BRIEFING PAPER

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Opium Poppy Eradication: How to raise risk when there is nothing to lose?

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Overview

Opium poppy cultivation in Afghanistan is likely to rise this year. The increase will not be uniform across the country, however, but specific to certain areas. In particular, if predictions are correct, Helmand province in the southern region is likely to see significant expansion in the amount of land allocated to opium poppy, possibly exceeding the previous peak of 45,000 hectares (ha) in 1999. This increase is likely to more than compensate for any reductions in cultivation in other provinces.

This rise in the aggregate level of cultivation in Afghanistan in 2006 may be touted by some as a sign that there is a need to seriously rethink Afghanistan's current counter-narcotics and development strategy. Undoubtedly, there will be those who assert that there is a need to adopt a more aggressive position on opium poppy eradication (the physical destruction of crops), possibly pushing for aerial spraying to increase the risk associated with cultivation in the minds of farmers as they approach the 2006—07 planting season. Lost in the media attention, which inevitably

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focuses on aggregate statistics, will be the shifting dynamics of rural livelihood strategies in parts of Afghanistan as well as the complex relationship between location, insecurity context, risk and opportunity cost as it applies to opium poppy cultivation.

This briefing paper looks at the relation between eradication of opium poppy and changes in the risk associated with its cultivation in Afghanistan. It draws on five years of fieldwork as well as research conducted in 2006 in four different provinces — Balkh, Ghor, Kunduz and Nangarhar. It argues that simply looking at the risk that destruction of the crop imposes on rural households is insufficient, as a farmer will not associate any real financial costs to the loss of a crop unless there are other legal income opportunities available.

Moreover, the risk associated with the insecurity context in which most opium poppy farmers live is a central determinant of their behaviour and raises deep questions about the very notion of "legality". For many farmers the opportunity cost of cultivation remains low, and households will continue to cultivate it, possibly increasing the amount of land dedicated to the crop in places where eradication has led to falling household income and increased debt. For other farmers, who are well located with respect to markets and are well endowed with assets of land and water, the opportunity costs of cultivating opium poppy are likely to be much higher. Because context matters, one cannot focus just on individual household behaviour in counter-narcotics policy.

Evidence from the field indicates that the way that eradication has been pursued in many locations is closely linked to the prevailing context of insecurity, rather than separate from it. It has not succeeded in increasing the risk of opium poppy cultivation among those farmers who are least reliant on opium poppy as a source of income and associate a high opportunity cost to its cultivation. The incidence of bribery and protection for those with political power or access to patron-client relationships reinforce the view that the wealthy can cultivate opium poppy with impunity. The belief that it is the poor who are most likely to have their crop destroyed and the perception of inequity is further fuelling discontent and anti-government sentiment.

Risk is a concept that denotes a potential negative impact to an asset or something of value that may arise from some process or event. It can be seen as the 'probability' of a loss or threat. Risk assessments have to combine the probability of an event occurring with the impact that the event would have.

Opportunity cost is a term used in economics to mean the cost of something in terms of an opportunity forgone—the benefits that you would have had if you had done something else. It can be assessed in monetary terms but also in terms of anything that is of value to the person making the choice.

I. What is wrong with the eradication of opium poppy?

Eradication is a powerful word — it implies action, force and control and has both military and medical meanings. With regard to opium poppy, eradication denotes the forced destruction of crops. So what is wrong with eradication as a means or way of eliminating opium poppy cultivation? That question can be interpreted in two ways. The first way is to take it is as a response to those who claim that eradication does not work from those who argue that there is evidence that it does. Second, one can understand it to imply that eradication is not achieving the expectations — meaning that eradication of the crop is not leading to a sustainable reduction in opium poppy area. In other words, why is the process of eradication not achieving its goal?

Last year there was satisfaction at the apparent 21 percent decline in opium area in Afghanistan.[1] It was claimed that this provided evidence of the success of the current counter-narcotics policy and in particular of the combination of coercive measures (eradication and persuasion) and the provision of legal alternative livelihoods. This year, however, the opium poppy cultivation area is likely to rise. It has also crept back into parts of provinces from which it was absent last year.

The updated National Drug Control Strategy (NDCS) addresses itself to achievement of a sustainable reduction in opium poppy area and places eradication not as a lead action but one that will only work "once farmers have access to sufficient legal livelihoods".[2] This reminds us that eradication has to be seen as part of a portfolio of interventions — including the development of "alternative livelihoods" — designed to achieve the counter-narcotics goal. The NDCS prioritises the injection of "risk" into the opium trade systems through a credible threat of enforcement and eradication, while putting in place "measures to speed the transition into legal rural livelihoods". Only "where there are legal livelihoods will a credible threat of eradication be used in order to provide incentives to shift away from opium poppy cultivation". But what is a "legal livelihood" and under what conditions and where is it likely to arise? And will the injection of risk into trading systems or cultivation work in the way that is expected? Will this risk be sufficient to outweigh the other risks that opium poppy farmers encounter?

"Only where there are legal livelihoods will a credible threat of eradication be used in order to provide incentives to shift away from opium poppy cultivation".

[1] See UNODC and Ministry of Counter Narcotics, *Afghanistan Opium Survey*, November 2005, iii. According to the USG report, however, cultivation fell from 206,700 to 107,000 ha — a 48 percent reduction in cultivation.

[2] Islamic Republic of Afghanistan, Ministry of Counter-Narcotics, *National Drugs Control Strategy*, Kabul: January 2006, www.fco.gov.uk/Files/kfile/NDCS%20-%20Final%20PDF%20version.pdf.

II. Comparative Evidence on the Effectiveness and Impact of Eradication

Some see eradication as an end in itself. The physical destruction of the crop removes potential opium from circulation and prevents it from being processed into heroin and subsequently traded on the international market. For those who claim links between the drugs trade and anti-government forces, reductions in the amount of opium available for moving into the higher-value end of the market potentially reduce the funds that will be available for financing insurgency and terrorism.

Eradication is seen as an integral part of drug control in most opium poppy and coca producing countries. Colombia is currently the country most closely associated with eradication as a means to eliminate production. Under the "Plan Colombia" strategy, it is estimated that 566,995 ha[3] of coca were destroyed between 1999 and 2004 at a cost of US$453 million.[4] In 2005, it was estimated that a further 139,400 ha were sprayed and 30,000 ha eradicated manually. When aerial spraying was started in 1996, there was an estimated 67,200 ha of coca in Colombia. With the start of Plan Colombia in 1999, the area estimates were 122,500 ha; by 2005 these had risen by 18 percent to 144,000 ha.[5] While it might be asserted that eradication had reduced the rate of expansion of coca cultivation, it certainly had not reduced the absolute area of the crop over a ten-year period.

In other illicit drug countries we have seen different approaches to eradication. Thailand in particular has pursued a pragmatic approach to eradication, after its aggressive eradication policy in the early 1970s drove the rural population into the hands of the Thai Communist Party. The Thai government abandoned eradication until it had absorbed the remote highland areas into the nation state. Eradication was only reintroduced in 1984, and even then only in areas where it was thought the people could make a satisfactory living without relying on opium.[6]

In Pakistan, the death in 1987 of 13 people during an eradication campaign in Gadoon Amazai in North Western Frontier Province (NWFP) also resulted in the government adopting a more cautious approach. Subsequently, in the Dir district of NWFP from the mid 1990s, eradication was pursued in phases, implemented in valleys only after a period of broad development assistance. In 1998 and 1999, after learning that community leaders in the more remote areas of Dir District had encouraged opium poppy cultivation as a means of extracting

[3] Bureau for International Narcotics and Law Enforcement Affairs, U.S. Department of State, 2005, *The International* Narcotics Control Strategy Report (INCSR) 2005.

[4] U.S. Government Accountability Office, Report to the Honourable Charles E. Grassly, Chairman, Caucus on International Narcotics Control, US Senate. Drug Control: Aviation Program Safety Concerns Are Being Addressed, but State's Planning and Budgeting Process Can be Improved, (GAO-04-918), July 2004, 15.

[5] Bureau for International Narcotics and Law Enforcement Affairs, U.S. Department of State, 2005, The International Narcotics Control Strategy Report (INCSR) 2005. White House Office for Narcotics Drug Control Policy Press Statement, 14 April 2006, www.whitehousedrugpolicy.gov/NEWS/press06/041406.html.

[6] "An appropriate path of dealing with this issue has been practised in the TG-HDP where farmers were given a four to five year period of grace, during which development work was pursued before enforcement would begin. In fact in the Nam Lang project area, law enforcement measures were not applied for almost eight years because opium poppy cultivation was on a continuing decline. Only during the last two years has opium cutting taken place in areas where the planting o opium poppies had risen again. A law enforcement deterrent deems justified in areas where particularly industrious farmers would like to benefit form both the development work of the project as well as narcotics production". Rerkasem, Kanok, et al. *TG-HDP Internal Paper No. 179: Impact Assessment Study*, Nam Lang: June 1994, 96.

increasing amounts of development assistance, the government used forced eradication to send a clear message that after eight years of development assistance the cultivation of opium poppy was no longer acceptable. USAID reported that its most successful projects in the area were those that combined development with law enforcement and permitted eradication to occur gradually in conjunction with the emergence of new income opportunities.

> "For the poorest and most marginal producers, the eradication of illicit crops without an increase in access to legal income sources has led to increasing poverty".

While the effects of eradication on area of illicit drug crop cultivation have been mixed, reports of eradication's impact on the lives and livelihoods of those who cultivate it provide a less positive assessment. There is evidence from a number of drug producing countries that for the poorest and most marginal producers, the eradication of illicit crops without an increase in access to legal income sources has led to increasing poverty.[7] In areas where there is already a history of migration, as in the drug crop producing regions of Latin America and South East Asia, eradication has prompted relocation of both people and drug crop cultivation.

The relocation of people and drug crop production has reportedly had negative environmental consequences — increasing deforestation and losses in biodiversity. Estimates indicate that between the early 1970s and the late 1980s, 700,000 ha of Amazonian rainforest were cleared as a direct or indirect result of coca cultivation.[8] In the 1990s, a number of national parks were also encroached by coca cultivators in both Peru and Bolivia as a result of eradication initiatives. This pattern of incursions has been repeated in Colombia in the early years of the twenty-first century.[9]

The outbreak of fungus *Fusarium oxysporum* in the Upper Huallaga Valley in Peru in 1991 is reported to have destroyed an estimated 12,500 hectares of coca. Nonetheless, cultivation in the Apurimac-Ene Valley in southern Peru doubled between 1988 and 1994 as households relocated and began to cultivate coca in more inaccessible higher areas, leading to denuded slopes and an increasing incidence of flooding.[10] The relocation of coca cultivation is reported to have exacerbated the rate of deforestation in these areas as a consequence of households clearing a further three hectares of forest for every one hectare of coca planted in order to cultivate food crops and tend livestock.

[7] In Myanmar, a 1991 UN mission to the eastern Shan state stated that "in the visited villages under the poppy eradication programme the mission got the impression that most households were facing extreme poverty and starvation. In the first year of the programme, they were able to survive with the relief grain distribution and by selling their livestock. In the second year they do not know how they will survive. This situation affects all households but especially the lower stratum of families. One of the consequences of the lack of income is that it makes more difficult the purchase of fertiliser for the rainy season's food crops, accelerating the downward spiral of impoverishment". Cited in GTZ, 1998, *Drugs and Development in Asia: A background and discussion paper,* GTZ: Eschborn.

[8] "The cultivation of the coca plant alone has since its inception destroyed between 160,000 and 240,000 ha of tropical jungle in the Orinoco and Amazon basins; and 30% of annual deforestation estimated in Colombia. In the Andean zone, the cultivation of opium poppy has destroyed approximately 60,000–100,000 hectares of Andean woodland and high Andean woodland of great ecological value, and these figures represent some 15% of the deforestation rate mentioned." Ministry of Foreign Affairs of Colombia, Vice Minister of Foreign Affairs, *Diplomatic Mail for Peace 8,* 23 July 1999.

[9] UNODC reported that coca cultivation was detected in 13 of the country's 50 national parks in 2005. UNODC/GoC, 2005, *Colombia Coca Survey 2004,* page 63.

[10] UNDCP, 1995, *Desarrollo Alternativo del Valle del Rio Apurimac-Ene*, Project AD/PER/95/939, Lima: UNDCP.

There is also evidence that an overemphasis on eradication has contributed to political instability rather than reducing it. In Myanmar, Peru and Colombia eradication has caused the relocation of households into regions beyond the control of the state and into the hands of non-state actors. Some analysts have suggested that the Peruvian government curtailed the aerial spraying of Spike in 1989 because the campaign had led to a growing alienation of coca cultivators and an increasing support for the militant Maoist group Shining Path.[11] It is also reported that in Colombia, the government's aerial eradication campaigns has resulted in increased support for the FARC guerrilla movement.[12]

Even in Bolivia, a relatively stable state by Latin American comparisons, violent unrest (including the deaths of coca growers and law enforcement officials) in 2001 led the government to reverse its policy on eradication in the Yungas region and to slow eradication operations in the Chapare region. Some even argue that opposition to the eradication programmes of the governments of presidents Sanchez de Lozada and Carlos Mesa played a significant role in the 2005 election of President Evo Morales, a former coca grower and head of the coca growers union.

For Afghanistan, where current conditions have all the ingredients for the precipitation of a complete breakdown, the potential negative impacts of inappropriate eradication on poverty, security and political stability have to be taken very seriously indeed.[13]

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[11] "Forced eradication of mature coca complicated efforts to eliminate coca leaf production by alienating the farmers and promoting the growth of terrorism". *USAID/Peru Alternative Development Project* (527-0348), June 1995, 2.

[12] The study *Fumigacion y Conflicto: Politicas antidrogas y delegetimacion del Estado del Colombia,* conducted by Accion Andina and the Transnational Institute, concludes that "the practice of aerial spraying [has set] in motion a destructive cycle of chemical pollution, livelihood destruction, and migration into even more vulnerable areas".

[13] See Barnett Rubin, *Afghanistan's Uncertain Transition from Turmoil to Normalcy,* Council on Foreign Relations, CSR No. 12, March 2006.

III. Does eradication increase the risk of opium poppy cultivation?

Advocates of a more eradication-led approach to eliminating opium poppy cultivation argue that by increasing the perception of risk that their opium poppy crop will be destroyed, farmers will refrain from cultivation. Evidence shows that this assumption, based on a neo-classical economics model of individual profit maximisation, is flawed: Households that have lost their crop to eradication do not behave like this. Even where opium poppy has been eradicated more than once, farmers often continue to cultivate poppy, and some even increase the amount of land dedicated to opium poppy in subsequent seasons so as to recover lost income.[14]

This should not come as a surprise. Even accepting the flawed model of household behaviour, in order for the risk of eradication to act as an effective deterrent to planting, a household will need to incur a financial loss not only in terms of the destruction of the crop (which prior to harvesting is rather low) but also in terms of potential income and assets gained had they pursued other crops and non-farm income options.

But what other crops options are there and where are they? In locations where there is poor market access or lower resource endowments with limited effective market demand, crop options are very few. In such a location, for a household that is highly dependent on opium poppy and has few other means to meet its basic needs, what risk does eradication pose? A farmer will not consider the potential loss of income that could have been generated if he had planted horticultural crops or fruit instead of opium poppy, because even if water was available the market to sell such crops does not exist.

Non-farm income opportunities are also likely to be limited in these areas. Thus, in deciding whether to plant opium poppy, a household will not consider the potential income household members could have earned had they not been working on the crop. While labour migration might provide some income, it is often not a preferred option due to the unpredictable nature of employment opportunities and the families' desire to continue to live together. The physical security of the household also requires the presence of sufficient male members, further restricting migration ability.

Thus, in an environment where choices for legal income are limited, the opportunity cost of planting opium poppy and having it destroyed is equal to the wheat crop that might have been cultivated in the place of poppy. However, taking into consideration land area, crop productivity and household size, many households would not harvest enough from a wheat crop to feed its members. If they refrain from planting opium poppy and plant wheat, their family will go hungry; if they do plant opium poppy and it is destroyed their family will also go hungry. In this context the opportunity cost of opium poppy cultivation is very low even with a risk of eradication.

By opting not to cultivate opium poppy, a household forgoes preferential access to credit that they obtain both in advance payments on their future crop (*salaam*) and in terms of goods in-kind, including medicines. Access to land will also be constrained from both supply and demand perspectives. Where there is a reduction in opium poppy area, less land will be available to those looking

[14] David Mansfield, "Exploring the 'Shades of Grey': An Assessment of the Factors Influencing Decisions to Cultivate Opium Poppy in 2005/06," Afghan Drugs Inter Departmental Unit (UK Government), February 2006.

for land on a sharecropping or rental basis. Legal crops, which typically require less labour, means that land-owning households may well be able to manage their land largely from household labour.[15] Where a sharecropper opts to refrain from opium poppy cultivation there will be less land available to take on a sharecropping basis.

> "Eradication may not only fail to have an impact on a farmer's decision to plant opium poppy in subsequent years, but even result in increased cultivation as households seek to recoup the losses they incurred as a result of their opium crop being destroyed."

In areas with poor market access, eradication may not only fail to have an impact on a farmer's decision to plant opium poppy in subsequent years but even result in increased cultivation as households seek to recoup the losses (and increased debts) they incurred as a result of their opium crop being destroyed. It is possible that households may even build in the impact of intermittent eradication on opium poppy cultivation into their decisions over how household assets be allocated or access to resources maintained. Consequently, where legal income options are scarce and there is a high dependency on opium to access income, land and credit, eradication may not succeed in injecting risk. It may instead increase resentment toward those who conduct the eradication, thereby fuelling support for anti-government forces.

In geographical locations with good market access and with good natural resource endowments, particularly of water, there may well be effective demand for cash crops other than opium poppy (vegetables, fruit crops). In these potential surplus-generating areas households with assets will have real options both with respect to crop choice and off- and non-farm income opportunities. In such places, the opportunity cost of cultivating opium poppy becomes significant. If a household were to allocate land to opium and see it destroyed they would forego the revenues they could have generated from high-value horticulture. There may even have been an opportunity to obtain advance payments on their crop prior to harvest as we have seen in some parts of Nangarhar province in the 2004-05 growing season. Labour could also have been allocated to other farm-based income sources such as dairy products and fodder. Moreover, if less labour-intensive legal crops had been grown, household labour would have been freed up to find work in construction or trade in the provincial centre. In such locations households have something to lose by cultivating opium poppy, and the threat of eradication can potentially deliver a change in behaviour.

"Risk" in this context, however, entails much more than the risk to income sources and access to assets. What has to be addressed is the very "riskiness" of the context (social, market and institutional relations) in which most farmers take decisions. The "insecurity regime" that characterises Afghanistan leaves many farmers with little choice but to manage risk for the present and deeply discount the future.[16] One cannot speak of creating legal livelihoods until there is a legal and legitimate context within which they can function.

[15] John W. Mellor, *Poppies and Agricultural Development in Afghanistan,* USAID/RAMP Project, presentation at the World Bank South Asia Rural Development Forum, 3 March 2005.

[16] Ian Gough and Geof Wood, 2004, *Insecurity and Welfare Regimes in Asia, Africa and Latin America: Social Policy in Development Contexts,* Cambridge University Press.

IV. Eradication in Practice in Afghanistan

In 2005, UNODC reported that less than 5,000 ha of opium poppy were eradicated in Afghanistan. Supposing a total opium poppy area before eradication of 110,000 ha, and making the improbable assumption of the risk of eradication being evenly distributed, this amounts to a one in twenty chance of any one hectare being eradicated. In 2006, the area eradicated may have doubled. The advocates of eradication see this level as insufficient risk to inject into farmers calculations of what to plant next year.

Given the extent of opium poppy cultivation, there is only a limited logic to this argument. As discussed, risk is only injected where there are other income opportunities available, where there is an opportunity cost associated with opium poppy cultivation, and where the risk of cultivating opium poppy outweighs the risk associated with the insecurity regime. Risk can only become significant when cultivators for whom the opportunity cost is high know that they are as likely to have their crop destroyed as any one else. The way that eradication has been conducted in previous years, and again in 2006, indicates that that this is not the case. In this sense, the eradication process is part of the insecurity regime and of failed governance, rather than separate from it.

So far, the evidence from the field is of a less than systematic eradication campaign. In 2005, the perception amongst farmers was that eradication targeted "the poor" and those located nearer the road.[17] In many areas, there were reports of endemic corruption in relation to eradication. In the district of Gulestan in Farah province, for example, there was a general consensus among those interviewed that eradication by the local authorities was aimed at revenue generation rather than destroying opium poppy. In other provinces, such as Balkh and Badakhshan, many interviewees said that those able and willing to pay bribes did not lose their crops. For example, in the district of Char Bolak in Balkh province, there were reports of villages paying 4,000 to 8,000 Afghanis (depending on the size of the village) to the local authorities so that they would conduct only a cursory eradication campaign. In the district of Keshem in Badakhshan it was reported that wealthier members of the community were more likely to escape eradication thanks to their contacts within the district administration. In Helmand province, eradication processes allowed authorities to gain greater control over the opium economy.[18]

In 2006, there are similar stories of an eradication campaign reliant on personal relations rather than principle. In Balkh, official reports regarding the extent of eradication were not consistent with field observations, and more powerful villages appeared to have been successful in relocating eradication.[19] In Helmand, it was reported that eradication continues to be highly selective in its targeting and subject to abuses of power.[20]

In Nangarhar, a more pragmatic approach to eradication has been adopted in 2006. Opium poppy cultivation was tolerated in the lower lying valleys nearer the provincial centre and along the Jalalabad river. Indeed, there is little evidence of farmers even planting it there in the first place. At the same time, the local authorities seem abundantly aware of the levels of poverty in some of the province's more remote districts following pre-

[17] David Mansfield, "Exploring the 'Shades of Grey'", 17.

[18] Adam Pain, *Opium Trading Systems in Helmand and Ghor*, Kabul: AREU, January 2006, 21.

[19] Adam Pain, *Water Management, Livestock and the Opium Economy: Opium Poppy Cultivation in Kunduz and Balkh*, Kabul: AREU, June 2006, 20.

[20] *Helmand at War: The Changing Nature of the Insurgency in Southern Afghanistan and Its Effects on the Future of the Country,* The Senlis Council, June 2006, 44-45.

vious years' almost blanket ban. Consequently they have not pressed the population in these areas too hard, fearing a backlash and growing support for anti-government forces.

Instead, villages have been allocated a specific number of *jerib* (five *jerib* equals one ha) to be destroyed, delegating to the community the decision over whose crop will be destroyed. Those farmers whose crops were eradicated were compensated for their loss by their fellow villagers. It is yet unclear how limiting the extent of eradication and sharing the cost it imposes among community members will impact next year's planting, but it is likely that it helped prevent violence.

In sum, given the extent to which processes of eradication are part of existing power structures, there are real doubts at present as to the scale to which the eradication of opium poppy can be stepped up. Effective, targeted eradication will require an environment of security and fair governance. This is also a precondition for legal alternative income sources being available for those who currently secure their livelihoods by cultivating opium poppy.

V. Where is eradication likely to raise the risk and opportunity cost of cultivating opium poppy?

It is clear that the risk of eradication is often felt most by those farmers with least choice of viable legal income alternatives. Increasing the risk associated with illicit drug crop cultivation through eradication is a necessary but not sufficient condition for achieving net reduction in opium poppy cultivation area. Much more needs to be done in order to encourage the development of viable income options and ultimately increase the opportunity cost of cultivating opium poppy. Evidence from the field indicates that where the opportunity cost of opium poppy cultivation is high, cultivation is already down to fairly nominal levels, showing that eradication may not even be necessary. Drawing from field evidence from four contrasting provinces, and variation within these provinces, we explore the differentiated nature of risk and opportunity cost by location and — for lack of a better term — "power status".

Nangarhar: increasing both risk and opportunity costs in the "centre"

The province of Nangarhar is seen as a success story in terms of counter-narcotics efforts; it saw a 96 percent reduction in opium poppy cultivation between 2004 and 2005. It is therefore worthy of particular consideration. The patterns of risk and opportunity cost — and associated patterns of cultivation — can be broadly explained in terms of location and distance from markets. Three broad zones can be identified.

In the first zone, close to Nangarhar's provincial centre of Jalababad, there is clear evidence that the opportunity cost of opium poppy cultivation has increased. Combined with a high risk of eradication in these accessible areas, this has made opium poppy cultivation an unattractive option. To cultivate opium only to see it destroyed would be foolhardy given the option of cultivating intercropping crops (such as squash, tomato and onion followed by cauliflower) that not only bring good returns but also provide a constant flow of income due to the staggered nature of the harvests, supported by the provision of advance payments and loans by vegetable traders from the city. Land can

also be used for the cultivation of fodder for both domestic livestock and sale in the city.

The opportunity cost of allocating labour to opium poppy cultivation also rises for those areas nearer the city. When there are employment opportunities in construction and trade, or even government jobs, it makes little sense to allocate labour to an opium poppy crop that might be destroyed. With the land for fodder production and labour for animal husbandry, dairy products such as milk and yoghurt can also be sold at a premium in Jalalabad. These are also relatively secure areas, and the absence of checkposts imposing "taxes" on the movement of agricultural goods allows farmers and traders to maximise their returns. In districts such as Surkhrud, Kama and Behsud, where these alternative income options are also available, the threat of eradication has been sufficient to change farmer behaviour.

The same cannot be said of the second zone, the most distant from Jalalabad, where access to assets such as land, irrigation and physical infrastructure are problematic and insecurity is pronounced. This zone has seen a return of opium poppy cultivation during 2006, following the impact of the dramatically reduced cultivation in 2005 on household farm-based incomes.

In those areas where opium poppy cultivation was a major source of household income, there was a depletion of assets when the ban on opium poppy was imposed in 2005. Once the ban was in effect in full force, the quantity and quality of food consumed was the first to suffer. Meat and fruit became scarce in family diets.

In contrast to those areas with better resource endowments, however, households in districts like Shinwar and Achin replaced opium poppy with wheat. They did not diversify agricultural production due to the absence of agricultural inputs and market demand. With a fall in on-farm and off-farm income and a loss of access to credit, all due to the dramatic reduction in opium in the area, households had little choice but to sell what assets they had. There was a sequenced asset disposal, a clear sign of households in increasing distress. First to go were any remaining opium stocks, followed by livestock and then gold, crockery and farming equipment when cash needs were pressing. There were cases of land being mortgaged and in some cases sold (often to those trading opium within the area). Out-migration for employment often led to work as itinerant harvesters in areas where poppy was increasing (e.g. Balkh) and establishing itself (e.g. Nuristan). Eradication here has lead to a process of immiserization.

In 2006, these households could not endure a second consecutive year without farm income and returned to opium poppy cultivation. Many farmers reported they had no real choice but to return to opium poppy cultivation whatever the risk of eradication. The absence of viable legal income opportunities and the depletion of assets meant that there was little to lose from crop destruction. In upper Achin where cultivation had been reduced in 2005 but not eliminated, around 80–100 percent of household land was dedicated to opium poppy this growing season. In lower Achin and upper Shinwar, cultivation varied between 40 and 80 percent of household land in 2006. With the return to cultivation of opium poppy came an increase in access to credit both as an advance on their future opium crop (although at less favourable rates than in 2004) and in-kind, as well as an increase in the availability of land for those households wishing to sharecrop or lease land to grow opium poppy.

The third zone, located between the first and the second zones and with easier access to the provincial centre, largely refrains from opium poppy cultivation for a second year. These areas, like lower Shinwar and Rodat, are just beyond the operation of the regional vegetable market surrounding Jalalabad, and thus continue to cultivate mainly wheat. There is little evidence of vegetable production as the market is weak: poor infrastructure, transportation costs, and limited agricultural inputs are blamed for this. Check posts established by the local authorities "tax" the movement of

legal goods, which further reduces the margins on the sale of legal goods. On the other hand, the location of this third zone means that farmers are more accessible to anti-opium enforcement efforts by the authorities, and social divisions and weak networks has made it harder for them to resist enforcement measures so far (although hostility to the local authorities seems to be growing).

In 2006, few households had assets to sell. Opium stocks have dwindled, except among the asset-rich; some livestock are left but continues to be sold as a means of purchasing basic food items. There is evidence of increased mortgaging and sale of land. The distance and cost of travel to Jalalabad is such that households cannot afford to take the risk of travelling daily to the city to search for work there. Seasonal migration is therefore the only option, and male household members again reported travelling to northern provinces on search of employment during the opium poppy harvest.

In these areas, credit is also hard to access for a second year. Advances on opium are not available and loans in-cash and in-kind are almost impossible to obtain for those without assets. There are increasing reports of families leaving for Pakistan. As in upper Shinwar and lower Achin in 2005, small areas of land are being allocated to opium poppy in the main canal-irrigated areas of lower Shinwar and Rodat. This likely constitutes further evidence that household reserves are almost exhausted and that more widespread opium poppy cultivation is likely to return to these areas in the 2006–07 growing season.

Balkh: linking risk and opportunity cost with water availability

In contrast to Nangarhar, in Balkh it is not distance from the major market centre that underlies patterns of risk and opportunity cost in relation to opium poppy cultivation, but rather location within a complex water-scarce irrigation system. There are differences in risk patterns between as well as within districts; what matters is who you are and where you are in the irrigation system.

> "For those with just sufficient water to cultivate opium poppy, the lack of legal farm-based income opportunities will diminish the risk of eradication".

There is strong evidence that irrigation management institutions in the Balkh scheme have collapsed at all levels, leaving water distribution in the hands of informal power holders. Combined with decreased water flows, increasing demands for water, crop intensification processes driven by declining farm areas and expanding non-agricultural uses, this has led to demand for water now greatly exceeding supply.

In 2005, 68 percent of opium poppy cultivation in Balkh was confined to the three districts widely regarded as the most unruly (Balkh, Chahar Bolaq and Chimtal). These districts are central in the irrigation system. The downstream districts (Dawlat Abad, Shortepa and Kalder) have both little water and little opium poppy. The Asian Development Bank estimated that the top seven canals of the system were "taking over half of the water out of the river, while having only the right to a quarter".[21]

Patterns of opium poppy cultivation appear to differ between the two districts of Chimtal and Chahar Bolaq. In the former, on the basis of farmers' reports and field observations, opium poppy cultivation is becoming increasingly confined to the downstream western ends of the district irrigation

[21] Asian Development Bank, 2004, *Emergency Infrastructure and Rehabilitation Loan Afghanistan Irrigation Component*, Technical Assistance Mission Draft Report, 30.

canal. The risk of not getting sufficient water favours opium poppy, which maximises returns to scarce water. In this location, there appears to be sufficient water to support poppy cultivation but nothing else, so the opportunity cost of not cultivating it is high. The upstream parts of the district, which are more accessible and have sufficient water, a double-cropping system has been partially maintained.

In contrast, Chahar Bolaq's downstream areas (in the north) face absolute water scarcity, even for drinking water. There is no opium poppy cultivation or anything else. The villages are largely depopulated of working-age labour. Power structures which allow the cultivation of opium poppy with impunity within one kilometre of the main Mazar-Shebergang road and the capture of the bulk of the districts irrigation water support an intensive horticultural cropping system combined with opium poppy cultivation. Power, which mitigates the risk of opium poppy eradication, and profit are the key drivers of opium poppy cultivation here.

For the Balkh irrigation scheme, therefore, the fundamental issue is the way that rules of water distribution work in practice. This issue will be very difficult to resolve given the extent to which demand for water now exceeds supply. Until this problem is addressed, for those locations with just sufficient water to cultivate opium poppy, the lack of viable legal farm-based income opportunities will diminish the risk of eradication. For those opium poppy cultivators with water and legal income opportunities, eradication will only become a risk when there are changes in the insecurity regime.

Ghor: a marginal crop in a marginal environment

Reports of opium poppy cultivation in the province of Ghor were first received in 1998. But it was only in the 2000–01 growing season, following price rises and the Taliban prohibition, that it became a more viable option. Now that prices have fallen from US$ 500 per kilogram in July 2001 to US$ 80 in July 2006, the opportunity cost of cultivating opium poppy has increased. In the case of Ghor, the risk to opium poppy cultivation is not from eradication but from achieving low or no yields of opium. Frost during the winter and spring, unreliable water supply during critical periods of the opium poppy's growth cycle and poor agricultural techniques all conspire against the productivity of the crop. For this reason the area of opium poppy is likely to remain low.

The opportunity cost of cultivating any crop and not obtaining a yield are high in rain-fed parts of rural Afghanistan. In areas isolated from the rest of the country for up to five months in the winter they are even higher. Allocating land to opium poppy means forgoing the wheat and fodder production that are an integral part of livelihood strategies in Ghor. Due to the province's remoteness and the high price of food items and fodder during the winter months, the opportunity cost of not cultivating wheat and fodder crops is far higher than their exchange value at the time of harvest.

Off-farm and non-farm income sources are important to households in Ghor. Migration to Iran with employment in the construction industry earns from 300–500 Afghanis a day. Even when opium prices are relatively high, few households are willing to give up this income in favour of cultivating a crop that is prone to low yields and possible crop failure.

As a consequence, opium poppy is a marginal crop in the districts of Chaghcharan and Sharak in Ghor. Its cultivation is limited to the higher and middle parts of the valleys, where there is relatively consistent water supply. Cultivation is typically undertaken by the younger members of the family and in some areas women, neither of which are considered to have a high opportunity cost associated with their labour.

Kunduz: why is there so little opium poppy here?

The question of why there is almost no opium poppy cultivation in Kunduz province, in contrast to its two neighbouring provinces, is important to ask. What might we learn from the apparent absence of opium poppy cultivation in a province which shares many structural features (such as a major irrigation system) with Balkh or Helmand?

Kunduz has a very modest history of opium poppy cultivation in 1999 and 2000, largely on the margins of the irrigation system in Qalay-i-Zal district, where it has remerged in 2005. There is clearly the knowledge to cultivate it from both resident Turkmen population who have long cultivated small areas for self-consumption and migrant labour to the Badakhshan opium fields. The province is well known to be a major drug-trafficking route across the Tajikistan border. Informal institutions around the management of water are subject to abuses of power and there are major issues of upstream-downstream fairness in water distribution. There are reports of actors in the official provincial administration behaving in a predatory way. In sum, Kunduz has all the ingredients of an insecurity regime and sufficient context for opium poppy cultivation, yet little opium poppy is being grown.

It is likely that the low level of opium poppy cultivation can be explained by two key and related factors. Firstly, in contrast to Balkh and Helmand, the Kunduz irrigation system suffers less water scarcity. Moreover, a rising water table downstream biophysically restricts opium poppy cultivation. Secondly, in the better-drained areas, the availability of water allows for the cultivation of both rice and cotton, which offer good returns. Kunduz has long had a labour deficit, attracting migrant labour from elsewhere. It also has a history of food security and relative land-access equality. These factors all point to an absence of the key drivers that have fuelled opium poppy cultivation elsewhere.

VI. Ways Forward

In 2004, UNODC reported that in Colombia "the sustainability of the eradication effort depends to a large extent on the real alternatives open to the farmers and to the displacement of the cultivation into new and more remote areas of the country".22 This assessment was made despite eradication peaking at 132,000 ha that year and a cumulative total of 566,995 ha of coca destroyed between 1999 and 2004. In 2005, a further 169,400 ha of coca was eradicated in Colombia, yet estimated cultivation increased that year. Afghanistan needs to take notice of this experience and learn from it.

Those who argue that eradication in Afghanistan should be undertaken prior to the development of legal livelihoods tend to assume that legal income streams already exist or that development agencies can create them quickly. In practice, neither assumption has proved true (perennial crops can take several years before economic yields are obtained). The argument also ignores the wider insecurity of the context in which most drug production takes place. Illicit drug crops are typically concentrated in a small number of unstable, high-risk places where there are few viable alternatives. Developing alternatives requires resources, time, the trust of households and local communities and a context where rules are based on accountability and not arbitrary authority. Destroying the crops of those whose livelihoods most depends on them prior to establishing a viable legal alternative does little to establish the foundations required for long-term drug crop elimination. Neither does such action address the insecurity regime, a

[22] UNODC/GoC, 2005, Colombia Coca Survey 2004, 63.

precondition for building a social contract between state and community.

This argument should not be interpreted as ruling out eradication entirely, however. Eradication can play an important role when carefully combined with other drug control measures. It works where preceded by comprehensive development programmes that address the context of insecurity and contribute to strengthening and diversifying legal income sources. Where alternative income sources exist, eradication can push those farmers who persist with drug cultivation. Where alternatives do not exist and in risky contexts, eradication is rarely cost-effective and can create perverse incentives for farmers to grow even more drug crops. It can also fuel violence and insecurity, hostility to national authorities and displace cultivation to less accessible locations. This ultimately undermines long-term efforts to change the conditions that promote drug crop cultivation.

- Eradication is not a short cut to a sustainable reduction of the opium economy. Experience with Peru's Shining Path movement, Colombia's FARC and the Thai Communist Party show that pursuing an aggressive eradication campaign prior to the establishment of security and accountable government does not promote a basis for legal livelihoods and will undermine efforts to build a social contract between state and communities.
- Coercion by the local authorities to prevent planting is ultimately a form of eradication. As the experience in Nangarhar province illustrates, compelling those with limited access to assets and a high dependency on opium poppy cultivation not to plant will not prove sustainable into a second consecutive year and could lead to growing resentment against the authorities.
- "Cash-for-work" programs cannot make up the deficit in income caused by eradication (either the physical destruction of the crop or coercion not to plant) nor meet the shortfall in access to assets, such as land and credit, caused by the loss of the crop. No short-term solutions can deliver viable legal income opportunities in areas where households have limited access to assets and a high dependency on opium poppy cultivation for income and resource access.
- Eradication has to be judicious and targeted. It is not an end in itself but a means for deterring farmers from cultivating opium poppy in subsequent growing seasons. If it simply serves to destroy one year's crop, while creating the conditions for a return to cultivation in the future, it will not only prove counter-productive but also exacerbate the relationship between community and government.
- Targeted eradication requires an understanding of the dimensions of risk and opportunity cost and of where eradication can justifiably and effectively raise these without condemning households to distress and destitution. Under such conditions, eradication can contribute to changing household decision-making and deter cultivation in future years. In those areas where there is a low opportunity cost to opium poppy cultivation, the focus should not be on eradication but on state building and the creation and diversifying of income opportunities.

  The challenge is to build such an understanding: this can only be done through systematic use of relevant secondary data (e.g. NRVA data) supported by field-based qualitative studies, including investigations on sub-district opium poppy cultivation patterns. Effective, targeted eradication requires a significant investment in evidence-building.

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