

The Roadmap for Peace in Afghanistan Must Include a Plan For Rejuvenating the Agricultural Sector of the Economy

The Importance of Agriculture in the life of the Afghan people

1. The agricultural sector has the potential to reestablish its historically prominent role in nurturing Afghanistan's growth and development. A robust agricultural sector would enhance employment, improve the trade balance, reduce poppy cultivation, and help maintain peace and prosperity in Afghanistan. Currently, however, the agricultural sector is suffering from a lack of adequate investment and the absence of an effective investment strategy and program. This paper attempts to identify some of the major problems with the agricultural sector in Afghanistan and offer recommendations for future development.

2. Farmers spend most of their income on non-traded, locally produced goods and services which are generated by part-time farmers and landless rural dwellers. As a result, increasing farmer income has a multiplier effect in creating jobs for non farm workers and local businesses. Currently, about 80 percent of Afghans live in rural areas and rely directly, or indirectly, on agriculture for their livelihood. Although three decades of war and upheaval have severely stifled growth in the sector, agricultural sector still accounts of about 50 percent of GDP, provides about 70 percent of employment, and makes up almost all the small export earnings for the country.

3. Prior to the Russian invasion of Afghanistan, the agricultural sector was moving forward. Its growth rate was keeping pace with the growth rate of the population. During this era, the country was almost self sufficient in wheat, the main staple food of the population. The export of agricultural products was expanding and foreign exchange earnings for fresh and dried fruits and nuts constituted about 40% percent of large and growing export earnings. The Central Bank enjoyed foreign exchange reserves of about \$500 million. Private sector activities in the agriculture had considerable support from public and semi-public institutions. The Ministry of Agriculture was able to attract and retain a relatively high caliber technical staff, establish a functioning adaptive research and extension system, and mobilize capacity for controlling contiguous animal and plant diseases. The Ministry of Irrigation was making significant progress in improving irrigation networks and bringing new land under irrigation. The Afghan Agriculture Development Bank established among international experts as an effective and efficiently run credit institution in the region.

4. Three decades of turmoil have inflicted a devastating blow to agriculture. Most of the agricultural infrastructure such as irrigation networks, research and training stations, and laboratory facilities have been destroyed or rendered non-functional. All 24 research stations (7 main and 17 sub-stations) are no longer functioning. The offices and laboratories of these research facilities have been destroyed. Almost 40 percent of irrigation systems are still not functional. Plant and animal diseases such as foot and mouth, render pest, and locust and sun pest have re-emerged and threaten Afghanistan's livestock and crops.

5. Of critical importance, the agricultural sector's technical staff and support system were hit hard by the loss of professional cadres and the break-down of the flow of modern technology transfer networks. Most of the professional staff were either killed or left the country. The small number that remains with the government is generally out of touch with recent technological breakthroughs, and their field activities are severely limited due to unavailability of operation funding and mobility. In addition, donors and Non Government Organizations (NGOs') provide uncoordinated assistance independently and directly to the community and villages, bypassing the line ministries administration structure and undermining the rebuilding of necessary capacity in the public sector-especially in the absence of other functioning institutions. The NGOs have further depleted the technical cadre of the line ministries by providing attractive employment opportunities with lucrative salaries and allowances. The government budget will not be able to support higher salaries until it has a stronger tax base, and it will not have a stronger tax base until economic activity recovers. Agriculture remains the most important and promising economic base in the near future.

6. Thus, while Afghanistan's neighbors made considerable leaps forward, doubling and tripling their productivity, agricultural production of licit crops experienced a downward trend in Afghanistan. Under economic pressure and the pressure of drug lords, farmers have resorted to production of illicit drugs, such as opium and marijuana. As a result, the country has moved to chronic deficit in the production of staple foods.

7. The continuing deficit in agricultural production of food supplies will have a negative impact on other tangible achievements that have been made in health, education, and security. These constraints in agriculture have contributed towards the present trade imbalance of one dollar of exports for every 14 dollars of imports. Without a major rejuvenation in the growth of legitimate crops and other agricultural products (e.g. from livestock and forestry) the country will remain dependent on considerable foreign aid or revenue from the illicit production of poppy.

Lack of Coordination Among Donors, NGOs and Government Agencies is a Major Obstacle

8. In 2006, the Ministry of Agriculture, Irrigation and Livestock (MAIL) identified the priorities and obstacles in the agricultural sector and developed, with the assistance of donors and the NGOs, a comprehensive Agricultural National Development Plan (ANDP) ("the Master plan") which was endorsed by the Cabinet. This Plan called for collaboration and coordination of all parties in the agricultural sector. Unfortunately, the ANDP has yet to be fully implemented due to resistance from some donors. More specifically, some donors insist that the action plan should start at community and village levels, that extension and research should be conducted by the private sector, that current NGOs' operation arrangement should continue, and that the focus should be on rural poverty alleviation instead of focusing on agricultural production. While these positions have merit and are necessary-specially in the long-run, such efforts are not sufficient or useful in establishing the solid foundation necessary for the agriculture to develop.

9. The Country's present circumstances demands that the government must establish its credibility with its citizens through establishing security, the rule of law, accountability, and visibility in rendering public services. Establishing proper national advisory services in agriculture such as research and extension services, and provision of credit are essential in addressing farmers' problems and improving government credibility. These services would, for example, improve farmers' revenue, and thereby significantly contribute to alleviating poverty in rural communities and improve the government's visibility to a major segment of the population. Strengthening national advisory services will have an immediate and broader impact on improving national growth and productivity compared to the elaborate, time consuming method of designing a development agricultural plan for each village or community- especially when key problems require coordination at levels above and beyond the village or community. Even in the golden era of the late 70's, Afghanistan lacked adequate technical staff in the central government level to design a development project and usually relied on outside consultants for this type of work. One wonders how a coherent national development strategy and plan could evolve from 35,000 villages or even from 18,000 communities, where most people are not aware of modern agricultural technologies, and struggle daily with the difficulties of hunger, illiteracy, and fear of persecution from warring groups.

10. Community organizations, promoted by the Ministry of Rural Development, have proved to be a suitable structure for distribution of subsidized relief operations and for the establishment of common goods such as road, drinking water, health and electricity. Similar democratically organized and managed farmers association would also strengthen the government politically; reduce technological delivery costs, and increase production and market productivity. As such, farmers should be encouraged to organize themselves in production, marketing, and processing associations. Already, about a thousand of these farmers associations exists in the country, however, substantial efforts is needed to properly train them in accounting, book keeping, and management fields. These farmers organization must have adequate autonomy to be able to compete in the national/international markets and to respond to their consumers' demand. As such, each association must be accountable primarily to its members- not to the government or community organization.

11. In the last seven years, a great deal of energy, resources, and precious time were wasted, with little impact on the agricultural sector's national performance. There is little doubt, that if all the parties jointly worked in a coordinated fashion with the government's technical institutions, accountability, transparency, and efficiency would have been established at many levels in the delivery of technical services by now. At the same time, on-the-job training for the technical staff would have been enhanced through learning-by-doing. Also, it should be emphasized that considerable local and overseas technical training is still needed for qualified staff to catch up with the current technology.

Priorities and Bottlenecks in Agriculture

12. The priorities in Agriculture have been indentified to be food security, expansion of the horticultural subsector, increased productivity of livestock, and preservation of natural resources. Food security implies that a majority of the population has access to adequate quantities and quality of food, either by growing it or by having sufficient money to buy it. Wheat is the staple crop of the country and

it occupies more than 70 percent of irrigated land and almost all of the rainfed land. The yield per hectare of wheat which was once on a par with other countries in the region, at present is estimated to be about 1.6 to 2 tons per hectare for irrigated land and about 0.6 per hectare for rainfed lands. Neighboring countries get about 4.5 tons per hectare from irrigated land and about 2 tons per hectare from rainfed land. This low productivity is explained by the inefficient irrigation practices, poor quality of seed, low usage of chemical nutrients, the absence of modern technology, and inefficient traditional cultural practices. Also many of the villagers most experienced in farming and horticulture or the breeding and raising of livestock were killed in the turmoil of the last 30 years, or fled to refugee camps where they were unable to pass on the requisite skills to the next generation, who have returned to the country but without the guidance of their more experienced but now deceased elders.

13. Unless proper action is taken to mitigate these problems, Afghanistan will remain a deficit country even under the conditions of normal rainfall. For example, in 2002, a normal rainfall year in the region, a significant number of farmers in the northern part of the country did not bother to harvest their crop due to the high cost of harvesting and the falling market prices as a result of cheap imports from neighboring countries- including the distribution of large quantities of food in the form of humanitarian aid that was imported from abroad rather than sourced in other parts of the country.

14. Afghanistan has a comparative advantage in horticulture, particularly dry fruits and nuts. About 188,000 hectare of the land area is under intensive, double cropping, cultivation. Although fruit and nut orchard area shrank by almost 50% from its pre-war years, it still occupies around 94,000 hectares. During the pre-war period, Afghanistan provided 20% of the global market for raisins and dominated the pistachio markets, earned about 40% of its foreign exchange from export of horticultural crops. A preliminary farm budget analysis shows that the revenue from two hectares of horticultural crops, such as almonds, would be equal to the revenue of one hectare of poppy. It would also take anywhere from 14 to 22 hectares of wheat to substitute for the revenue of one hectare of poppy. Afghanistan's dried fruits still enjoy premium prices in India's growing markets. Although the farmers receive higher revenue from the high value crops, the potential exists to double the productivity of the present orchards and expand substantially the area of high valued crops. To get the full benefit of precious irrigated land, the long-run strategy should be to free irrigated land as much as possible from wheat production and put it under higher revenue generating horticultural products. The lack of modern production and processing technology, transportation problems, inaccessibility of credit, and the unavailability of critical mass are the main obstacles to ensure the growth of this subsector.

15. Increased production and productivity of Livestock is another priority for improving rural income. Livestock provides draft power on the farm, milk and meat for household consumption, and foreign exchange from the sale of wool, hides and skins in international markets as well as raw materials for domestic carpet and leather industries. *Extensive* livestock production, dominated by nomads using grazing land that constitutes about 45 percent of the country's land area, is gradually shifting to *intensive* livestock production. The majority of farmers only keep a few animals as part of diversified subsistence farming and mixed farming systems, but a limited number of semi-intensive and specialized production units are operating where the feed resource base is sufficient to ensure a steady production.

16. Lack of adequate feed, degradation of natural range land, emergence of contagious and zoonotic disease has also limited the growth of this sub-sector. There is an urgent need to rehabilitate both public and private sector delivery and control systems, to seek viable programs that would arrest degradation of the grazing lands, and to promote private sector initiatives and investments in feeding industries.

17. The conservation and preservation of natural resources needs immediate attention to prevent food shortages and environmental degradation. Of Afghanistan's 65 million hectares, only 12 percent (7.8 million hectares) is arable, just 5 percent is irrigated, about 45 percent is permanent pasture, and 2 percent remains as forest cover. The remaining 40 percent is mountains or desert. The natural resource base suffered due to almost three decades of unrest, competing land uses, lack of appropriate policy such as governing grazing, harvesting of trees, and ownership of land. The forest cover is shrinking fast due to community demand for fuel-wood and illegal logging. Off take rates are estimated to exceed annual growth rates by about 30,000 hectares per year. 90 percent of forest cover which had been mapped before the conflict has been destroyed. It needs to be restored to ensure watersheds function correctly again with implications for downstream agriculture production.

Proposed Actions

18. Five policy and action programs must be taken immediately in order to achieve the sector's primary objectives. These actions proved to be successful in Afghanistan during the 1970's, and with appropriate modifications they could be used to address the realities of the present political and economic situation of the country. First, the over-riding objective of any project and program should be to enhance government credibility in assisting its citizens. Government institutions need to be strengthened at both the central and local levels through proper local and overseas training, providing essential operating funds, and streamlined accounting and reporting system. It is imperative that donors and NGOs take a back seat position by limiting their involvement to advisory functions, institution building, project design and the establishment of proper accounting, monitoring and reporting systems. Through this mechanism, accountability and transparency would improve as well as the capacity of the technical staff. Furthermore, the security risk for the expatriate staff would be minimized through their limited exposure to the rural community. Under this arrangement, administration costs for delivery of technical services would be reduced drastically as NGOs may not find it necessary to open field offices all over the country, paying high staff salaries, and being burdened with extra expenditure for their security.

19. Second, without adopting modern and up-to-date farming technologies, Afghanistan's farmers will neither be able to compete in the world market, nor be in a position to respond to the growing domestic demand for food. Individually, the farmers are financially too weak to bear the costs associated with research findings and the delivery of technology, and, as a group, farmers' organizations have not developed to the level necessary to assume this responsibility jointly. Afghanistan's geo-ecological and topographic situation is another obstacle that makes dissemination of production and marketing information to the producers difficult without public assistance. While donors and NGOs' have made some advances in the area under their command, their operations lacked sustainability and

have not had any national level impact. As such, development and transfer of appropriate and modern technological services must remain under the domain of the public sector for at least the next 10 to 15 years.

20. The Ministry of Agriculture, Irrigation, and Livestock (MAIL) must reactivate its seven main research stations which could serve as hubs of change for each of the seven agro-ecological zones of the country through serving as a center for responding to the farmer's technical problems, conducting adaptive research, and training extension and leading farmers to disseminate best practices. At the same time, the extension cadre of the Ministry needs to be strengthened through training programs, better coordination with the researchers, transportation facilities, provision of operational funds, and working jointly with NGOs' expertise. A two way communication must be established between researchers and extension agents and farmers. Extension agents must convey pertinent farmer's problems to the researchers for investigation and resolution. At the same time, each research station must provide appropriate cultural practices for the extension agents to be delivered the farmers. Among other things, researchers should be responsible for development of improved high yielding varieties- including production of breeder and foundation seeds, promoting mixed farming systems, efficient irrigation techniques. Extension agents need to disseminate improved marketing and production techniques through demonstration plots, mass media, and direct contact with leading farmers and farmer associations. In time as the level of farmers' education and access to internet and other information sources increases, the role of extension services can be scaled back. But it is vital and necessary catalytic service in the interim next one to two decades.

21. Third, establishing viable agricultural credit facilities is vital for gaining farmers' support politically and for enabling them to finance input and modern technology of their needs. Farmers all over the country are demanding access to a reliable credit source, and political pressure on the government is mounting. This demand is expanding due to the rise in the cost of agricultural inputs, and the depleted soil productivity, shortage of draft animals, high cost of automated farm machinery, and intensive crop cultivation which leaves little time- without usage of appropriate technology- for the farmers to harvest one crop and prepare the land for planting another crop. In addition, it is impossible to weaken the influence of drug lords on the client farmers without providing an alternative credit source for these farmers. It is estimated that the drug lords extend, as advance payment toward the purchase of drugs, approximately \$200 million to their client farmers yearly. Most of these farmers finance the required seed and fertilizer for their legal crops from these advance payments as well. Private banking services have not evolved to the point where they can assess and price risks that would help the bulk of farmers.

22. The micro credit field has received support from several donors. The costs of administering these loans, despite the highly participatory organizational structure and good risk management, are very high. In spite of subsidized hidden costs, the interest charges for these loans are about 18 percent. In addition, the size of these loans is too small to finance the needs of middle size farmers. It is no wonder that micro-finance tilted heavily toward the landless small rural enterprises and part time small farmer.

23. During the last seven years, almost \$100 million worth of seed and fertilizer were dispatched through voucher systems, generally to small farmers. The recovery of these funds, however, seems to be negligible and doubtful. In addition, several projects provide credit facilities in the small area of their commands, each with repayment, interest rate, and collection procedures of their own. It is time to focus on establishment of a viable national agricultural credit system that would complement the micro credit scheme and respond to the credit needs of other categories of farmers including the unseved credit needs of middle farmers) , and follow a uniform policy based on procedures of prudential international banking system.

24. The Afghan Agricultural Development Bank (ADB) with its branches reached most governorates, provided credit facilities for the farmers during 1970's, and established an excellent reputation among the farmers all over the country. Unfortunately, this Bank remains in a lingering situation due to the strong opposition of some donors. The ADB included it in the list of parastotals to be dissolved, even though, its general structures are still intact and some of its braches are still in operation. The strong position for liquidation of this Bank is surprising in view of the presence of such facilities for the farmers in most developed and developing countries alike, in spite of their well established commercial banking structures. In the context of Afghanistan such a position is also not pragmatic. Liquidating a weak institution before a functioning alternative system is in place does not serve the interest of agriculture in the country. Rebuilding it to the standards it had achieved in the past may be a faster and better transition strategy that is consistent with the long term goal of introducing a world class banking system in Afghanistan

25. Revitalization of Agricultural Development Bank (ADB) with the objective to serve as a credit and deposit institution must be given utmost attention Years of upheaval, have taken its toll on ADB, like all other institution in Afghanistan. As such, ADB needs to be strengthened through sizable capital infusion, proper training programs, modern accounting and book-keeping training, and proper office technology. To reduce the banking administration's costs, group lending to legal farmers associations such as producers associations, water user associations, and marketing associations must be pursued.

26. Fourth, improving irrigation efficiency and the rehabilitation of dysfunctional existing irrigation systems along with the expansion of irrigation areas deserve close and proper assessment and investment focus. Out of 65 million hectares of the total land area in Afghanistan, only 7.8 million hectares are identified to be arable land. At the present time, 4.5 million hectares of arable land is classified as rainfed, and total irrigated land is estimated about 3.3 million hectare with proper investment it could be increased to 5.5 million hectares.

27. Afghanistan receives about 75 billion cubic meters of water in the form of rain and snow falls. Only 20 billion cubic meters of this is used through surface and under ground channels mainly for agricultural purposes. The water use efficiency of this is estimated to be about 25 percent. With improved irrigation techniques the water use efficiency could be increased to 50 percent. There were several new irrigation projects in the investment pipeline in the late 1970's which were halted due to political unrest. One of those projects was Khush Tapa , diverting water from Amu Darya , and bringing about 600,000 hectares in the North part of Afghanistan under irrigation. Except for yearly losses of

thousands of hectares of land due to seasonal flooding, Afghanistan does not get any benefit from this river. So far, none of these major pipeline projects are under consideration for investment.

28. Improving farm water management, especially on current irrigated land, should be included as a top priority of any action plan. The creation of Water User Associations (WUAs) in several countries has proved to be an effective and efficient way of improving efficient water use and minimizing budget costs. Under such an arrangement, beneficiaries would be responsible for repair and maintenance as well as the distribution of water. Also, in the case of Afghanistan, WUAs could be used as a vehicle for reducing the production of poppies.

29. Fifth, given the present situation of Afghanistan, a tremendous boost in agricultural development can be provided by establishing a mechanism to procure food and rations for foreign military and civilian personnel in Afghanistan, and setting up the inspection and testing capabilities of local personnel and labs to ensure the quality and safety of the products procured. This can then gradually be shaped into the equivalent of the FDA to guarantee the quality of food products sold domestically, and certification process to meet internationally established criteria for high quality exports.

30. In summary, agriculture has the potential to enhance rural income and employment, to reduce poppy production, and to promote peace in Afghanistan. In pursuit of these goals, the country identified in the framework of its Agricultural National Development Plan the sector's main priorities to be food security, enhancing the productivity and production of high value horticultural crops, improving livestock production and productivity, preservation of natural resources, and improving irrigation efficiency and expansion of irrigated land. For the sector to realize its potential these five actions must be taken immediately. These actions proved to be successful in Afghanistan during 1970's and are still relevant given the realities of the present political and economic situation. First, the government must play a leadership role in the implementation of the investment program and in strengthening its visibility, especially through provision and delivery of services to farming communities and to its citizens. Second, a coordinated effort by all parties should be made to strengthen the national research and extension capacity. Third, viable agricultural credit facilities must be established for gaining farmer's support politically and for enabling them to finance input and modern technology of their needs. Fourth, irrigation efficiency and rehabilitation of dysfunctional existing irrigation systems must be improved and expansion of irrigation areas must be properly assessed for investment consideration. Fifth, consideration should also be given to procurement of food and ration for foreign military and civilian personnel in Afghanistan.