

## **CHAPTER 3: INCREASING VALUE ADDED, COMPETITIVENESS AND PRODUCTIVITY IN AGRICULTURE**

3.1 The economic challenge of opium is overwhelmingly a rural one: opium is the most valuable agricultural activity, and it provides income and employment for hundreds of thousands of Afghans. As discussed in Chapter 2, opium plays a key role in the rural economy, employment and poverty reduction. Increasing value added in non-opium agriculture is thus an essential pathway to the long-term reduction of opium cropping.

3.2 This chapter first examines the characteristics of the farming economy and of Afghan farmers and looks at growth potential (Section 3.1). Subsequent sections (3.2 and 3.3) look at current development interventions in agriculture and at opportunities for further engagement that can impact on the opium economy. Constraints to further opium-reducing development in agriculture are then discussed (Section 3.4). A final section (3.5) summarizes recommendations and assesses the expected growth, poverty reduction and opium economy impacts.

### **3.1 CONTEXT AND OPPORTUNITIES FOR ENGAGEMENT**

#### **Agriculture and Poverty 3.1.1**

3.3 *Afghanistan is predominantly a rural and agricultural country.* Afghanistan is a mountainous, poor, landlocked, largely rural country, with about 85% of the population living in the countryside in scattered hamlets and villages. Agriculture accounts for up to half of GDP, but its contribution varies considerably with the weather (49% in 2002/3, but only 36% in 2004/5). Over time, there is likely to be a progressive decline in the sector's share in the economy as the industry and service sectors grow faster than agriculture. The sector currently employs about two thirds of the labour force. In 2002/3, the most recent year for which figures are available, the total work force was estimated at 7.7 million, of whom 5.2 million (68%) were in agriculture.<sup>4</sup>

3.4 *Afghan rural households are typically poor, operating at subsistence level, and food deficit.* A large proportion of Afghans – probably at least one-third – live below the poverty line, and a significant percentage have insufficient calorie intake. Most of the rural population is at risk of falling into deep poverty in the face of fluctuations and shocks – economic, security-wise, or others. The rural economy suffered badly during the years of conflict, with all the main drivers of growth – technology, roads, irrigation, education – suffering enormous deterioration. Most rural people engage in subsistence farming activities, producing wheat and owning a few head of small livestock. Households are large, averaging 11.4 members. Most farm households are not self-sufficient in food and are dependent on income from family members who work outside agriculture and often elsewhere in Afghanistan or even in neighboring countries. These characteristics apply especially to land-poor rural households.

#### **The Structure of Afghanistan's Agriculture Sector 3.1.2**

3.5 *Farming is largely a subsistence activity, and irrigation is essential to achieve good yields.* Farmland tends to be confined to small plots in ribbons stretching along deep valleys. Farms are generally small: the average size of the reported 1.28 million farms is 5 ha (Maletta 2007). Only about 8% of farms are over 10 ha, and just 8,000 farms are over 50 ha. Most farm households do not cover family food needs from farming, and few farms generate a marketable

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<sup>4</sup> See Perisic n.d.: 7; IMF 2006b: *passim*, especially 12.96

surplus. In addition, 23% of rural households are landless, and these constitute the bulk of the very poor (Vulnerability Analysis Unit, MRRD, 19 August 2004). The dry climate makes irrigation a necessity in many areas: of the total cultivable land (6.5m ha), approximately 3 million (43%) is at least partially irrigated. Irrigated agriculture accounts for 80% of crop production.

3.6 *Afghanistan produces food crops, a range of export and industrial crops, and livestock products.* **Food crops** account for over two-thirds of the cultivated area and are typically grown for subsistence. Wheat is the predominant crop, grown on 80% of the cereals area. About 40% of the cereals area is rain fed, and 60% receives some form of irrigation. Although most households are not self-sufficient, some larger farms produce a cereals surplus that is marketed locally. Once self-sufficient in cereals and in some years a small exporter, Afghanistan has relied on varying levels of cereals imports in recent decades, particularly during the drought years of the late 1990s. High-value cash crops cover *traditional export crops* of dried fruits and nuts, fresh fruits and vegetables, and *industrial crops* such as oil crops, cotton and sugar beet. *Livestock products* include sheep and goat meat, hides, skins and wools from small stock, chicken, eggs, and dairy produce.

### **The Cereals Sub-sector 3.1.3**

3.7 *The cereals economy has rebounded since 2001.* Cereals production has doubled since 2001, except for the drought years of 2003/4. Wheat yields rose from an average 1.0 t/ha in 2001/2 to 1.82 t/ha in 2006/7. Average rain fed wheat yields of 1.1 t/ha and irrigated wheat yields of 2.8 t/ha are comparable to those of neighbouring countries (World Bank 2005a). The area planted to cereals increased from 2.1 million ha to 3.0 million ha during the same period. There has been considerable effort by projects, NGOs and FAO to boost productivity through provision of seeds, fertilizers and improved irrigation. Over half the wheat area is now sown with improved seed, and average fertilizer use on irrigated wheat is an impressive 180 kg/ha. In 2007, Afghanistan will meet 90% of its wheat requirement. The current rise in the world price of cereals, and consequently of the cost to all households of buying food, increases the incentives to produce more cereals. However, climatic conditions are highly variable, and yields and production are consequently vulnerable (Mansfield 2007a: 22; Perisic n.d.: 7; World Bank 2005b: 5-6).

3.8 *The lesson is that, although cereals are low value and not very labour-intensive compared to other crops, their place in livelihoods strategies, particularly for the poor, means that cereals can play a significant role in helping reduce incentives for opium production.* Almost all farm households produce cereals, and food security is the top priority for all households, particularly for the poor who are most vulnerable to the attractions of the opium economy. In addition, there are important linkages to the livestock economy, with wheat straw an important animal feed (see, for example, Box 2 in 2.4 above). Thus although cereals production is in principle low return, it has an important role in both subsistence and cash economies, and further improvements in wheat productivity would have an impact on livelihoods. Extension of access to inputs and services to more remote areas, and most importantly investment in irrigation, would improve the livelihoods of the vulnerable poor. Investment in increasing cereals productivity would therefore improve household food security and progressively release agricultural land for higher-value, labour-absorbing licit crops with market opportunities.

**Table 4: Cereals Production ('000 tons)**

<b>Production (000 tons)</b>	<b>2001/2</b>	<b>2002/3</b>	<b>2003/4</b>	<b>2004/5</b>	<b>2005/6</b>	<b>2006/7</b>
Cereals	2,108	5,373	3,057	5,243	4,447	5,584
- of which wheat	1,597	4,362	2,293	4,266	3,363	4,484

Sources IMF 2006b: 80-1; MAIL 2007a

**Nuts and Fruits 3.1.4**

3.9 *Nuts and fruits are expanding cash crops.* Area reported under perennial nut crops (primarily almonds, walnuts, pistachios) in 2004/5 was 14,000 ha, up from 11,000 ha in 2001/2. The area under fruit trees in 2004/5 was reported as 106,000 ha, of which grapes accounted for 53,000 ha. The fastest growing fruit crops, based on the reported increase in planted area during 2001-5, were berries (up from 6,600 ha to 9,000 ha) and figs (up from 3,300 ha to 7,400 ha). Current sales of nut and fruit tree seedlings by nurseries suggest expansion of about 12,000 ha per year, an annual rate of increase of 10%, with apricots, plums and almonds showing the strongest growth. Already production of nuts is reported to have gone up from 17,800 t in 2001/2 to 24,000 t in 2004/5 (IMF 2006b: 82-3).

**Table 5: Fruits and Nut Production In 2005**

	<b>000 ha</b>	<b>000 tons</b>
Watermelon	20.0	233
Melon	25.0	250
Apricot	8.0	n.a.
Berries	9.0	n.a.
Figs	7.4	n.a.
Almond	12.0	n.a.
Other nuts	2.0	n.a.
Grapes	57.6	388
<b>Total</b>	<b>122.6</b>	<b>871</b>

Source: MAIL 2007

3.10 *There are prospects for further growth and exports.* There is a large internal demand and huge export potential. The current value of exports (2006) is \$70 million for fresh fruits and \$111 million for dried fruits and nuts. Experts estimate that, if productivity and quality can be improved, the sector can contribute \$1.5 billion to exports within 10 years from a level of \$100 million in 2005 (OTF 2006). Government targets are more modest, aiming at \$250 million by 2015 (MAIL 2007a; IMF 2006b: 82-3).

3.11 *However, realizing this potential will prove difficult under current conditions and will require sustained support.* At the production level, it is essential to ensure sustained and consistent improvements at all stages, from planting of orchards through management to picking, drying and packing. The industry will need to ensure that only good varieties are planted from controlled and certified nurseries. Extension advice – preferably from the industry itself – will be needed to ensure properly maintained trees and proper harvesting and field grading. Downstream, processing and storage need to be upgraded (and here the problem of electricity is a constraint). Export markets need to be (re)built, starting first with traditional markets, notably India. Box 3 shows how all these constraints apply to one leading commodity – raisins (Perisic n.d.: 6; IMF 2006b: 114).

3.12 *The lesson is that, if the significant constraints can be overcome, nuts and fruits offer good alternatives to the opium economy, although special consideration needs to be given to including small farmers and the poor.* Afghanistan enjoys comparative advantage for these

products, which have high value-added and labour absorption, good downstream profitability in processing and packing, and broad geographical growing range. In more accessible and secure areas there are existing mechanisms by which traders purchase fruits and nut crops prior to harvest, provide packing material and pay the farmer (or others) to harvest the crop. As with opium, the trader pays for transportation and transaction costs. Potential for substituting for opium is quite good – and the substitution is very hard to reverse, once orchards are established. A good private sector dynamic is already established, although significant constraints still need to be overcome (see 3.4 below). Smaller farmers can participate, particularly through farmer groups. Economies of scale apply to the processing, quality control, standards, etc. downstream, and here a “rural enterprise” type of approach would allow smaller farmers to reap some of these economies through associations and links with larger, export-oriented traders and processors. Ways such as this to ensure that small producers and the poor can be included in private sector-led horticulture development need to be devised.

### **Box 3: Reviving Cash Crops is Hard – The Case of Raisins**

*Reviving the raisin market, where Afghanistan was once an important exporter by world standards, is proving difficult, with diminished skills, poor organization and weak processing capacity eroding comparative advantage.*

Raisins are one of Afghanistan’s principal export commodities. In the 1960s and 1970s, Afghan raisins were an important export by international standards, with good markets especially in India and other regional countries. There is thus perceived to be tremendous potential. However, production approaches are now outdated, yields are low, processing facilities have deteriorated, and packing and marketing are sub-standard. In the meanwhile, other countries have filled the gap and Afghanistan has not just to revive but to catch up. In the 1980s there were eight raisin processing factories in Kabul: today, only one is operating. Nationwide, only eight factories out of 31 are still working. Farmer organisation is lacking, and farmers are consequently getting an inadequate share of value. Farm-level production, processing and marketing issues need attention to increase productivity and quality. Production issues have been studied under a RAMP contract.

*Improvements are required at all stages of the value chain, and in the export and shipping process. Pilot work by CADG in Kandahar has shown that processing and packing can be improved. Export procedures need to be simpler and more transparent. Transit and shipment procedures are a major source of loss of value and of business: CADG shipments through Pakistan were three times offloaded (truck to train, train to container, container to ship), and could spend several weeks in baking heat in a railway siding.*

Improvements to quality and price at the farm and processing levels and improvements in export procedures are possible, and would greatly increase value added and incentives to expand production. In their absence, Afghanistan may lose even existing markets.

*Source: Lister and Brown 2004: 1,11,23-5*

## **Fresh Produce 3.1.5**

3.13 *Fresh fruits and vegetables are produced throughout Afghanistan, largely for the local market (with some regional exports). According to MAIL, most production falls in a four-month period, coming to market at around the same time, consequently with low producer prices. Lack of pre-cooling and refrigerated storage is a constraint to extending the marketing season: there is only 10,000 mt of storage in the country (World Bank 2006a).*

3.14 *Market prospects for fresh fruits and vegetables are in principle good. Demand in towns is growing rapidly, and the expatriate community of some 100,000 people comprises a high-potential market for fresh produce.*

3.15 *The sector is, however, vulnerable to insecurity and to transport problems. Delivering fresh produce requires roads to be of good quality and open at all times. “Informal taxes” both*

on domestic roads and on exports are also a problem. In the case of exports, the problem of transshipment at the frontier – Afghan trucks are not allowed to enter either Pakistan or Iran – is a major cost and risk, especially for the lower-value and more perishable cargo.

3.16 *The lesson is that there is considerable potential for import substitution in fresh produce in direct competition with opium, but constraints need to be resolved.* Fresh produce typically offers high value, short cycle and ready market, all characteristics of opium. The potential for competing with opium is considerable, although the perishable nature of fresh produce is a constraint. Producer services need to be developed, there need to be investments in facilities, including refrigerated storage, and rural roads (see Chapter 5), and policy, institutional and security problems need to be resolved. Development needs to be market driven and private sector-led, in partnership with government where needed.

### **Industrial Crops 3.1.6**

3.17 *Despite comparative advantage, industrial crop production has not revived.* Afghanistan used to produce a wide range of industrial crops for local processing by government-owned agro-industry. This included sugar beet, cotton lint and oil, and other vegetable oils. Cotton was a major crop, occupying (in 1978) 112,000 ha, much of it in Helmand province which is well suited to the crop. Beet occupied 5,000 ha (3,000 ha in the Jalalabad area). Since 2001, there have been efforts to revive these crops, but with little success so far. Oil seed crops appear to have declined (IMF 2006b: 82). Cotton production did revive in the south, but on a local scale only, and cotton hectareage fell from 60,000 ha in 2001/2 to 37,000 ha in 2004/5. The ginnery in Helmand has operated only intermittently, and the raw cotton is often sold to traders from Pakistan. Nevertheless, the potential is great; for example, if production area could be restored to levels prevailing prior to the conflict and the average farm size planted to cotton is one hectare, over 100,000 farm families would benefit.

3.18 *The constraints are partly economic, partly organizational.* Inefficiency and poor governance in state-owned companies, including corruption, which in effect “tax” producers through low prices and delays in payments, among other problems, are serious constraints. Competition from imports may make it hard to re-establish profitability, although Afghanistan potentially has comparative advantage in some of these crops, at least for import substitution. Sector organization is a major constraint, with considerable underutilized processing capacity in state hands. Privatization of state owned enterprises in the agro-processing sector has been tried, including a sugar beet plant and a cotton ginnery. The sugar plant could not offer farmers a sufficiently attractive price (UNDP 2007). The privatized ginnery in Balkh dates from the 1940s and is in very poor shape (see 3.2). The parastatal ginnery in Helmand is working inefficiently and is not providing farmers with adequate or appropriate incentives, while the issue of establishing competing private ginneries has been contentious. Prospects for reviving old state-owned plant are limited: most is obsolete and too inefficient to be worth rehabilitating (IMF 2006b: 12.90-1).

3.19 *The lesson is that revival of industrial crops could have a significant impact in shifting incentives away from opium, but it would require policy, institutional and investment measures.* It is likely that Afghanistan could revive production of industrial crops, with better organization and governance and measures to improve profitability and provide farmers with quality services and more stable market outlets. This could have a favourable impact in terms of reducing the opium economy, as industrial crops have some characteristics similar to opium. They are relatively high-value and can provide a good cash income for farmers, small farmers can participate, the crops are labour-intensive particularly at harvest, and the production support system provided by agro-industrial plants can parallel that in the opium economy (provision of extension, seeds and chemical inputs, access to credit, assured market outlet). There is scope

for increased private sector investment and management, where needed in partnership with the public sector.

### **Livestock Potential 3.1.7**

3.20 *Afghanistan is a traditional livestock country and was in the past self-sufficient in livestock products.* Livestock – largely sheep and goats – have traditionally been an integral part of most farming systems in Afghanistan, and range pasture, covering some 45% of the land area, has traditionally supported a large livestock population. In the 1970s the country was self-sufficient in meat and milk and had significant exports of animal fibre and high-value processed products (carpets and skin garments).

3.21 *However, war and drought have seriously impaired the livestock economy.* Pastoral livestock numbers fell by 50% in the late 1990s, due to the war (which disrupted trekking routes) and to the severe nationwide drought. Particularly affected have been the poorest (including the nomadic Kuchi people), for whom livestock are the principal resource (Mansfield 2007a). This drop in herd numbers in turn curtailed the availability of sheep for fattening, the mainstay of meat supplies to urban centres. With the reduction in hostilities and return of favourable rains, livestock numbers have begun to recover. However, poor nutrition and disease contribute to low fertility and productivity, and pasture areas are being reduced and degraded. The country now has rapidly growing imports of frozen chicken, eggs and dairy products. Average meat consumption has dropped to just 10 kg per annum (World Bank 2006a).

3.22 *The lesson is that livestock development could be a means of reaching the poorest and most remote communities, thereby reducing their vulnerability to opium.* More generally, revival of the livestock economy is a priority for poverty reduction. In addition, because livestock are owned by almost all farmers – including by the poorest and those living in the remotest areas – promoting livestock would have an impact on incentives with respect to the opium economy, including in the remoter upland areas that other development interventions cannot easily reach.

## **3.2 CURRENT DEVELOPMENT INTERVENTIONS IN THE SECTOR**

### **Government Growth Strategy for Agriculture 3.2.1**

3.23 *Government sees agriculture as a priority growth sector.* The Agriculture Sector Development Strategy, approved in 2005, proposes to establish the framework conditions and environment for strong growth in private agriculture and agro-industry, with particular emphasis on the cereals, horticulture and livestock sectors. To implement this programme, the government is undertaking a number of development programs in the agriculture sector (Perisis n.d.: 6; World Bank 2006a: 2).

### **Programmes Supporting Agriculture and Horticulture 3.2.2**

3.24 *A number of large programmes have been developed in the agriculture sector, particularly in horticulture.* In addition, many alternative livelihoods projects have contributed to the sector. Examples include:

3.25 *USAID has funded a number of programmes in the agricultural sector, which have typically combined support to production with market development, following a “value chain approach” that identifies and resolves key bottlenecks* (see Box 4). The Rural Agricultural Marketing Programme (RAMP) focused on developing marketing chains. RAMP has now been

succeeded by the Accelerated Sustainable Agriculture Programme (ASAP) which will continue much the same work. Three regionally-based Alternative Livelihood Programmes (“ALPs”) also are supporting agricultural market chain development together with related investments such as irrigation. All of these projects have assisted horticulture at farm and marketing levels.

3.26 The EC has launched the Perennial Horticulture Development Project (PHDP) to provide assistance at the planting and farm level and to support the development of farmer organizations.

3.27 The Emergency Horticulture and Livestock Project (EHLA) is World Bank-financed (\$20 million grant), and MAIL and GTZ implemented. The horticulture component supports rehabilitation and expansion of orchards in four northern provinces and around Kabul on a matching grants basis. It also supports the establishment of a joint public-private Horticulture Development Council of Afghanistan (HDCA) for research, piloting new crops, market development, and capacity building.

3.28 The Asian Development Bank has launched a \$40m five year Commercial Agriculture Development Project (CADP) aimed at strengthening the agro-processing and marketing systems.

**Box 4: Implementing the “Value Chain Approach”**

Considerable work to develop the fresh fruits and vegetable “value chain approach” has been undertaken. Much of this was supported by USAID under RAMP, and now under ASAP. Special efforts in Nangarhar have resulted in the construction of a packing and grading warehouse that is HACCP-accredited, and in trial export shipments of pomegranates to the Gulf. Ongoing work includes investments in cold storage and promotion of production near good roads to ensure quality.

Various implementing partners such as Roots of Peace and CADG have had considerable success in facilitating small-scale exports to neighboring countries and beyond.

*Source: Authors*

**Agro-industry 3.2.3**

3.29 *New agro-industrial investments have been made that can link back to local producers.* Much of Afghanistan’s agro-industrial plant is old and run down (see, for example, Box 3). However, there has been some limited new investment, and several sizeable new agro-industry investments appear to have potential for backward linkages to producers, and the owners have expressed interest in piloting “livelihoods development” relationships with farmers.

3.30 **Spinghar Vegetable Ghee Company** is a \$10 million investment set up in 2004, with a capacity to produce 400t of ghee daily. Raw materials are currently imported, but the company says that it would like to work with producers’ groups in contract farming arrangements (Perisic n.d.: 18).

3.31 **NAPCOD** is a joint investment of \$12 million for cotton ginning and seed processing, between a partly public French company and the Afghan government. The investment benefited from guarantees from the Afghan Investment Guarantee Fund (AIGF). In 2006 NAPCOD took over an old existing ginnery and purchased cotton from 4,600 farmers. The company, which also provides seed and extension services to farmers, expects to be working with 20,000 farmers by 2008. Next steps are to promote farmers’ associations, provision of credit and extension services, and development of a contract farming model agreement. There are, however, reports that NAPCOD has run into difficulties, with farmers avoiding their obligations and other local (state run) ginneries purchasing cotton at higher prices. One of the

investors commented: “local commanders don’t want it to succeed.” In addition, the plant is extremely old, and the operation suffers from frequent breakdowns and power cuts (Parto et al 2007; Perisic n.d.: 19).<sup>5</sup>

### **Contract Growing and Industry Organization 3.2.4**

3.32 *Contract growing is being practiced on a small scale.* Under contract grower models, the company provides inputs and guidance to out-growers and buys their product under contract. In some models, there is a nucleus estate with out-growers located around it. In other cases, the contracting company may simply be a wholesaler or processor with no production activity. Afghanistan had experience with contract growing with farmers on the Helmand irrigation scheme. The cotton company built success by providing extension services, inputs and an assured cotton market and price. This set-up has long since disappeared, but there are cases of contract growing in Afghanistan today. An example is that of CADG, which began in 2002 to contract canola, grapes, cotton and other crops for export. Contract growing primarily of wheat seed production is also currently being promoted by five micro-finance organizations and is being tested with the saffron pilot in Uruzgan (see Box 5 below).<sup>6</sup>

3.33 *Various professional associations are coming together to provide common services.* NGOs have built associations in various provinces to improve marketing and input supply. RAMP has worked with the newly established Kabul Consortium for grape exports in Kabul and with the Fresh Fruit Exporters Association of Kandahar.

### **New High-value Crops 3.2.5**

3.34 *Considerable efforts have been invested in piloting possible new high-value crops, notably saffron.* With support from DFID and other agencies, new crops are being introduced. With DFID funding, MAIL has been working with ICARDA to introduce *saffron*. The programme is to establish a national platform, to conduct research, to import top-quality planting material, to train extension staff, and to develop markets. Saffron is a bulb with a five-year cycle that mimics opium in being labour-intensive with high returns. Women are involved in all stages of the crop, especially processing. This highly interesting niche crop is now being tried in various locations in Afghanistan. Reports from Uruzgan, where commercial Dutch buyers have been investing in contract growing with farmers, look promising (see Box 5). At present market demand is not much of a problem as Afghan production is less than one ton against global production of about 300 tons, and market demand is strong. If the commercial contract growing model is extended to other suitable areas, Afghanistan production could reach 100 t per year. This has the potential to increase the incomes of up to 30,000 farm families by as much as \$1,000 a year, and to earn up to \$40 million in foreign exchange.

#### **Box 5: Saffron Is Being Piloted Commercially In Uruzgan**

Working with Provincial Department of Agriculture and two Afghan NGOs, the Dutch have introduced saffron to Uruzgan province, where it is proving successful. Yields typically exceed those of Iran (13 kg/ha), where the product fetches \$400/kg, or \$5,200/ha. A private company, Global Sales Exchange (GSE), supplies planting material, trains extension workers and supervises their work with farmers, helps with processing, and guarantees purchase of all produce at prices linked to world market prices. Credit will be provided by credit unions supported by WoCCU under the MISFA umbrella.

*Source: Authors.*

<sup>5</sup> The cotton sector clearly has some potential but also suffers from policy, economic and technical constraints which need to be tackled before enterprises such as NAPCOD can become properly viable – see paragraph 3.52 below, and also section 8.2.6.

<sup>6</sup> See Zia and al 2005: 7, 32-3; Perisic n.d.: 17; Byrd 2007: 23

3.35 *Other niche products that have been tested include mint and cumin.* Parallel DFID-funded work by ICARDA has led to the establishment of eight *mint* producers' associations, producing mint for drying and for mint water and mint oil. This has considerable potential, including in main opium-producing provinces. There are good export prospects – and again women play a major role in the production cycle. *Cumin* also has been tested.

### **Irrigation 3.2.6**

3.36 *There has been considerable support to the irrigation sector.* Several donor-assisted programmes are under implementation by the Ministry of Energy and Water (MEW). For example, the Emergency Irrigation Rehabilitation Project (EIRP) is World Bank-financed (\$40 million Credit and \$35 million ARTF grant).<sup>7</sup> The project finances rehabilitation of small irrigation schemes in all five river basins of Afghanistan. The initial project target was 1,280 small schemes covering 110,000 ha, 160 medium schemes covering 120,000 ha, and 20 large schemes covering 50,000 ha, for a total area of 280,000 ha. As of September 2007, 570 sub-projects had been approved (for \$36 million) and 350 completed (for \$11.1 million). After a slow start, implementation is going well, with the total area already rehabilitated reaching 400,000 ha, in excess of targets. By project completion in September 2008, almost 500,000 ha will have been rehabilitated, almost double original targets. A second-phase project is under preparation. Other donor-financed irrigation programmes include a \$15 million irrigation programme in Balkh, and an \$80 million programme for the Western Basin (both ADB-financed). The EC is financing a major water management programme for the Kunduz Basin.

### **Livestock 3.2.7**

3.37 *Current support to veterinary services is designed to establish an autonomous private network of veterinary field units and clinical services.* Government veterinary services were largely destroyed during the decades of conflict. Starting in the late 1980s various donor-funded NGOs and international agencies – led by FAO and UNDP – provided very modest services by training community-based veterinary paraprofessionals and establishing Veterinary Field Units (VFUs). Since 2001, donor-funded NGOs have worked to develop a sustainable national network of privatized VFUs that provide regular veterinary care on a fee-for-service basis. Currently there are some 500 VFUs – all managed through NGOs – together with about 120 government veterinary clinics. An Animal Health Development Project (AHDP) funded by the EU is helping to transform the VFUs into an autonomous network and to privatize the government clinics. The Afghan Veterinary Association, which has been supported by RAMP, is developing as the representative of private veterinary services.

3.38 *New programmes are supporting poultry and dairy development, particularly for small and poor farmers and women.* Support to animal production hitherto has been weak. Pilot projects for poultry and dairy development were initiated in 2000, implemented by FAO with bilateral funding. Building in part on this experience, the World Bank-financed EHLIP livestock component supports dairy development based on the Indian Amul system of a cooperative dairy with local milk producers associations (World Bank 2006a: 9-20). It also supports village poultry production by women's groups, together with veterinary services. The approach is essentially a public-private partnership (PPP) one, with a demand-driven program, a private sector basis in cooperatives and associations, and cost sharing of investments. In addition, the local Coca Cola producer, Habib Gulzar, has plans to set up a dairy, to be supplied by dairy farming associations.

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<sup>7</sup> See World Bank 2007a: 6; World Bank 2003: 4-5

### 3.3 SUGGESTED FURTHER INTERVENTIONS TO COUNTERBALANCE THE ADVANTAGES OF THE OPIUM ECONOMY

3.39 This section will discuss possible further interventions that might contribute to counterbalancing the advantages of the opium economy. Chapter 2 (Tables 2 and 3) pinpoints a number of agricultural development responses to tilt incentives away from opium, particularly:

- Promoting an *integrated approach* to increasing value added in farming, and improving access to services, particularly to inputs
- Promoting *high value agriculture* and *labour-intensive processing*
- Increasing agricultural land under *irrigation*
- Improving returns to *livestock*

Taking these four areas of focus in turn, this section examines what are the development interventions where more could be done in the short or longer term to enhance agricultural growth and to reduce incentives to participate in the opium economy.

#### Integrated Support to Farmers 3.3.1

3.40 *The most effective means of providing integrated packages in agriculture is through implementing partners such as NGOs.* Chapter 2 points to the need for an integrated approach to augmenting value added in farming through water-efficient techniques and technologies and high value-added production packages. This requires access to proven technologies and to improved planting material, fertilizer and pesticide, credit, harvest and post-harvest technology, and (above all) profitable markets. In other poor countries it has proven virtually impossible for public agencies to provide this range of services, and attempts to rely solely on the market are unlikely to work in Afghanistan's difficult environment. The best solution is provision of integrated packages by field-based implementing partners such as NGOs. The focus needs to be on reorganizing production systems around market-driven supply chains, increasing the endowment of productive assets, and expanding the private sector's involvement.

3.41 *These NGOs should work with community organizations, in particular farmer organizations, which can be developed so that ultimately they can take over responsibility from the NGOs.* These field-based NGOs should also work closely with the private sector and other national programmes to ensure integrated service delivery: examples include credit provision (working with MISFA, see 4.3.3) and seeds and planting materials (through the private sector or MAIL). The focus should be on profitability and sustainability; cost sharing or free services or transfer of assets should only be provided to establish activities that can be self-sustaining afterward. Integrated packages along these lines are being delivered through various donor-supported programmes. Examples include AKDN's programme in Badakhshan and GTZ's Project for Alternative Livelihoods (PAL) in the Eastern Region, run with DACAAR and Afghanaid as implementing partners (see Box 6). ***Recent evaluations have shown the economic and counter-narcotics impact of these integrated programmes. Successful models can be scaled up and replicated throughout Afghanistan, with due attention to the variation in local conditions.***<sup>8</sup>

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<sup>8</sup> See, for example, Aga Khan Foundation, Afghanaid and Concern 2007. Also see 6.3.2 below for a discussion of the role of "full service" NGO facilitating partners in the NSP programme.

**Box 6: AKDN Has Had Good Success In Integrating Production, Community Mobilization, Marketing, etc. in its Agricultural Programmes**

Farmers in Badakhshan requested help in developing commercial scale poultry farming. This required a range of support, from market survey through farmer organization, production techniques, construction of poultry houses, animal husbandry and veterinary, and market development. First, AKDN's enterprise development team conducted a market survey of the potential of commercial scale poultry farming in Badakhshan. The engineering section did the estimation and design of the poultry farms, and the community development team identified potential poultry farmers through CDCs. The enterprise development team then organized poultry keeping and business management training and linked farmers with the veterinary services (VFUs) for necessary inputs. As a result, many profitable poultry businesses were established. Now all the eggs in local markets are locally produced, and chicks are supplied to the market from local sources.

In silk sector development, the process started with a production potential survey, which was jointly done by all the teams. Then the community development team recruited trainees from different villages, and the agriculture team worked with farmers on mulberry plantations and cocoon production. The enterprise development team helped establish marketing systems. AKDN has many other examples which illustrate the success of the integrated approach in agriculture. These include: cashmere processing, agriculture input supply, seed multiplication, honey production and sale etc.

*Source: Aga Khan Foundation, Afghan Aid and Concern 2007.*

### **Promoting High-value Agriculture and Labour-intensive Processing 3.3.2**

3.42 *Afghanistan could further develop a range of export and import-substituting products.* The potential for expanding export crops is high, including dried fruits and nuts, and fresh produce (see 3.1). Import substitution could occur for dairy produce, oil crops and fresh fruits and vegetables. Current import levels that might be displaced are on the order of \$200-\$300m. The following paragraphs explore how these potentials may be developed, pulling economic activity away from opium.

#### *SUPPORTING HIGH-VALUE HORTICULTURE PRODUCTION*

3.43 *The potential of high-value horticulture is strong.* Current development programmes (see 3.2.2 above) are based on successful models, and are likely to succeed. For example, the fruit orchard development being promoted by EHLP is based on research and development work from the 1970s, revalidated in 2002, and on the results of two pilot NGO projects (World Bank 2006: 4). Experience in Turkey, India and China since the 1970s shows that major investments in production, processing and marketing can result in state-of-the art perennial fruit industries.

3.44 *Despite the considerable investments that have been occurring in high-value horticulture, there is certainly scope for more investments, although current inefficiencies need to be addressed.* EHLP focuses on just four provinces, but it has been designed as a national programme to be expanded as experience develops and further resources become available. There is an opportunity to support the programme with additional resources, particularly in provinces where there is pronounced poverty and opium vulnerability. Support to this development in other parts of the country could represent an important contribution to rural incomes, employment and poverty reduction. However, the current lack of linkages and coordination between programmes and the resulting overlaps and inefficiencies (see 3.4.2 below) would need to be addressed before further investment could be justified. An opportunity to provide consolidated support to high-value horticulture, from production through

processing to market, is also presented by MRRD's recent proposal for a massive and integrated rural enterprise development programme, AREDP (see 4.3.1 below). This programme is expected to undertake in-depth studies to identify the best economic prospects in high-value horticulture.

3.45 *There is also a need to develop instruments to reach poorer farmers.* Farm size does not necessarily inhibit profitability, especially for high-value cropping. Orchard crops and vegetable crops in principle can be grown efficiently on a small scale. However, development programmes chasing hectare targets typically overlook the needs of smaller farmers. EHLP has a provision for smaller farmers to form groups, and such groups can certainly reduce the costs of delivering assistance. The success of this approach and the scope for promoting horticultural farmer associations should be ascertained, and programmes designed to ensure access by poorer farmers.

3.46 *There may be scope for extending certain short cycle horticultural crops in vulnerable provinces, including Nangarhar, Helmand and other southern provinces.* Interventions with farmers to help establish new tree crops would be very difficult in conditions of insecurity. However, there is scope for creating market opportunities for short cycle, high-value crops, as has been done with initiatives for contract farming of chili peppers in Helmand. Other high-value crops that could be expanded in southern provinces include alfalfa and mint.

- ***Further support to development of high-value horticulture should be provided, with a focus on opium-vulnerable provinces that are currently under-served. Prior to provision of further support, MAIL and MRRD need to identify the best economic opportunities and to work together through AREDP and other programmes, ensuring that all interventions are streamlined and dovetailed with each other. Instruments to ensure the participation of poorer farmers are an imperative. The innovative and successful DFID-supported programme to identify and develop new high-value crops should be continued and strengthened.***

#### *SUPPORTING THE DRIED FRUITS AND NUTS PROCESSING AND EXPORT SECTOR*

3.47 *The dried fruit and nut sector has particular features that make it suitable for further development and scaling up in Afghanistan's difficult environment.* Afghanistan certainly has a comparative advantage in dried fruits and nuts, reflected in the profitability of exports. Also, the industry is relatively less vulnerable to insecurity and poor transport networks; for example, produce can be stored on the farm in the event of roads being inaccessible. Development of the dried fruits and nuts sector thus appears to have potential for sustainable and profitable growth, and the market is enormous: the value of the global dried fruit and nut market is estimated at \$2.2 billion, only 2% of which is captured by Afghan producers (Parto et al 2007:18).

3.48 *Recent programmes to support the sector show that there are considerable problems.* USAID's RAMP and the CADG programmes have gone a long way to pinpointing remaining constraints in the value chain, and investments can resolve some of these. However, there are also major policy and institutional constraints (see Box 3 above and 3.4.1 below) that are holding back growth.<sup>9</sup>

- ***Further investments and capacity building in the dried fruits and nuts sector are required all along the value chain. However, progress needs to be made with the actions to address the policy and institutional constraints set out in Box 3 above and in Section 3.4.1 below, before further major investments can be effective. In addition, the improvements to strengthen Afghanistan's overall business environment***

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<sup>9</sup> See also the broader constraints to enterprise development and competitiveness discussed in 4.4, especially 4.4.2.

***and competitiveness discussed in Chapter 4 (4.4.2) would help the revival of the dried fruit and nut sector.***

#### *THE VALUE CHAIN APPROACH*

3.49 *There is strong evidence of multiple constraints throughout value chains, and a value chain approach can address these systematically.* The case of raisins illustrates the usefulness of the “value chain development” approach, rather than “sectoral” interventions at the levels of production, marketing, processing etc. Much knowledge has already been garnered, particularly under RAMP, and this approach has been applied in several projects. For example, in 2006 USAID put together an Agricultural Marketing and Production Support (AMPS) designed to support entire value chains in three agricultural areas of Afghanistan. The program was specifically conceived as an “alternative livelihoods” program in 11 provinces where opium was to be banned and eradicated. AMPS was to start with a market assessment to identify 2-3 horticultural products in each area, and then provide inputs and extension advice to farmers and support to markets (e.g. development of cold stores, help with packaging, grading etc). A priori, this approach is one that could be applied to a number of high-potential crops and products. There is, however, a surprising lack of objective and documented assessments of these kinds of approaches (Byrd 2007: 1; Perisic n.d.: 3).

- ***Experience with value chain approaches linking producers, processors and export markets should be thoroughly evaluated in preparation for the AREDP programme (Perisic n.d.).***

#### *MARKET DEVELOPMENT AND AGRICULTURAL EXPORT PROMOTION*

3.50 *Market development is important in tapping the potential of agriculture.* A well-organized marketing system is perhaps the most powerful incentive for agricultural development. Improvements are required at all stages of the value chain, in the export and shipping process, and also in the development of agro-industry. RAMP, working with private producer and exporter associations, has built up much knowledge in this area. Establishment of the Horticultural Crops Development Authority (HCDA) is being supported under EHLF. The agricultural export sector is also being assisted by the Export Promotion Agency of Afghanistan (EPAA), the chambers of commerce and various USAID programmes.

3.51 *Countries around the world have been successful in developing horticultural exports.* Many countries in Africa have developed public/private partnerships in agricultural export promotion and facilitation, often with government or project support. The classic example is Kenya, where an entrepreneurial private sector, willing farmers and light government support have developed a horticulture export industry that supports 100,000 families. In West Africa there are World Bank-financed projects to support the growth of agricultural exports, particularly horticultural products.

- ***There is considerable scope for further export promotion, based on successful experience in comparable countries and working with industry bodies like producer and exporter associations and with the HCDA. The AREDP programme should be employed to help build strong commodity export associations (Byrd 2007: 1; Perisic n.d.:3).***

#### *INDUSTRIAL CROPS AND AGRO-PROCESSING*

3.52 Industrial crops could offer economic growth with impacts on the opium economy, but so far development attempts have had little success. The constraints – partly economic, partly organizational – were discussed above (3.1.6). Yet the potential is considerable, and current

movements in prices of edible oils are changing the economics. Programmes in many countries have supported development (see Box 7), and there is no reason why Afghanistan should not do the same. The impacts on opium areas like Helmand of production and marketing of alternative high-value crops like cotton could be considerable (see 7.7 and 8.2.6). However, there may be some environmental constraints: cotton is not well suited to some of the increasingly saline soils, for example in Helmand, and improper pesticide use can pose risks.

- ***Under AREDP, sector studies of prospects for cotton and oil seed development should be conducted. These should evaluate financial profitability and economic comparative advantage as well as environmental impacts and risks, and should recommend policies and investments (for example start-up assistance, matching grants, cost sharing, short to medium term support, market development, etc.) to help establish and sustain agro-industries. Options for an integrated production and market development programme for suitable crops such as cotton, initially targeted at Helmand province, should be actively explored and evaluated (see 8.2.6).***

**Box 7: Development Of Industrial Crops and Agro-Processing to Stimulate Agriculture**

In the absence of agro-processing capacity, Afghanistan will remain an exporter of low-quality primary produce. It is unlikely that infant agro-industries can simply emerge and survive without some form of support. Examples from the East Asia “miracle” show that a range of measures may be used to stimulate agro-processing.

*Malaysia* developed its oil palm refineries by taxing unrefined oil palm exports and using the proceeds to support its refineries. Now the refineries are sufficiently competitive and the export tax has been lifted. In the 1980s, *Thailand’s* agriculture sector was in decline, and a policy to protect and diversify the agricultural base was pursued. Government offered promotional privileges to large export-oriented processing industries, including extendable tax holidays, duty draw-back, reduced electricity prices, lower freight charges on national carriers, and tariff protection as high as 40-50% on processed foods to protect a new industry. In addition the government financed programmes to enhance export quality. These industries also benefited from subsidized credit extended to farmers who participated in out-grower schemes. Furthermore, bilateral trade negotiations were employed to win reduced tariffs from importing nations. Thailand was able to simultaneously develop its own brands and, with international investment, to export in sectors where it already had developed a comparative advantage (for example in pineapples, where Dole had invested). Agro-industry grew at a rate of 33% a year from 1986 to 1993.

*Source: Jomo and Rock 1998.*

**CONTRACT GROWING**

3.53 *Contract growing is an attractive model, but there are constraints.* The advantage for the farmer is that he receives a package of inputs and advice and has an assured market outlet, usually at an agreed price or price formula. The advantage for the processor is a supply of raw materials of predictable quality, quantity and price. This mechanism matches the structure of the poppy business, and therefore is a good way to help farmers to change their crop. Problems identified are: (i) lack of established steady demand for most crops – there is a need for processing capacity, for example for edible oils; and (ii) lack of institutions that can facilitate (and finance) these arrangements, Should a partner organization be brought in to do this? Or should incentives be provided to the private sector?<sup>10</sup>

3.54 *There is considerable international experience to learn from.* This formula has worked for cotton in Africa (the CFDT model in several countries), for coffee (the cooperative model in Kenya), for tea (the KTDA factory and out-grower model pioneered by Britain’s

<sup>10</sup> See Zia and al 2005: 33 for a good discussion of these issues. Also Perisic n.d. 9

Commonwealth Development Corporation and others), for tobacco (private company and out-grower models in Zimbabwe), for mango and dates in India and Pakistan etc.

- ***Contract growing arrangements through private sector processing and marketing firms are a priority area for development, and a detailed feasibility study of experience and opportunities should be carried out. Potential in suitable crops such as cotton, including especially in Helmand, should be a priority area for investigation (see 8.2.6).***

### **Increasing Agricultural Land under Irrigation 3.3.3**

3.55 *A top area for further investment – currently under-financed – is agricultural water, including watershed management, storage, irrigation development and on-farm water management.* In order to restore livelihoods and promote transition to higher-value cropping, irrigation is essential. This is not given enough emphasis in the I-ANDS, and the search for “quick impact projects” has meant that little “alternative livelihoods” financing goes into irrigation. Yet the need is enormous. The scope for further irrigation rehabilitation alone is considerable. Afghanistan has 1.0 million ha of traditional river and stream irrigation, 50,000 ha irrigated by springs and karezes, and 250,000 ha of modern government run schemes. Much of this irrigation infrastructure is severely degraded.

3.56 *Current programmes are being carried out effectively, but their scope needs to be broadened and financing increased.* Existing rehabilitation programmes are performing well under Afghan leadership and execution. Rehabilitation costs are low (less than \$250/ha) and rates of return are high (the programme requires a minimum ERR of 15%). However, these programmes cover less than half of total rehabilitation needs. A second phase EIRP project is about to start, but considerably more investment is required, not only in rehabilitation but also in watershed management, new water storage projects (enabling irrigation to be practised in drier years) and modern irrigation technology to save water (for example drip irrigation). In addition, attention needs to be given to areas not currently well covered, such as improved water management and advice on irrigated cropping. A second phase of the ongoing rehabilitation programme is under preparation, for possible financing by the World Bank (\$120 million) and ADB (\$80 million). In addition, the Saudi Fund for Development may cofinance. This programme is likely to focus on large-scale irrigation and hydropower, leaving a gap for financing of other irrigation and agricultural water management priority investments (World Bank 2007: 6; World Bank 2003: 4-5).

3.57 *There may be scope for new large scale multi-functional development.* Afghanistan possesses considerable untapped surface water resources, and many of these could be developed for large scale irrigation, associated with hydropower. A feasibility study under EIRP of a possible Kokcha River irrigation scheme has shown that 160,000 ha of land could be improved or developed for irrigation, at an average cost of \$4,000/ha, which is below the average cost of successful modern irrigation schemes in the region. The project could also be multi-functional, generating 100 MW of hydropower, which would improve economic viability. There is also scope for other large scale development, for example on the Amu Darya and its tributaries. There are however, issues over water sharing with riparians.

- ***An irrigation and agricultural water management sector review should be carried out and massive extra financing provided to implement a phased ten-year programme covering irrigation rehabilitation and expansion (topping up the existing programmes), watershed management, new storage, modern irrigation, and development and dissemination of improved water management and irrigated cropping packages. The review should also assess issues of riparian rights and transboundary water sharing. The Ministry of Energy and Water (MEW) and the***

*Ministry of Agriculture, Irrigation and Livestock (MAIL) need to work together in this endeavor and to cooperate with NGOs and other outreach organizations.*

### **Improving Returns to Livestock 3.3.4**

3.58 *Investment in livestock is a first-class entry point to reduce the dependency of the poor on opium.* As discussed above (3.1), improving returns to livestock offers a direct route to addressing the needs of the most vulnerable and thereby reducing the incentives to participate in the opium economy. There are national programmes underway to strengthen veterinary services, but the financing and sustainability of these programmes are uncertain. Current small-scale initiatives in dairy and poultry are showing the way for pro-poor and sustainable development, and there are possibilities for scaling up ongoing programmes. Other areas of the livestock economy – in particular sheep fattening and development of downstream high value-added activities – also deserve more attention, as they offer opportunities for reaching the poorest and most remote communities.

- *Top priority should go to ensuring that the transition to privatized but universally accessible veterinary services is carried through, whilst ensuring that services are available to the poorest.*
- *The results of the initiatives in dairy and poultry to date should be studied in detail, and further support should be provided, with particular focus on the poorest, on women, and on extension to areas least served by development programmes and with susceptibility to dependency on opium poppy cultivation.*
- *Mechanisms to enhance livestock value added should be devised and associated programmes supported. High priority areas are sheep fattening and cashmere fibre development; improving wool quality for the carpet industry; and production of karakul sheep pelts.*

## **3.4 CONSTRAINTS AND POLICY AND INSTITUTIONAL RESPONSES**

3.59 This section looks at the major constraints to agricultural growth and to enhancing value added in agriculture, and at the possible policy and institutional responses to resolve those constraints. The constraints discussed are: (i) the hindrances to competitiveness and profitability of Afghanistan's agricultural production; (ii) the often ineffective and inefficient delivery of public support programmes in the sector; (iii) the weakness of sector policy development and planning; and (iv) growing insecurity.

### **Improving the Competitiveness of Production 3.4.1**

3.60 *In order to be competitive, Afghanistan's agriculture needs to become more commercial.* The difficulties that Afghan farmers face in competing with imports even in the case of products enjoying heavy natural protection underlines the need to improve competitiveness. This means improving productivity at farm level, providing added value through better marketing and processing, and better farm to market linkages. This in turn requires a focus on supporting enterprise development (see Chapter 4) and taking a comprehensive value chain approach. It also means having the necessary infrastructure – transport, electricity and irrigation – in place. The following paragraphs discuss actions that need to be taken on some of the principal constraints:

- *Improving transport and the road network is a priority.* An inadequate road network leads to high costs for moving farm produce, and the ban on Afghan vehicles entering Pakistan and Iran results in very high transshipment costs and product losses. There

are also constraints, delays, spoilage and other costs that affect exports shipped through neighbouring countries like Pakistan. Among recent improvements is the sharp increase in the number of trucks operating in Afghanistan from 30,000 in 2001/2 to 83,000 in 2004/5, 90% of them privately owned. However, the poor state of the road network leaves many areas inaccessible and makes for excessively high transport costs. Measures to improve the rural road network are discussed in Chapter 5. Improving and enforcing transport standards would enable Afghanistan to negotiate transit in Afghan vehicles through neighboring countries, thereby reducing costs. *Access by Afghan trucks to neighbouring countries should be negotiated in transit and trade agreements (IMF 2006b: 92; World Bank 2007: 10).*

- *Effective services to farmers are essential for lowering production costs.* Producer services are key to improving productivity. New government policy identifies an essential public sector role for MAIL in terms of planning, financing, quality control and supervision of service delivery. Service delivery is, however, to be carried out through private and NGO organizations (see Box 9). *In line with its new policy, MAIL should carry out its essential public sector role, and contract for service delivery through farmer organizations, NGOs etc.*
- *Targeted support is needed.* General production subsidies in agriculture are not advisable (see Box 8). However targeted support programs – such as investment promotion, start-up grants, capital cost sharing, land allocation etc. – will be important for encouraging investment in the sector. Support is, for example, already being usefully applied in cost sharing and technical support for development of nurseries, orchard planting and building of stores. AREDP is proposing a blend of start-up grants (e.g. innovation grants) and support to accessing market finance. Careful monitoring and safeguards are required to ensure that “support” does not encourage unsustainable investments or crowd out normal market development by the private sector. Much criticism has been leveled at certain donor programmes for “giving things away”, undermining market processes and produced no lasting development impacts. *Targeted support to production and marketing carries some risks but is well worth considering for industrial crops for which Afghanistan has underlying comparative advantage, particularly if there is a focus on opium-vulnerable areas.*

#### **Box 8: Should Production Subsidies Be Ruled Out?**

Background work for this report extensively analyzed the case for and against subsidies on agricultural production as a means of encouraging farmers to move out of opium production. The conclusion was that general agricultural production subsidies are not advisable. In particular, production subsidies for *wheat* would not work. 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 opium 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 addition, the fiscal cost of a wheat subsidy would be enormous. The current price of wheat is in the range of about \$150 a ton. To raise the gross margin on wheat to equal that of poppy, a price of \$455/ton would have to be paid, three times the market price. Such a massive subsidy on one crop would greatly distort relative prices. The impact on the opium economy would be very modest, as the opium trade would certainly respond by bidding up the price to the point where incentives to avoid the subsidy and continue to cultivate opium poppy would become overwhelming. Moreover, since opium cultivation easily can shift across many parts of the country, a wheat subsidy would need to be implemented on a nationwide basis in order to reduce opium production rather than merely displacing it to other parts of the country. Hence the fiscal cost would be staggering – of the order of \$2 billion annually, some 30% of GDP and three times current fiscal revenues. It would be difficult to prevent the benefits of the subsidy from accruing to landowners, i.e. the better off. And finally, in practical terms administering such a system in Afghanistan’s weak governance environment would be virtually impossible.

This does not mean that targeted investments and operating support for certain specific agricultural products,

particularly those that can shift incentives away from opium, should be ruled out. Various options are discussed in this report, including *inter alia* start-up assistance, matching investment grants, cost sharing, short and medium term support, market development, etc. The proposed integrated production and market development programme for suitable crops such as cotton in Helmand is an example (see 8.2.6).

Source: Ward et al 2007:6.4.A

### **Enhancing Synergies Amongst Programmes 3.4.2**

3.61 *Programmes should work closely together to reduce duplication of effort and provide effective developmental services, and there is an acute need for consolidation around national priority programmes.* There are numerous donor-assisted programmes in the agricultural sector, but their effectiveness is impaired by lack of coherence and effective coordination among them under government leadership. There are gaps, overlaps and incoherence. Information on programmes and achievements is rarely exchanged, and results are not monitored and fed back into policy and programming. A striking example is the three horticulture development projects which sit alongside each other within MAIL (EHLP, PHDP, ASAP: see 3.2 above). Despite good intentions and attempts at coordination, these three programmes have little interaction and lack joint programming. The problems are essentially as follows:

- Weak strategic framework (now strengthening)
- Lack of Afghan government leadership (now improving)
- A strong supply-driven impetus from donors and NGOs, each keen to take the initiative

3.62 There have been recent improvements, with the stronger lead taken by MAIL and increased donor willingness to work with that institution (see 3.4.3 below). However the problem remains acute.

- *All partners need to align agricultural programmes within the new strategic framework provided by MAIL (see below) under Afghan government leadership, and to give priority to joint programming at central and provincial levels, and to transparency, information exchange and knowledge management. Key areas for better cooperation are horticulture and livestock.<sup>11</sup>*

### **Strengthening Sector Policy Development and Planning 3.4.3**

3.63 By contrast with the rural development sector where MRRD has maintained strategic focus and attracted donor financing to effective National Priority Programmes, the agricultural sector has been characterized by lack of vision, weak public institutions, and scattered interventions. Now MAIL is reforming, with an emerging strategy, an institutional reform programme, and a promising vision of its own (policy and planning) role, and of the role of executing agencies such as NGOs (see Box 9).

- *Capacity building of MAIL should focus on enabling it to fulfill its strategic roles. Donors should help MAIL by all means possible to work closely and programme jointly with MRRD and MEW. Many studies have already been undertaken of export crop development, oil crops for import substitution, and livestock. These need to be reviewed and if necessary further developed to ensure that proper economic analysis is included, and that any needed adjustments to policy to permit profitability and sustainability are clearly identified.*

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<sup>11</sup> See also Chapter 7, where issues of Afghan ownership, National Priority Programmes, and aid effectiveness are discussed.

### Dealing with Insecurity 3.4.4

3.64 As for all rural programmes, agricultural programmes have encountered problems of insecurity, which are constraining implementation, particularly in the south. The Ministry of Energy and Water's irrigation rehabilitation programme has encountered increasing insecurity in Helmand, Kandahar, Zabul, Uruzgan and Nimruz. In Kandahar, the programme was active in all districts and had identified 223 schemes for rehabilitation, but only one-third of these (75) have been completed, and the level of new approvals is greatly reduced. In Uruzgan, of 48 schemes identified, only five have been taken to design stage. In Helmand, only three of the 16 schemes identified have actually been rehabilitated. Insecurity and risk are factors in implementation capacity too: MEW's regional offices in insecure areas are "losing good staff by the day". The response, as for other rural programmes, has been to rely more on community ownership: community leaders will typically accompany staff on site visits and assure their safety.

#### Box 9: Changes at the Ministry of Agriculture, Irrigation and Livestock (MAIL)

Long viewed as a bastion of top-down *dirigisme*, the Ministry of Agriculture (MAIL) has over the last two years begun to recast itself in the new mould of lean and efficient government.

The ministry has given priority to *strategic planning*, preparing (1) a master plan, (2) a strategy (for ANDS) with seven programmes, and (3) an Implementation and Investment Programme, with projects in each of the seven programmes. Seven working groups were set up, each headed by a MAIL Director-General. For the first time, these documents were not just prepared by expatriate technical assistance – MAIL staff were involved in the planning process, and have become familiar with concepts like privatization, participation, M&E etc.

*Institutionally*, MAIL is going through simultaneous change processes. Organizational changes are introducing a new organigram. Capacity building is going ahead on a continuous basis. In the meantime, staff are getting hands-on experience with implementation. The ministry has been through PRR: 14,000 MAIL staff in 2004 are now down to 10,000. About 20% of staff have "passed" PRR and are now confirmed in PRR positions. They are the object of capacity building, and they receive \$200 a month (rather than \$40 for non PRR staff). "PRR makes a difference," a senior adviser commented. The ministry remains, however, heavily concentrated at headquarters and provincial levels: MAIL has only 220 staff in Afghanistan's some 350 districts.

In its policy and strategy documents, MAIL has set three main *policy priorities*:

- **Reduce the vulnerability of the poorest:** a baseline is being established as a benchmark by which to measure progress; an FAO-executed project, FAHM, is doing a survey to assess levels of poverty among farmers (the overlap of FAHM with NRVA should be checked).
- **Withdraw MAIL from direct interventions** and focus on a "steering and regulatory role", ensuring service delivery through farmer organizations, NGOs etc. With this in mind, MAIL is developing a partnership protocol with NGOs, spelling out respective roles. MAIL is planning to keep a list of accredited agricultural NGOs and contract with them for service delivery. For example, EHLP has funds for NGO facilitating partners.
- Prepare the ground for *private sector development*, e.g. by working on land tenure and water rights.

MAIL has set three *program priorities*: (1) food security (livestock, irrigation, agro-processing, transfer of new technology); (2) development of horticulture for export; and (3) livestock for import substitution (poultry, dairy).

A key objective is to *consolidate – or at least coordinate – existing donor programs*. The Minister commented: "A year ago, donor programs were a patchwork. Now we are trying to work with donors, filling gaps" The Minister admits that there are shortcomings. The only way is to "communicate, coordinate and collaborate". But even so, there are agricultural projects that the ministry knows nothing

about. MAIL helped the USAID-financed credit project ARIES through all the hoops and committees, offering them office space in the ministry, but once effective, ARIES “disappeared and we don’t know their address”.

One remaining weakness is the inadequate *collaboration with MRRD and MEW*. Despite encouraging words, there has been little collaboration in the past with MRRD, the natural partner of MAIL. There are signs, however, that collaboration with MRRD may be improving. A positive indication is the recent close collaboration between the two ministries in drafting the Comprehensive Agriculture and Rural Development Strategy (CARD) under the auspices of the Senior Economic Adviser to the President. Once approved, CARD is expected to become the main coordination mechanism for agriculture and rural development. Two other areas where closer collaboration would be desirable is in the provision of rural credit and in rural enterprise. In addition, following the recent separation of irrigation from MEW, serious coordination problems remain, and MAIL is struggling to take over the MEW’s important portfolio of irrigation work.

*Source: Discussions with HE the Minister and with senior MAIL staff*

- *As in the case of other programmes, there is a need to work through decentralized planning and programming mechanisms and to optimize community engagement (especially through CDCs). Implementing partners should use locally recruited staff, and work with a community security guarantee.*

### **3.5 EXPECTED GROWTH, POVERTY REDUCTION AND OPIUM ECONOMY IMPACTS**

#### **Overall Impacts 3.5.1**

3.65 *Increasing value added in agriculture across the board has high potential to reduce poverty and to have an impact in terms of shifting incentives away from the opium economy.* Growth of orchard and industrial crops will primarily benefit the better-off landowners and smallholders (Types 1 and 2, see 2.3 above), but will also have important impacts on poverty and the opium economy through employment effects in the longer term. Growth in food crop and livestock production and productivity would have a broad impact across the entire rural population (including for the poorer farmers, Types 3 and 4) and would directly reduce poverty, thereby also supporting counter-narcotics objectives.

3.66 *Expanding the area of irrigated orchard crops can provide economic growth, exports and a viable replacement for opium for landowners and many farmers.* The distribution of benefits is broad, with more than 600,000 farmers working in this sector, and with an average area of less than 1/3 ha per farm (MAIL 2007a). Orchard crops are grown widely across the country, including in areas where poppy is currently concentrated. Growth impacts would thus be good (particularly for Types 1 and 2, but also for Type 3 farmers), and under conditions of decent governance and security, expansion of orchard crops could be expected to provide incentives for these farmers to avoid opium poppy cultivation.

#### **3.5.2 Targeting Maximum Counter-narcotics Impacts**

3.67 *Amongst the numerous possible interventions in agriculture, the maximum counter-narcotics impact is likely to come from the interventions which are broadly spread and bring the most income and employment to poor households.* Investment in integrated support programmes (3.3.1) is a very good candidate for scaling up and could be targeted to the key Type 2-4 farmers, although there are policy and institutional issues that would need to be resolved. Investment in high-value agriculture (3.3.2) would have its highest impact in the irrigated plains and peri-urban areas, where poppy is less prevalent, and could be predominantly taken up by larger landowners (Type 1). However, where more labor-intensive high-value crops are involved, these will increase demand for labor and (maybe at least to some extent) sharecropping. Promotion of certain high-value crops (the saffron example is an excellent one)

or in certain areas could have considerable impact on more marginal (Types 2 and 3) farmers. Pilot initiatives in developing high-value agricultural and processing activities, whether for export or import substitution, could have strong demonstration effects and encourage imitative scaling up over time by Afghan farmers and businesses. A comprehensive programme for contract farming of cotton could have a significant impact on incentives, with potentially high impact in opium areas such as Helmand (if security conditions permit). Further investment in irrigation (3.3.3) and in livestock (3.3.4) would have a strong counter-narcotics impact, although questions about operations and maintenance of irrigation need to be examined.

- ***The policy implication is that for maximum impact on the opium economy, further investment should be focussed on integrated support programmes, on irrigation, and on livestock, and the policy and institutional constraints to these programmes should be addressed. Support to higher value added cropping could be through the proposed AREDP programme (see 4.3.1 below).***

### **3.5.3 Mitigating Possible Risks**

3.68 *There is a risk that agricultural development activities may actually facilitate and enable greater areas of poppy to be grown.* Improving or extending irrigation can make it easier to grow poppy. Poppy could continue to be cultivated alongside the alternative crops promoted by development programmes. Newly established orchards, for example, can sustain an intercrop for the first three to four years – and poppy could be a suitable intercrop.<sup>12</sup> Settling refugees back into the community may actually provide more labour to service the poppy economy. A programme that provides alternative crops for farmers may still make many landless labourers redundant, as the alternative crop may have much lower labour requirements. In such cases, the landless may well seasonally migrate to where poppy cultivation is occurring, helping opium to flourish somewhere else.

3.69 *Measures to mitigate these risks need to be identified at the programme design stage.* The Afghan government’s policy of “mainstreaming” counter narcotics into all development programmes (see 7.3 below) requires that the risk of negative impacts be identified at the beginning of programme development, and mitigation measures built in, taking account of the specific drivers that affect each of the different categories of rural people engaged in opium production (see 2.3). Regarding the risk of loss of employment, alternative provision, e.g. labour-intensive public works or rural enterprise development, may be needed, although in the longer term increasing agricultural value added should generate some longer-term compensatory employment in production, processing and packing.

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<sup>12</sup> However, orchards would crowd out poppy over the mid- to longer-term.