

## VII. AGRICULTURE, FOOD SECURITY, AND NATURAL RESOURCE MANAGEMENT

### A. Current Situation

157. Agriculture has traditionally been the largest source of economic output in Afghanistan, and 85% of the country's population is engaged in the rural economy. Agriculture in Afghanistan is largely a household activity, with women and children as well as men having important roles in crop production, horticulture, and the rearing of livestock. Tragically, agricultural activity has been depressed by 3 years of drought and more than two decades of war. Environmental degradation caused by the pressure on the natural resource system, including the ploughing of steep hillsides, stripping of brushwood for fuel, and use of animal dung for fuel rather than fertilizer, has further reduced productivity. As refugees return to rural areas, pressure on natural resources—particularly water and forests—will likely increase, raising risks of further environmental degradation. Cereal production, the main determinant of domestic food supply, has fallen by almost 40% since 1999, and is only half of what it was in prewar years. Food supplies are critically dependent on cereal production and cereal import requirements are currently about 2 million tons.

158. Agriculture relies heavily on irrigation, since rainfall is scant and highly variable over those parts of the country where topography and soils are suitable for cultivation. Prewar surveys indicated that 80% of wheat and 85% of all crops were produced on irrigated land. Since 1996 the irrigated area, has declined by around 60%. Irrigation is dominated by small and medium river valley schemes owned, operated and maintained by village communities. This high level of community ownership should provide a strong basis for a sustainable, community-driven approach to rehabilitation. Large-scale irrigation schemes covering over 100,000 hectares (ha) are found in the northern and western plains, but these are plagued by severe management problems, waterlogging and salinity, and by induced and destructive changes in river regimes. In 1997, the area requiring rehabilitation was about 1.7 million ha.

159. While landholding patterns in Afghanistan vary greatly, both between and within districts, sharecropping is common on irrigated lands. Poorly-designed and controversial land reform programs were undertaken in the 1960s and 1970s but in the past two decades re-allocated land has largely reverted to original owners or been seized by commanders. Disputes and conflicts over landownership or usage are common in parts of the country.

160. Through the 1980s, the livestock subsector provided food, draft power and fiber and was a major source of cash income. Livestock also accounted for about 40% of total export earnings. While herd numbers declined significantly during the war years, herds (particularly sheep and goat) did begin to recover in the mid-1990s, only to be devastated by the current three-year drought. Herd numbers are estimated to have fallen by about 40% since the drought began.

161. In the late 1970s, horticulture accounted for around 40% of the country's export earnings, though occupying only some 6% of the total arable land and 12% of the irrigated land. Horticultural production declined rapidly during the war years, but began to recover significantly after 1992. A 1996 FAO survey found that 40% of orchards were less than 15 years old, indicating strong resilience among farmers, replanting and improving their orchards.

162. As described in Chapter III, large amounts of arable land, particularly in the southwest and northeast of the country, were devoted to poppy production prior to the Taliban ban. The area under poppy cultivation was reduced considerably under the ban, but began to rise again

in 2001. Further increases are likely in the absence of alternative income sources (agriculture, nonfarm income-generating opportunities), and effective enforcement of the drug ban.

163. A growing, less vulnerable, more diverse rural economy that provides opportunities for rural women and men is essential to improve rural livelihoods. Agriculture, water sector, and natural resources recovery must be coordinated with other programs including education, health, accessibility, rural finance, and private sector development to form a multisectoral launching platform for achieving this vision..

164. Sustained rural recovery will require ensuring free access to domestic and external markets, promoting efficient functioning of input and output markets, and facilitating local and community ownership and management. Food insecurity is likely to persist in the short term, so a combination of programs that increase food and livestock production, create wage employment opportunities and provide a safety net for the vulnerable groups may be required. Early delineation of public and private sector roles in these initiatives is needed to avoid creating a system that crowds out the nongovernment sector in the long term.

165. Rural recovery cannot be discussed without parallel discussion of critical natural resource issues. The major environmental challenge facing Afghanistan is the impact of the return of refugees on already stressed water and forest resources. When the refugees return to rural areas, the carrying capacity of the land will depend not only on food and fuel supplies, but more broadly on success in rehabilitating agricultural systems – particularly irrigation systems – seeds and fertilizers. If food and fuel support is not available, people are likely to practice environmentally degrading methods of agriculture, and sources of energy, simply to stay alive. In this context, the development and implementation of sound policies for natural resource management will be critical in the long-term to Afghanistan's long-term prospects for a strong agriculture sector, and to the well-being of rural households and communities.

## **B. Short-Term Priorities**

166. In the short term, the priority for the rural sector will be the recovery of farm production and irrigation capacity on a selective basis, coupled with programs to address key policy and institutional capacity issues that enable the AIA to guide and support growth, while avoiding threats to natural resources through overexploitation of groundwater, and degradation of soils, pastures and forests.

167. In implementing this program, the fostering of markets and engagement with the private sector will be crucial. In particular:

- (i) access to domestic and external markets will be a critical stimulant for recovery in the short term and for the success of the reconstruction effort in the medium and longer term;
- (ii) an open trading regime with bordering countries will provide the goods needed by communities and thus facilitate the recovery process. In the case of agriculture it will facilitate the functioning of input and output markets as well bringing consumers goods into rural areas; and
- (iii) public private partnerships will help reduce risks, perceived by the private sector and communities.

168. An early delineation of public and private sector roles is needed to avoid creating a system that crowds out the nongovernment sector in the long term.

## 1. Immediate Actions

169. The priority in the first year will be quick-gestation rural recovery and employment programs that restore community and household food security and protect the vulnerable. Emphasis should be given to community-driven interventions to the maximum extent possible. This would enable the quick launch of an effective and financially sustainable program of recovery and rehabilitation. Rural development activities would be coordinated with the Government's anti-poppy programs to promote maximum feasible crop substitution.

170. Other actions that could be initiated in the first year include

- (i) distributing essential agricultural inputs (seeds, tools, machinery, spare parts, fertilizer, and livestock vaccines);
- (ii) designing an irrigation rehabilitation program and agreeing on institutional arrangements; and
- (iii) designing programs and initiating pilot projects for forestry and watershed management (including sites identified and recruitment started).

171. Better information is urgently needed to support the development of sound policies for the rural sector, and to ensure effective targeting of assistance. To support longer-run planning, there is an urgent need to collect, organize and analyze data on the status of agriculture and the rural economy. A key immediate task is to develop regional, social and poverty-related criteria for the targeting of government interventions.

172. Within the next 2 years, it will be essential to restore a significant capacity for seed production and planting materials, expand plant protection programs, and expand animal disease control programs, particularly for sheep, goats, and poultry, which provide the quickest potential to improve food security and generate income. The rehabilitation of key rural infrastructure, particularly irrigation and drainage, rural access roads, and related structures would also be a high priority.

173. Pesticides and toxic chemicals used for agriculture can pose a serious health hazard. Outdated and banned supplies still exist and need to be located and disposed of safely. An enforceable regulatory framework is essential for the safe transport, storage, and use of chemicals, fertilizers and toxic chemicals used in the agriculture sector.

174. Particular effort will be required to ensure that women and other vulnerable groups, from the beginning, are engaged in and benefit from rural recovery initiatives. Here, options for the medium term include capacity building and skills enhancement training on marketing and food processing, targeted at women and other vulnerable groups, and the development of mechanisms for providing these groups credit to initiate projects in such areas as food-processing, livestock development, agro-based cottage industry, sericulture, and carpet-weaving.

175. A comprehensive approach to water management and livelihoods is proposed from the start—while rehabilitation of irrigation and drainage schemes progresses—focus should remain on the integrated management of soil, pasture, and forests in each watershed to improve water harvesting and conservation. Wherever possible indigenous knowledge and coping strategies and skills need to be incorporated and strengthened. At the same time the standards for technical assistance to farmers and village organizations would be improved and appropriate international best practices introduced.

176. In developing short- to medium-term programs for irrigation and broader water resource management, some basic principles, building on the existing water laws, can apply. A river basin and watershed approach to programming will be essential if water security is to be increased. Within this river basin and watershed framework, the focus should be on strengthening traditional village mechanisms for water and scheme management and maintenance and the full participation of the village in the rehabilitation works. Selection and sequencing of scheme rehabilitation within a watershed should ideally be based on community priorities and willingness to participate in rehabilitation works and assume control of operation and maintenance. At the village and scheme level, rehabilitation would focus on meeting all water needs including domestic and livestock drinking water, irrigation, ecological requirements including the protection of water quality and health, and sustaining the diverse ways in which land within the scheme is used to support household livelihoods.

177. A comprehensive approach to water management and livelihoods would become the focus of the approach as scheme rehabilitation progresses. Over time, there could be an increasing focus on the integrated management of soil, pasture, and forests in each watershed to improve water harvesting and conservation with the aim of improving groundwater recharge, reducing vulnerability to drought and enhancing and increase opportunities to improve livelihoods. Wherever possible indigenous knowledge, coping strategies and skills would be incorporated and strengthened. At the same time, standards for technical advice and assistance to farmers and village organizations would be improved and appropriate international best practices introduced.

178. Forestry resources priorities include the reactivation of prewar systems to protect forests, especially in the face of lucrative cross-border trade in timber. Sustainable markets can be developed through supporting village level forestry with fast-growing species to stabilize watersheds and provide firewood and as a cash crop for rural households. Protecting and ensuring equitable access to common property (e.g., nontimber forest products including wild pistachio nuts, grazing lands, and brushwood) particularly for the landless and very poor is also a priority concern.

179. In the first 2.5 years, priority actions for natural resource and environmental management will include

- (i) the preparation of a national conservation strategy to provide a cross-sectoral analysis of conservation and resource management issues. The objective would be to identify the country's most urgent environmental problems, raise public consciousness about environmental concerns, assist the AIA and the subsequent transitional administration in setting priorities, and move toward building the institutional capacity required to handle complex environmental issues;
- (ii) the piloting and scaling up of projects aimed at environmental rehabilitation that engage the potential beneficiaries of these projects and rely on local traditional knowledge—including projects for afforestation, reforestation, watershed management, environmental health improvements and renewable energy; and
- (iii) the development of baseline environmental data, including assessment of remaining forest and conservation areas, through remote sensing.

### **C. Longer Term Needs and Options**

180. More complex programs would be implemented based on the initial planning and preparatory work. Such activities could include

- (i) implementing a policy framework to support competitive markets and private sector provision of agricultural support, marketing and agro-processing services;
- (ii) developing the hydrological monitoring network;
- (iii) promoting improved technologies in the irrigated and rainfed crops, livestock, horticulture, forestry and agro-forestry, and irrigation sectors (water management);
- (iv) sustaining community-driven rehabilitation and improvement of small and medium irrigation schemes;
- (v) fostering the development and outreach of a sustainable rural and microfinance system;
- (vi) rehabilitating of large traditional, modern, and multipurpose irrigation and drainage schemes (including hydropower) within the context of a water sector strategy;
- (vii) expanding watershed management and forestry and agro-forestry program to priority areas; and
- (viii) rebuilding and strengthening the public institutional capacity to develop environmental policy and related regulatory and institutional responsibilities, in collaboration with local governments.