rural elites and tribal groups, that previously found some advantage in their preferential access to actors within the local government, recognised that they could no longer draw on their social capital in the presence of such overwhelming international military presence and the inflow of state institutions from outside the province. It is only in the more inaccessible and insecure areas that significant amounts of opium persist and where Taliban presence reduces the risk of a ban on opium being implemented.

While patronage, corruption and insecurity currently do not work as effectively as strategies for farmers and communities to reduce the risk of a poppy ban materialising in the canal command area, they would appear to continue to shape who benefits from the distribution of aid. Mechanisms for the delivery of aid, in particular the production of village lists by government officials and rural elites, are seen to favour those with links to the district

and provincial government. Those who are most exposed to the concurrent risks associated with the conflict, the ban on opium production and ongoing environmental stresses are currently the least well placed to receive this assistance. It is farmers in these same areas and communities across much of Nad e Ali, Marjeh and Nawa Barakzai that most fear intimidation and punishment if they ignore the Taliban's ban on receiving development assistance from the government and international community.

For farmers in these areas there is currently a disconnect between a government and international community that is seen to be able to enforce a ban on opium production but cannot improve the delivery of public goods, in particular security. The perception that development assistance has been concentrated in the hands of a few at a time when many in Nad e Ali and Marjeh have experienced greater exposure to violence and the loss of their opium crop is unlikely to translate into greater support for the government and stabilisation efforts. Pockets of economic growth remain limited to the environs of the urban centres and continue to be seen as unattainable for the majority of farmers who are confronted with limited market demand, as well as the high transaction and transportation costs associated with living in contested space. The risk-management model in operation in areas north of the canal, where opium persists under the protection of the Taliban, currently appears more attainable.

In those areas in the canal command areas, that lie beyond the environs of the urban areas, there are already signs of economic distress associated with the concurrence of a ban on opium production and the increased exposure to the impact of the conflict, as well as exposure to the ongoing environmental stresses that are

prevalent in the area. The most vulnerable are those households that have experienced an injury, death or loss of property during the conflict or have been exposed to serious illness. When combined with life cycle events such as marriage, these shocks in the absence of opium production have led to farmers adopting coping strategies that undermine their future earning capacity. In the past opium production was a way of managing some of these risks, financing investments in farm improvements, strengthening social capital and supporting asset accumulation so as to guard against food insecurity and idiosyncratic shocks such as injury, illness or death.

Experience in other provinces, as well as in Helmand itself, has shown that the initial response to the imposition of a ban on opium in such conditions has been to substitute wheat for opium poppy. In areas with agricultural potential this has been followed in subsequent years by an increase in the amount of land allocated to a multitude of high value horticultural crops. The same process can be seen in Sra Qala, near the city of Gereshk, as well as in Bolan and Qala Bost in the environs of Lashkar Gah. In these areas over half the land cultivated during the winter and spring season is dedicated to high value horticultural crops and even more land is grown with cash crops during the summer. As in other provinces these areas are adjacent to the provincial centre and have both a higher incidence of non-farm income opportunities and much better access to public goods such as education and health services. The increased international presence has brought further investment and economic growth in the environs of the urban areas of central Helmand. Typically the population in these areas has little interest in a return to opium production, favouring instead livelihood

diversification and the improved access to public goods particularly security and education.

The challenge for both counter narcotics and stabilisation efforts is not in these areas but in those locations where wheat continues to occupy the majority of land more than twelve months after the initial imposition of a ban on opium. The expansion of wheat production in Helmand was initially driven by concerns over food security and subsequently by overwhelming military force; it has not been motivated by the commercial interests of Helmandi farmers. For the majority of farmers rising wheat prices are seen as a risk not as a market opportunity. High transport costs and commodity prices due to insecurity, as well as the inflationary effect of the concentration of opium production, typically renders those farmers that can produce a marketable surplus of wheat in Helmand uncompetitive with better quality imports from Pakistan and Kazakhstan. Wheat is not a viable and sustainable alternative to opium poppy and there is a need for significant increases in the cash income derived from livestock, cash crops or wage labour if farmers are not to experience a significant loss in wellbeing.

However, Helmand would appear structurally disadvantaged. While it is a border province, it sees none of the high value official cross border trade that provinces such as Balkh, Nangarhar, Kandahar and Herat benefit from; it does not have an abundance of mineral resources; and growth in the agricultural sector on which it largely depends is a function of demand from the population in Kandahar, Kabul and Quetta – who can source produce elsewhere at lower cost. Moreover, the political elite are divided and their relationship with the population has a

coercive and predatory quality. Those that have best managed the shift out of opium production are those that produced a surplus of opium over and above the amount required to meet annual household expenditures, and invested the revenues in other livelihood options such as livestock, transport and trading. With a significant reduction in opium production, this population also will see a contraction in the economic benefits they earn from their investments in the legal economy.

At this juncture, the reduced levels of opium cultivation in the central command area would appear to be largely shaped by the presence of international military forces. As we have seen over the last two seasons, first in central Nawa Barakzai and Garmsir, and then in the districts of Nad e Ali and Marjeh, overwhelming force can lead to dramatic reductions in cultivation. However, even if current troop levels were maintained, sustaining the current reductions in opium production will not be easy in those areas where the state does not have a monopoly on the means of violence, the rural elite is both divided and lacks popular support, the price of opium remains high and where the population is exposed to concurrent and repeated shocks. Building a social compact between the state and the people is likely to prove even harder in these areas when communities believe the state has dramatically increased the level of risk they are exposed to and impoverished sections of the population.

Recommendations

Policy makers should urgently consider:

The impact of opium bans on communities that are exposed to repeated and concurrent shocks, do not have viable alternatives and where government support for economic development is often not in place. In the run up to the 2011/12 growing season those looking to deliver counter narcotics and stabilisation effects in central Helmand are confronted with a policy dilemma. Without a reduction in their exposure to risk or effective ways to manage it, many communities in the canal command area may look to return to the risk mitigation strategy that has proven successful in the past - and continues to be for farmers north of the Boghra canal - that of opium poppy cultivation. It is important to ask, if the government and international community seek to prevent a return to cultivation in the 2011/12 growing season through continued coercion whether the rural population in these areas will look to reach out to Anti-Government Elements to offer protection from the state and a ban on opium production? After all this is a trend that can be seen at work in other parts of Afghanistan and has created the environment for increasing levels of cultivation in a number of the southern districts of Nangarhar, as well as in the northern districts of Laghman, Sarobi in Kabul and parts of the province of Balkh in the 2010/11 growing season. Both the penetration of the insurgency and the resurgence in cultivation in those parts of Nangarhar where the population has limited resource endowments and are exposed to concurrent and repeated shocks, reflects the fragility of the situation in an area like central Helmand, where despite better resource endowments the population is subject to chronic conflict and where the Taliban traditionally have a stronger political base.

The detrimental impact of eradication on the consent of the population where it is undertaken in areas recently 'cleared' of anti-government elements and where it is conducted in a predatory and corrupt manner by government officials. Eradication campaigns in Helmand have been subject to allegations of corruption and patronage, and government officials have often been accused of using crop destruction for extracting rent from rural communities. Typically crop destruction in Helmand has tended to target the land of more marginal communities outside the well irrigated parts of central Helmand or more marginal members of communities within the areas of greater agricultural potential. In 2010 eradication was conducted in a more systematic manner in areas within the canal command area that had been subject to military efforts to clear the Taliban. In late 2010 the population in these same areas was subject to considerable pressure to reduce levels of planting. These efforts without being preceded by improvements in both the physical and economic security of the rural population and without sufficient controls on the way the eradication campaign is conducted are likely to lead to increasing instability.

The need to focus development assistance on interventions that will support livelihood diversification. The Study shows that there is much to be learned from those areas and households in central Helmand whose livelihoods are resilient to a ban on opium production and that diversification has been critical. In the rural areas in close proximity to the cities of Lashkar Gah and Gereshk, growing demand for high value horticulture has supported a process of crop diversification that has spread risk and increased household incomes. Employment and trade opportunities

have been more available to the population in these areas further supporting the transition out of opium production. Improvements in security as well as access to education and health services have bolstered the conditions for a social contract between the population and the state. Beyond the environs of the urban centres where agricultural diversity continues to be limited, it is those households with non-farm income opportunities, which have often been funded from the proceeds of opium production, that are more resilient to the loss of income imposed by the opium ban. Given these findings, much greater emphasis needs to be given to supporting crop diversification and creating employment opportunities for those communities in the canal command area of central Helmand. Investments in wheat seed and fertiliser distribution are too limited.

The importance of understanding the local socio-economic, political and environmental context in which opium poppy cultivation takes place for the design of effective interventions. The Study highlights the need for designing interventions based on a clear understanding of the different livelihood trajectories that are in place across Helmand: the types of shocks that the population is exposed to; the assets they can draw upon; and whether livelihoods can adapt to shocks or whether significant numbers of households are adopting strategies that undermine their future earning capacity, expose members of their household to physical hazards, and potentially undermine stabilisation efforts. This data is crucial for future planning and in particular identifying the appropriate timing for the implementation of an opium ban in given area.

Focusing on measuring livelihood outcomes, including the transition out of opium poppy cultivation, and how these differ by location and socio-economic groups. It is not wise to reduce the assessment of the lives and livelihoods of the rural population into ordinal data that is used to report for example on the proportion of the population that has answered the latest round of closed questions indicating that they are economically 'better off' or 'support the government' and compares it to with the previous quarter. Such measurements are notoriously problematic in chronically insecure environments like central Helmand, and offer few warnings as to the economic and political faultlines that exist within a given area. Nor is it sufficient to measure the quantities of development inputs distributed without understanding who has benefited, who has not, and how the distribution of assistance has impacted upon both the livelihood portfolios of the rural population and the local political environment. Remote sensing data could be used to assess the process of diversification into high value horticulture and to provide an understanding of how farmers are using the agricultural assistance they have been given, the different income streams they are drawing on, and the resilience of livelihoods to shocks. It would also offer warning signals for areas that persist with low-risk low-return agricultural systems and have been highly dependent on opium production, such as those beyond the environs of the urban areas in the canal command area. As such, geospatial data on cropping patterns should be seen as both a source of impact data and as a diagnostic for identifying areas that require further examination and may require a refocusing of interventions.

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Annex A Research site crop maps 2008 to 2010

Overview map

Aqajan kalay	1
Zarghun Kalay	2
Do Bandi Kalay	3
Loy Bagh	4
Bolan	5
Dashte Basharan	6
Luy Bagh	7
Khwaja Baidar	8
Chanjir Dashte	9
Dashte Aynak	10
Aynak	11
Kalaj	12
Marjeh F4 D5	13
Marjeh Block 2A	14
Malgir	15
Sra Kala	16
Shersharak	17
Dashte Shin Kalay	18
Sna Jama	19
Keshal Kalay	20
Shin Kalay	21
Qala Bost	22
Mohajerin	23

Annex B Cropping statistics by research site

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010						
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010	
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha
1	Aqajan kalay	Wheat	43.30	25.39	73.74	44.26	66.97	47.41	30.44	70.30	-6.77	-9.18	23.67	54.67	GLE	29	23.51	0	0.00	0	0.00
		Poppy	102.69	60.21	73.33	44.01	30.80	21.80	-29.37	-28.60	-42.53	-58.00	-71.90	-70.01	PEF	1	0.80	0	0.00	0	0.00
		Other Crop	19.41	11.38	11.72	7.03	13.61	9.64	-7.69	-39.64	1.90	16.20	-5.80	-29.86							
		Prepared/Fallow	5.15	3.02	7.82	4.70	29.87	21.15	2.67	51.94	22.04	281.79	24.72	480.10							
		Total	170.55	100.00	166.61	100.00	141.25	100.00	-3.94	-2.31	-25.36	-15.22	-29.30	-17.18	All	30	24.31	0	0.00	0	0.00
2	Zarghun Kalay	Wheat	38.26	28.52	83.44	60.40	76.43	55.88	45.19	118.11	-7.01	-8.40	38.18	99.79	GLE	41	37.37	0	0.00	34	21.06
		Poppy	85.04	63.40	50.64	36.66	40.05	29.28	-34.40	-40.45	-10.60	-20.92	-44.99	-52.91	PEF	14	15.42	0	0.00	0	0.00
		Other Crop	5.30	3.95	1.53	1.11	4.13	3.02	-3.77	-71.18	2.61	170.58	-1.17	-22.03							
		Prepared/Fallow	5.53	4.12	2.55	1.84	16.18	11.83	-2.98	-53.96	13.63	535.50	10.65	192.57							
		Total	134.12	100.00	138.16	100.00	136.79	100.00	4.03	3.01	-1.37	-0.99	2.66	1.99	All	55	52.79	0	0.00	34	21.06
3	Do Bandi Kalay	Wheat	169.98	32.26	265.74	48.19	203.93	37.42	95.76	56.34	-61.80	-23.26	33.96	19.98	GLE	0	0.00	0	0.00	0	0.00
		Poppy	293.79	55.75	242.89	44.04	289.61	53.14	-50.90	-17.33	46.72	19.24	-4.17	-1.42	PEF	0	0.00	0	0.00	0	0.00
		Other Crop	30.91	5.87	36.09	6.54	31.24	5.73	5.18	16.75	-4.85	-13.44	0.33	1.06							
		Prepared/Fallow	32.27	6.12	6.75	1.22	20.18	3.70	-25.52	-79.08	13.43	198.99	-12.09	-37.46							
		Total	526.94	100.00	551.46	100.00	544.97	100.00	24.52	4.65	-6.50	-1.18	2.66	3.42	All	0	0.00	0	0.00	0	0.00

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010							
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010		
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha	
4	Loy Bagh	Wheat	157.92	21.51	395.74	64.48	348.64	62.86	237.82	150.59	-47.09	-11.90	190.72	120.77	GLE	235	283.60	329	208.71	146	45.51	
		Poppy	411.23	56.01	154.51	25.18	94.12	16.97	-256.72	-62.43	-60.38	-39.08	-317.11	-77.11	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	21.06	2.87	5.80	0.94	32.91	5.93	-15.26	-72.48	27.11	467.82	11.85	56.27								
		Prepared/Fallow	144.00	19.61	57.67	9.40	78.93	14.23	-86.33	-59.95	21.26	36.86	-65.07	-45.19								
		Total	734.20	100.00	613.71	100.00	554.60	100.00	-120.50	-16.41	-59.11	-9.63	-179.60	-24.46	All	235	283.60	329	208.71	146	45.51	
5	Bolan	Wheat	108.81	35.24	206.46	73.71	162.10	56.52	97.65	89.75	-44.36	-21.49	53.29	48.98	GLE	47	31.62	1	0.39	0	0.00	
		Poppy	43.81	14.19	8.77	3.13	0.76	0.27	-35.04	-79.98	-8.01	-91.30	-43.05	-98.26	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	55.56	17.99	27.63	9.86	55.38	19.31	-27.93	-50.27	27.75	100.45	-0.18	-0.32								
		Prepared/Fallow	100.59	32.58	37.25	13.30	68.57	23.91	-63.34	-62.96	31.31	84.04	-32.03	-31.84								
		Total	308.76	100.00	280.11	100.00	286.81	100.00	-28.66	-9.28	6.70	2.39	-21.96	-7.11	All	47	31.62	1	0.39	0	0.00	
6	Dashte Basharan	Wheat	189.08	61.24	266.95	95.30	234.56	81.78	77.87	41.18	-32.39	-12.13	45.47	24.05	GLE	171	141.26	71	33.79	8	1.84	
		Poppy	100.13	32.43	26.91	9.61	10.88	3.79	-73.22	-73.12	-16.03	-59.59	-89.25	-89.14	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	21.55	6.98	23.53	8.40	41.57	14.49	1.98	9.21	18.04	76.66	20.02	92.93								
		Prepared/Fallow	48.03	15.55	53.09	18.95	78.70	27.44	5.07	10.55	25.61	48.23	30.67	63.87								
		Total	358.78	116.20	370.48	132.26	365.70	127.51	11.70	3.26	-4.78	-1.29	6.92	1.93	All	171	141.26	71	33.79	8	1.84	

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010						
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010	
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha
7	Luy Bagh	Wheat	48.96	29.20	112.09	62.14	98.78	54.23	63.13	128.95	-13.31	-11.87	49.82	101.76	GLE	0	0.00	0	0.00	5	1.97
		Poppy	97.25	58.00	36.33	20.14	15.85	8.70	-60.92	-62.64	-20.48	-56.36	-81.39	-83.70	PEF	8	10.37	0	0.00	0	0.00
		Other Crop	6.89	4.11	6.13	3.40	9.53	5.23	-0.76	-11.05	3.40	55.47	2.64	38.30							
		Prepared/Fallow	14.58	8.69	25.83	14.32	57.98	31.83	11.25	77.15	32.16	124.51	43.41	297.72							
		Total	167.68	100.00	180.38	100.00	182.15	100.00	12.70	7.57	1.77	0.98	14.47	8.63	All	8	10.37	0	0.00	5	1.97
8	Khwaja Baidar	Wheat	50.03	19.84	109.20	42.20	188.04	79.91	59.17	118.27	78.84	72.20	138.01	275.87	GLE	0	0.00	0	0.00	0	0.00
		Poppy	175.62	69.65	133.08	51.43	10.46	4.45	-42.54	-24.22	-122.62	-92.14	-165.15	-94.04	PEF	0	0.00	0	0.00	0	0.00
		Other Crop	11.40	4.52	9.18	3.55	11.11	4.72	-2.22	-19.45	1.93	20.97	-0.29	-2.57							
		Prepared/Fallow	15.11	5.99	7.31	2.82	25.70	10.92	-7.81	-51.66	18.40	251.85	10.59	70.08							
		Total	252.16	100.00	258.77	100.00	235.32	100.00	6.61	2.62	-23.45	-9.06	-16.84	-6.68	All	0	0.00	0	0.00	0	0.00
9	Chanjir Dashte	Wheat	122.22	19.98	315.64	53.07	366.97	62.88	193.42	158.26	51.33	16.26	244.75	200.26	GLE	89	65.19	402	291.09	38	8.76
		Poppy	380.86	62.25	221.38	37.22	97.67	16.74	-159.48	-41.87	-123.70	-55.88	-283.18	-74.35	PEF	0	0.00	0	0.00	0	0.00
		Other Crop	17.34	2.83	47.79	8.03	32.51	5.57	30.45	175.55	-15.28	-31.97	15.17	87.46							
		Prepared/Fallow	91.43	14.94	9.97	1.68	86.46	14.81	-81.46	-89.09	76.49	766.97	-4.98	-5.44							
		Total	611.85	100.00	594.78	100.00	583.61	100.00	-17.07	-2.79	-11.17	-1.88	-28.24	-4.62	All	89	65.19	402	291.09	38	8.76

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010							
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010		
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha	
10	Dashte Aynak	Wheat	73.92	22.01	148.99	57.07	108.03	55.37	75.07	101.56	-40.97	-27.50	34.11	46.14	GLE	154	64.91	79	41.07	0	0.00	
		Poppy	151.22	45.04	63.20	24.21	49.05	25.14	-88.03	-58.21	-14.15	-22.39	-102.17	-67.56	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	24.87	7.41	29.80	11.42	10.44	5.35	4.93	19.82	-19.37	-64.98	-14.44	-58.04								
		Prepared/Fallow	85.76	25.54	19.05	7.30	27.57	14.13	-66.71	-77.78	8.52	44.71	-58.19	-67.85								
		Total	335.78	100.00	261.05	100.00	195.08	100.00	-74.73	-22.26	-65.96	-25.27	-140.70	-41.90	All	154	64.91	79	41.07	0	0.00	
11	Aynak	Wheat	83.27	40.80	159.74	77.66	127.79	61.02	76.47	91.83	-31.95	-20.00	44.52	53.46	GLE	75	106.05	7	2.00	8	1.54	
		Poppy	76.69	37.57	8.28	4.03	1.37	0.65	-68.41	-89.20	-6.91	-83.45	-75.32	-98.21	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	6.92	3.39	7.55	3.67	10.76	5.14	0.63	9.10	3.21	42.46	3.84	55.42								
		Prepared/Fallow	37.23	18.24	30.12	14.64	69.51	33.19	-7.11	-19.11	39.39	130.81	32.28	86.71								
		Total	204.12	100.00	205.69	100.00	209.44	100.00	1.58	0.77	3.74	1.82	5.32	2.61	All	75	106.05	7	2.00	8	1.54	
12	Kalaj	Wheat	186.96	23.45	667.29	84.51	592.33	77.04	480.34	256.92	-74.96	-11.23	405.38	216.83	GLE	0	0.00	0	0.00	16	6.75	
		Poppy	468.56	58.78	54.28	6.87	0.12	0.02	-414.27	-88.41	-54.16	-99.77	-468.43	-99.97	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	80.58	10.11	23.65	2.99	56.79	7.39	-56.94	-70.65	33.14	140.14	-23.80	-29.53								
		Prepared/Fallow	61.06	7.66	44.42	5.63	119.60	15.56	-16.64	-27.26	75.18	169.24	58.53	95.86								
		Total	797.16	100.00	789.64	100.00	768.84	100.00	-7.51	-0.94	-20.80	-2.63	-28.32	-3.55	All	0	0.00	0	0.00	16	6.75	

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010							
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010		
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha	
13	Marjeh F4 D5	Wheat	65.52	28.45	92.17	42.08	61.83	29.13	26.65	40.68	-30.34	-32.91	-3.68	-5.62	GLE	0	0	0	0.00	0	0.00	
		Poppy	143.16	62.17	114.97	52.48	131.32	61.88	-28.19	-19.69	16.35	14.22	-11.84	-8.27	PEF	39	47.86	0	0.00	0	0.00	
		Other Crop	6.65	2.89	1.77	0.81	12.70	5.98	-4.88	-73.37	10.93	617.01	6.05	90.94								
		Prepared/Fallow	14.96	6.50	10.15	4.63	6.38	3.01	-4.81	-32.17	-3.76	-37.09	-8.58	-57.33								
		Total	230.29	100.00	219.06	100.00	212.23	100.00	-11.23	-4.88	-6.82	-3.12	-18.06	-7.84	All	39	47.86	0	0.00	0	0.00	
14	Marjeh Block 2A	Wheat	79.97	24.20	161.98	50.47	95.02	29.98	82.01	102.54	-66.96	-41.34	15.04	18.81	GLE	0	0.00	0	0.00	0	0.00	
		Poppy	174.22	52.73	147.93	46.09	194.76	61.44	-26.29	-15.09	46.83	31.66	20.53	11.79	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	53.63	16.23	6.39	1.99	20.32	6.41	-47.24	-88.08	13.93	217.95	-33.31	-62.11								
		Prepared/Fallow	22.57	6.83	4.62	1.44	6.86	2.17	-17.95	-79.52	2.24	48.44	-15.71	-69.59								
		Total	330.41	100.00	320.93	100.00	316.96	100.00	-9.48	-2.87	-3.97	-1.24	-13.44	-4.07	All	0	0.00	0	0.00	0	0.00	
15	Malgir	Wheat	173.75	24.31	408.08	52.21	349.44	51.01	234.34	134.87	-58.64	-14.37	175.70	101.12	GLE	0	0.00	0	0.00	0	0.00	
		Poppy	454.82	63.63	327.72	41.93	273.19	39.88	-127.11	-27.95	-54.53	-16.64	-181.64	-39.94	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	31.28	4.38	15.35	1.96	34.93	5.10	-15.93	-50.92	19.58	127.54	3.65	11.68								
		Prepared/Fallow	54.98	7.69	30.43	3.89	27.53	4.02	-24.55	-44.66	-2.90	-9.53	-27.45	-49.93								
		Total	714.83	100.00	781.58	100.00	685.09	100.00	66.75	9.34	-96.49	-12.35	-29.74	-4.16	All	0	0.00	0	0.00	0	0.00	

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010							
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010		
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha	
16	Sra Kala	Wheat	167.81	37.64	278.94	63.31	230.16	54.35	111.13	66.22	-48.78	-17.49	62.35	37.16	GLE	0	0.00	0	0.00	0	0.00	
		Poppy	147.41	33.06	58.96	13.38	47.33	11.18	-88.45	-60.00	-11.63	-19.72	-100.07	-67.89	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	58.35	13.09	41.52	9.42	37.21	8.79	-16.84	-28.85	-4.31	-10.38	-21.15	-36.24								
		Prepared/Fallow	72.28	16.21	61.18	13.89	108.80	25.69	-11.10	-15.36	47.62	77.84	36.52	50.53								
		Total	445.85	100.00	440.60	100.00	423.50	100.00	-5.25	-1.18	-17.10	-3.88	-22.35	-5.01	All	0	0.00	0	0.00	0	0.00	
17	Shersharak	Wheat	27.74	10.12	120.87	41.70	119.57	74.54	93.13	335.70	-1.29	-1.07	91.83	331.04	GLE	0	0.00	0	0.00	33	22.49	
		Poppy	122.90	44.84	60.79	20.97	27.92	17.40	-62.11	-50.54	-32.87	-54.08	-94.99	-77.29	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	6.47	2.36	1.30	0.45	2.39	1.49	-5.17	-79.90	1.09	83.54	-4.08	-63.11								
		Prepared/Fallow	116.95	42.67	106.91	36.88	10.53	6.57	-10.04	-8.58	-96.38	-90.15	-106.42	-90.99								
		Total	274.07	100.00	289.87	100.00	160.41	100.00	15.80	5.77	-129.46	-44.66	-113.65	-41.47	All	0	0.00	0	0.00	33	22.49	
18	Dashte Shin Kalay	Wheat	26.81	14.86	0.00	0.00	163.17	58.46	0.00	0.00	0.00	0.00	136.36	508.65	GLE	0	0.00	0	0.00	0	0.00	
		Poppy	108.42	60.10	0.00	0.00	31.52	11.29	0.00	0.00	0.00	0.00	-76.90	-70.92	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	0.20	0.11	0.00	0.00	25.99	9.31	0.00	0.00	0.00	0.00	25.78	12843.63								
		Prepared/Fallow	44.96	24.92	0.00	0.00	58.43	20.93	0.00	0.00	0.00	0.00	13.47	29.97								
		Total	180.38	100.00	0.00	0.00	279.11	100.00	0.00	0.00	0.00	0.00	98.72	54.73	All	0	0.00	0	0.00	0	0.00	

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010							
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010		
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha	
19	Sna Jama	Wheat	95.43	32.35	0.00	0.00	182.97	57.23	0.00	0.00	0.00	0.00	87.54	91.74	GLE	0	0.00	0	0.00	0	0.00	
		Poppy	113.99	38.64	0.00	0.00	71.48	22.35	0.00	0.00	0.00	0.00	-42.51	-37.29	PEF	0	0.00	37	139.44	0	0.00	
		Other Crop	3.03	1.03	0.00	0.00	2.49	0.78	0.00	0.00	0.00	0.00	-0.54	-17.80								
		Prepared/Fallow	82.54	27.98	0.00	0.00	62.80	19.64	0.00	0.00	0.00	0.00	-19.74	-23.92								
		Total	294.98	100.00	0.00	0.00	319.73	100.00	0.00	0.00	0.00	0.00	24.75	8.39	All	0	0.00	37	139.44	0	0.00	
20	Keshal Kalay	Wheat	137.14	28.43	267.03	52.16	228.60	44.76	129.88	94.71	-38.43	-14.39	91.45	66.68	GLE	0	0.00	0	0.00	0	0.00	
		Poppy	275.98	57.21	207.60	40.55	231.43	45.31	-68.38	-24.78	23.83	11.48	-44.55	-16.14	PEF	0	0.00	0	0.00	0	0.00	
		Other Crop	41.44	8.59	10.63	2.08	28.68	5.61	-30.81	-74.35	18.05	169.82	-12.76	-30.80								
		Prepared/Fallow	27.85	5.77	26.67	5.21	22.05	4.32	-1.17	-4.22	-4.63	-17.35	-5.80	-20.83								
		Total	482.41	100.00	511.93	100.00	510.75	100.00	29.52	6.12	-1.18	-0.23	28.34	5.87	All	0	0.00	0	0.00	0	0.00	
21	Shin Kalay	Wheat	120.41	40.15	187.51	73.60	162.25	56.07	67.09	55.72	-25.26	-13.47	41.84	34.74	GLE	1	0.90	0	0.00	25	18.83	
		Poppy	118.10	39.38	51.60	20.25	85.20	29.44	-66.50	-56.31	33.60	65.11	-32.90	-27.86	PEF	24	23.16	41	40.70	0	0.00	
		Other Crop	17.63	5.88	1.18	0.46	4.26	1.47	-16.45	-93.31	3.08	261.47	-13.37	-75.83								
		Prepared/Fallow	43.79	14.60	14.49	5.69	37.68	13.02	-29.31	-66.92	23.20	160.13	-6.11	-13.96								
		Total	299.94	100.00	254.77	100.00	289.39	100.00	-45.16	-15.06	34.62	13.59	-10.54	-3.52	All	25	24.06	41	40.70	25	18.83	

Research site		Crop Type	Crop Figures						Change Between Years						Eradication 2008 to 2010						
			2008		2009		2010		2008-2009		2009-2010		2008-2010		Type	2008		2009		2010	
No	Name		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%		Fields	Ha	Fields	Ha	Fields	Ha
22	Qala Bost	Wheat	142.51	56.59	143.63	63.50	103.02	45.35	1.12	0.79	-40.61	-28.28	-39.49	-27.71	GLE	4	2.20	2	0.45	0	0.00
		Poppy	10.50	4.17	2.24	0.99	0.06	0.03	-8.26	-78.71	-2.18	-97.44	-10.44	-99.45	PEF	0	0.00	0	0.00	0	0.00
		Other Crop	26.74	10.62	22.12	9.78	28.96	12.75	-4.62	-17.27	6.84	30.93	2.22	8.31							
		Prepared/Fallow	72.06	28.62	58.22	25.74	95.11	41.87	-13.84	-19.21	36.89	63.37	23.05	31.99							
		Total	251.80	100.00	226.21	100.00	227.15	100.00	-25.60	-10.17	0.94	0.42	-24.66	-9.79	All	4	2.20	2	0.45	0	0.00
23	Mohajerin	Wheat	164.32	25.45	296.23	62.57	295.04	58.90	131.91	80.28	-1.19	-0.40	130.72	79.55	GLE	0	0.00	32	31.09	2	0.89
		Poppy	189.53	29.35	150.61	31.82	136.04	27.16	-38.92	-20.54	-14.58	-9.68	-53.50	-28.23	PEF	0	0.00	0	0.00	0	0.00
		Other Crop	8.23	1.28	2.69	0.57	8.40	1.68	-5.54	-67.27	5.71	211.75	0.17	2.04							
		Prepared/Fallow	283.61	43.92	23.87	5.04	61.40	12.26	-259.75	-91.58	37.53	157.27	-222.21	-78.35							
		Total	645.70	100.00	473.40	100.00	500.87	100.00	-172.30	-26.68	27.47	5.80	-144.83	-22.43	All	0	0.00	32	31.09	2	0.89