

Unofficial translation

TAJIKISTAN
PROPOSAL FOR FINANCING TO THE
GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAM
(GAFSP)

SUMMARY

Per capita income in Tajikistan is less than US\$700. The agricultural sector accounts for about one fourth of the economy but employs 75 percent of the country's workforce. This indicates the low labor productivity in the sector. Rural poverty has been declining but remains nevertheless very high at 55 percent in 2007. The poverty level has increased recently due to adverse climatic conditions, the regional food crisis and the global financial crisis which has reduced the level of remittances.

As identified in the Agricultural Investment Plan, one of the key factors contributing to low agricultural productivity is the poor state of the irrigation network throughout the country but especially in the Khatlon Region. The network is poorly maintained due to inadequate financial resources and weak management. About half of the water is lost due to evaporation and the poor quality of the infrastructure.

The management of the resource is also deficient. The Government is committed to managing the country's water resources within a river basin framework as opposed to the purely administrative model that applies at present. This framework will facilitate a more effective utilization of water resources. Water User Associations (WUAs) have also been established which provide a greater role for consumers in the management of the irrigation network. WUAs are in an embryonic stage of development and need to be strengthened. Many local administrations see the WUAs primarily as vehicles for collecting water fees. Basic control systems are also weak, for instance, many farms do not have their own water gates and water meters. Pricing of water usage also needs reform as flat-rate rather than volume-based fees apply.

This GAFSP proposal focuses on rehabilitating the irrigation system through targeted investments in the network and in addition supports government efforts to introduce substantial reforms in the effective management of the irrigation system to ensure sustainability of the network beyond the investment phase. The proposal has the additional merit of providing assistance to that segment of the population that has been most affected by recent natural and financial shocks.

The Government's resolve to reform the management of its water resources is credible in the light of significant recent reforms in regard to the granting of property titles to thousands of farmers and through its commitment to ensuring the "freedom to farm" for Tajik farmers.

The strategic context for this GAFSP proposal is provided by the ten-year National Development Strategy (NDS) issued in 2007. The PRS-3 for 2010-12 has been recently approved by the Government. It aims at implementing the NDS vision while taking advantage of the lessons and experienced provided by the PRS-2.

The Agrarian Policy Concept and Food Security and Agriculture Investment Plan were prepared as a part of the NDS and PRS-3. These documents set out demanding targets for agricultural productivity and output growth and identify priority activities for the sector, which include include (i) ensuring food security of the country; (ii) defining the

role of the State in the implementation agrarian policies; and (iii) identification of priority directions for the development of the country's agro industrial complex. The Agrarian Policy Concept and the Investment Plan were produced following extensive consultations with stakeholders, the research community, civil society and private sector and development partners.

Based on the development priorities and the implementation of reforms in the agricultural sector, the Government has designed an Investment Plan for the period 2010-15. Investment is projected at US\$ 1.28 billion, or US\$ 200 million per year which is equivalent to 3-4 % of the GDP. This amount can be absorbed by the economy provided that reforms continue to gather momentum and the implementation capacity of the relevant agencies are enhanced with external and internal support. Donors have committed financing of about US\$380 million already. Budget financing amounts to US\$72 million implying a financing gap of about US\$827 million. In general this gap is likely to be bridged as the investments that are contained in the Investment Plan concern priority projects that underpin reforms that will attract the support of donors and international institutions.

This GAFSP proposal will, if it is successful, reduce the financing gap for the irrigation sector by US\$30 million which is identified as a priority investment area in the Government's Investment Plan.

The proposal would, if implemented, enhance food security through increased crop production resulting from improved irrigation and drainage infrastructure and improved water resource management systems. The proposed GAFSP-financed activities are targeted at the Khatlon Region where rural poverty and food insecurity rates are the highest.

The proposal complements will upscale the ongoing Public Employment for Sustainable Agriculture and Water Management Project (PAMP). It amplifies all of the short-term benefits of PAMP in terms of additional employment and earnings for highly food insecure segments of the population which include substantial numbers of women. In addition the TA measures are designed to ensure the long-term sustainability of the refurbished irrigation network. The PAMP implementation has already commenced with funding of EUR 7.42 million, or, about US\$ 10 million, from the European Union Food Crisis Rapid Response Facility Trust Fund (EU-TF) under the Global Food Crisis Response Program which is administered by the World Bank. Although PAMP has only recently commenced, the initial results appear to be very promising. Hence this GAFSP proposal, if it is accepted, can commence relatively quickly given that PAMP has commenced and based on early indications from PAMP we can have reasonable confidence as to its likely success.

The proposal includes three components: (1) *Public Works to Renovate Irrigation and Drainage Infrastructure*. This component will assist in rehabilitating selected secondary canals in the same area to improve water delivery at the farm level. These works will target ten additional districts relative to PAMP with high food insecurity and good agricultural potential. (2) *Technical Assistance*. This component will finance preparatory work for the introduction of a Water Basin Management System. This work will include the delineation of water basins; an outline of the new roles and responsibilities and the

institutional infrastructure needed to manage these water basins, and; recommendations on how to move from the current institutional structure to the new one. This component will also include assistance to strengthen the legislative and operational framework for Water User Associations. It will also assist in reforming policies and procedures associated with the assessment and collection of water user fees. (3) *Implementation Support, Monitoring & Evaluation*. This component will provide assistance to the Project Management Unit (PMU). The unit will be responsible for financial management and procurement. A communications strategy is being implemented to inform rural households and local government authorities of the objectives of the project, the support to be provided and the eligibility criteria, as well as the measures to be taken to prevent corruption. This communication strategy will pay special attention to the participation and leadership position of women farmers particularly through the WUAs. Specific targets will be established for the participation of women at all levels of the project and these targets will be rigorously monitored.

It is expected that if the proposal were to be successful, relative to PAMP, about 75,000 households will benefit permanently as a result of the increased incomes that will result from the improvement in the irrigation system. The proposal would also create about 1.5 million working days of employment; improve about 1500 km of collection and drainage canals; renovate about 5000 km of irrigation canals and fortify about 7,000 spillways. About half of the farmers that will benefit from the rehabilitated canals are estimated to be women.

The Khatlon Region has been selected as the project area for two major reasons. First, survey evidence consistently shows that this is the poorest and most food insecure region in Tajikistan. Second, the region has a high agricultural potential that remains unrealized due in part to the deteriorating irrigation infrastructure.

For several reasons, the GAFSP project will aim to support other reform efforts and to create the conditions for its own sustainability. First, priority will be given to those districts where land privatization is well advanced, as private farmers have a greater incentive to continue maintaining their irrigation infrastructure after project completion. Second, where feasible, the project will be linked to ongoing projects so as to maximize farmers' use of improved technology and access to seeds and fertilizer. This would be an additional incentive to maintain the irrigation infrastructure in good condition. Third, the reform in water fees and collection policies should allow the relevant institutions to carry out the needed maintenance on a regular basis. Fourth, WUAs will have an increasing voice in irrigation policies, system maintenance and fee setting and collection. Finally, the proper separation of irrigation policies from administration; clarification of the respective roles of national and local authorities and the WUAs in water resource management; and the elimination of flat fees for water use should collectively play a crucial role in enhancing the efficiency and facilitating maintenance of the irrigation network.

The project's Monitoring and Evaluation system is based on the results framework already used in PAMP but new targets will be identified in order to capture the additional targets/objectives associated with the TA component. Outcome indicators will be disaggregated by gender as the relevant information becomes available:

The civil works will consist mostly of earth moving, concrete works and rehabilitation of existing canal structures, all of which are fairly small scale activities. Some of these activities will be done manually and will not have significant environmental impacts. At the same time, reduction in water losses and improved irrigation distribution should reduce seepage losses from the main canal and excess water distribution. This should have a beneficial impact on project areas through lower water tables, lower risk of salinity, and less stagnant water pools in villages which are associated with health problems. The selected subprojects are located in existing irrigation areas. Therefore, none of them will have impact on protected areas, critical habitats or culturally or socially sensitive areas.

In order to reduce administrative costs, arrangements in place for the administration of PAMP will be extended to the proposed GAFSP project. Overall management responsibility for the project will rest with the Ministry of Irrigation and Water Resources (MIRWR) and the Administration of Khatlon Region. The Ferghana Water Resource Management Project Management Unit (PMU) is the lead operational institution for PAMP and administers PAMP in accordance with a specific Project Operational Manual (POM). The PMU retains overall responsibility for project procurement, disbursement and financial management. An additional Public Works Division will be established within the PMU which will be adequately staffed for the required activities.

The local branches of the MLRWR, District Water Authorities (raivodkhozes) will carry out a preliminary assessment of the demand for rehabilitation of on-farm and off-farm systems. Consultations will take place after this technical work regarding interventions, the works to be carried out and respective financing. The requirement for ongoing maintenance work, particularly by local communities, will be emphasized in order to ensure sustainability of the project. These consultations will be required before any final decision is adopted and will involve local communities (makhallahs) and local authorities (jamoats). The participation of women will be actively encouraged and rigorously monitored. If necessary, consultations with local communities will be repeated to guarantee a good level of women's representation.

In general, an extensive consultation process will be carried at the following levels: national authorities, local governments, local communities, donors and civil society. While consulting with local communities, particularly farmers, the participation of women will be strongly encouraged. The consultation process will precede final decisions and implementation. Throughout the process the consultation will continue with national and local authorities as well as WUAs on the tasks ahead, particularly in connection with maintenance work. Activities to enhance the WUA capabilities may include some training. The content of all training programmes will be discussed with the targeted beneficiaries. The intention will be that WUAs that benefit from such training will be lead by women in, at least, 30% of the cases. Where farmers are the beneficiaries the target will be to ensure that at least 45% will be women. All these targets and implications will be discussed with stakeholders from the project's inception.

Since PAMP is currently being administered by the World Bank, the Government would prefer to continue with this arrangement. The GAFSP proposal may take around 4.5 years to be fully implemented. This estimate is considered a realistic, achievable time-frame, commensurate with the design of the project.

Overall, risks are manageable but will require a careful follow up to make sure that mitigation measures are fully implemented. Policy risks on institutional arrangements for irrigation are substantially reduced by the (Government) enhanced commitment to reforms in recent years. The risk that women's participation will not materialize will be ameliorated by the communications' strategy and through rigorous monitoring.

Introduction: Country and Sector Background

1. Tajikistan is a landlocked country located in southeastern Central Asia with 7.5 million inhabitants. The country is divided into four regions known as Khatlon, Sughd; the Region of Republican Subordination (RRS) and the Autonomous Region of Gorno Badakshan (GBAO). Per capita income is below US\$700 and the majority of the population is dependent on agriculture for their livelihoods. Agriculture contributes to 23 percent of the GDP, but it employs 75 percent of the country's workforce which indicates the low labor productivity in the sector and, as a result, the high levels of poverty in rural areas. In fact, about 76 percent of the poor in the country live in rural areas. The rural poverty rate has shown a declining trend over the medium term, however, it remains very high at 55 percent in 2007. Of great concern, however, is the recent rise in rural poverty due to successive shocks, including adverse climatic conditions and the locust attacks of 2008. In addition, the regional food price crisis of 2008-2009 contributed to increased household food insecurity. Finally, the global financial crisis in 2009 reduced the level of remittances, an important source of supplementary income for many poor rural households.

2. Mountains and hills cover more than 90 percent of the Tajik territory. Agricultural land is limited to only 860,000 ha of arable land of medium level fertility. However, the country has the resources and the potential for a diversified agricultural sector, based on the production of cereals, cotton, fruit, vegetables and livestock products. Crop yields have increased over the last decade particularly for non-cotton crops such as potato, fruits and vegetables, although they remain low by international standards. There is a considerable room to raise yields and productivity through better crop management, more intensive use of inputs and, most importantly, improved irrigation.

3. Cotton grows well in Tajikistan and has long dominated agricultural policy due to its important contribution to export earnings, tax revenue and rural employment. But production had relied to a large extent on compelling farmers to grow cotton at very low prices with low returns. Incentives have been low and led to inability to repay seasonal finance loans. As explained below, this is changing rapidly as the Government has addressed or is addressing the central issues of property rights, cotton debt and competition among cotton investors and ginneries.

4. The irrigation network is poorly maintained due to inadequate financial resources and weak management. Of the 720,000 ha of irrigated land (about 85 percent of all arable land) only 515,000 ha is currently in use. About half of the water is lost due to evaporation and the poor quality of infrastructure (predominantly earth irrigation channels). Irrigation is delivered through an extensive network that consists of 6,000 main canals, 26,000 km of on-farm canals and 11,500 km of drainage channels. Approximately half of the irrigated land depends on pumping systems, with lifts ranging from 10 m to 200 m. An estimated 65 per cent of pumping systems are out of operation.

Table 1: National Irrigation and Drainage Infrastructure

	Unit	Amount
Total irrigated area	Ha	718,410

Total area with pumped irrigation	Ha	383,105
Total area irrigated from wells	Ha	40,000
Length of main and inter-farm canals including:	Km	6,060
unlined/earth canals	Km	3,650
lined canals	Km	2,410
Length of on-farm canals, including	Km	26,000
unlined/earth canals	Km	20,729
lined canals	Km	5,271
Length of drainage facilities	Km	11,550
Area serviced by drainage network, including:	Ha	310,000
Serviced by sub-surface drains	Ha	80,000
Off-farm pumping stations	Number	450
On-farm pumping stations	No	1,807
Total number of wells (irrigation and drainage)	No	1,816

GWh Giga Watt hour (10⁹); MWh Million Kilo Watt hours (10⁶)

Source: Asian Development Bank and Ministry of Irrigation and Water Resources of Tajikistan (MIRWR)

5. The institutional framework for water resource management requires reforms that go beyond changes already introduced in the water code and the introduction of Water User Associations (WUAs). Responsibility for water resource management is still governed by administrative boundaries, and shared by the Ministry of Irrigation and Water Resources (MIRWR) of Tajikistan and local and regional governments. At the local and regional level, decisions on water resource use are made by local governments rather than the local offices of the MIRWR (Raivodkhoz). This local government control of water use limits the MIRWR's capacity to manage water resources within a broader river basin framework and, therefore, results in a less efficient water use from the national viewpoint.

6. Water User Associations are being established to address some of these issues, notably the need for water users to assume more responsibility for financing and managing water delivery through the secondary and tertiary canals. They still lack the capacity to respond to this challenge however, and are viewed by local government as little more than an alternative means to collect water use fees. Their impact could become stronger if WUAs are more numerous and able to work with local government and local Raivodkhoz in all matters pertaining water use and fee collections.

7. Land privatization was not accompanied by institutional reforms to assign responsibility for the secondary drainage and irrigation canals that were formerly the responsibility of the kolkhoz and sovkhoz. Therefore, the physical infrastructure deteriorated. The current irrigation systems were designed and constructed before independence to provide water and drainage to large, collective farms. Many of these systems cover several villages. Following farm privatization and the consequent break-up of these collective farms, little has been done to establish new physical and institutional infrastructure suited to small-scale private farms. Many new farms lack their own water gates and water meters and are unable to regulate the timing and volume of the water they use. Their water distribution proceeds through the water gates of the original collective farm. A flat fee is paid for usage disregarding the volume. As a result,

incentives to use water rationally and/or to lower the unit costs of irrigation are greatly reduced.

8. The proposal detailed in this request would support the government in their efforts to deepen agricultural reforms, to introduce substantial reforms to the irrigation system, to deal with some of the issues described above and to provide assistance to the segments of the population most affected by recent natural and financial events.

Part 1: Summary of Overall Agriculture and Food Security Strategy and Associated Investment Plan

Objectives and Indicators

9. The overall strategic framework is provided by the National Development Strategy (NDS) issued in 2007 and covering the 10-year period: 2006-15. NDS contains three key objectives: (i) promotion of sustainable economic growth; (ii) improvement of public administration; and (iii) development of human potential. The key issues identified for the agriculture are (i) a lack of food security, particularly in rural areas, (ii) inadequate healthy nutrition for the population, and (iii) a deteriorated irrigation systems. In order to address these issues, the Government has identified the following actions to increase agricultural productivity: (i) enhancement of cotton productivity and debt restructuring; (ii) development of entrepreneurship in agriculture and provision of land tenure rights; and (iii) rehabilitation and development of irrigation systems. The NDS forecasted a Public Investment Program (PIP), for which around US\$ 7.7 billion¹ was (indicatively) estimated as being required to alleviate food security and to enhance the agro-industry sector.

10. Within the overall NDS, the Government approved, in 2007, the Poverty Reduction Strategy-2. It covered the 2007-09 period and identified more specifically the priorities for the first three years of the NDS. PRS-2 was based on three pillars: (i) a functional pillar (public administration reform, macroeconomic management, investment climate, private sector development, regional cooperation, and global economic integration); (ii) a production pillar (agriculture, energy and industry, food security, and infrastructure); and (iii) a social pillar (education, health, housing, social welfare and water sanitation). PRS-2 emphasized two key issues in agriculture and rural development: (a) small farmer's access to land-use rights; and (b) a strategy for resolving the cotton debt. The PRS-2 included a Public Investment Program for agriculture amounting to US\$172.9 million.

¹ The NDS is, to a large extent, a continuation of PRSP 1 (2002-06). The objectives of PRSP 1 included: (i) sustained economic growth; (ii) improved governance; and (iii) increased access to social services. PRS-1 viewed agricultural growth and increased agricultural exports as one the key prerequisites for economic growth. PRS-1 provided for a public investment program (PIP) of about US\$690 million, of which 10% was allocated to projects in agriculture, irrigation and water supply.

11. The PRS-3 for 2010-12 has been recently approved by the Government. It contains the same three strategic pillars listed under the PRS-2. The medium-term program aims at implementing the NDS vision while taking advantage of the lessons and experienced provided by PRS-2. The objective of enhanced food security is again emphasized and the agricultural sector continues to be recognized as one of the key sectors of the country's economy. In regard to agriculture, the specific PRS objectives are to increase agricultural output and labor productivity, with particular emphasis on production, water resources management, land use rights and nutrition. An enhanced irrigation infrastructure and associated institutional improvement were also strongly emphasized.

12. The implementation of programs in these areas would ultimately ensure food security thereby facilitating the achievement of the Millennium Development Goals and the strategic objectives of the NDS, including poverty reduction in rural areas. Monitoring indicators for the Food Security and Agricultural Sector outlined in PRS-3 are presented below.

13. The Agrarian Policy Concept and Agriculture Investment Plan were prepared as a part of the NDS and PRS-3; the Agrarian Policy Concept was adopted by the Government in December 2008 and the Investment Plan was approved in September this year. The Investment Plan was prepared for the period of 2010-2015. These documents set out demanding targets for agricultural productivity and output growth and identify priority activities for the sector, which among others include (i) ensuring food security of the country; (ii) defining the role of the State in the implementation of the agrarian policy; and (iii) identification of priority directions for the development of the country's agro industrial complex. The Agrarian Policy Concept and the Investment Plan were produced following extensive consultations with stakeholders, the research community, civil society and private sector and development partners. The Concept provides a good foundation for the comprehensive Agricultural Strategy that is currently under the preparation.

Table 2: Main Monitoring Indicators for the Food Security & Agricultural Sector in PRS-3

Indicator	Unit of Measure	Ratio in 2008	Ratio in 2012	Responsible organizations
Indicator of Outcome				
Growth in aggregate output in agriculture sector	Index	107,9	121	MOA
Growth in average productivity of cotton sector	Centner/ha	14.7	25	MOA
Growth in livestock production	Index	106	123	MOA
Growth of income per 1 ton of sold cotton	Index	-	115	MOA
Indicator of Output				
Rehabilitation of lands which are out of agriculture use	1000 ha	7,3	6,2	MOWR&LR
Number of issued land certificates for dehkan farms during 3 years	Number	4190	4500	Land Committee

Number of land certificates for household plots during 3 years	Number	38363	40000	Land Committee
Number of land certificates for non-agriculture lands during 3 years	Number	3233	6500	Land Committee

1.1 Key elements of the policy environment

14. Based on NDS/PRS-3 priorities and lessons learnt so far, the following main medium-term goals and associated actions have been identified for food security and agricultural development for the years of 2010-12:

- Increasing efficiency in the agricultural sector with a special emphasis on the cotton sector;
- Improving conditions for the development of rural entrepreneurial activities;
- Securing land use rights;
- Improving conditions for the effectiveness of the agricultural and water resource management infrastructure;
- Taking actions towards proper nutrition of the rural population.

15. The specific policy measures taken to pursue these objectives are explained in the next section. Several policy instruments have been used in this regard².

1.2 Plan components to achieve the objectives

16. The major issue in Tajikistan's agriculture sector in the last decade has been excessive emphasis on cotton growing. Cotton grows well in Tajikistan and has long dominated agricultural policy due to its important contribution to export earnings, tax revenue and rural employment. But production relied on compelling farmers to grow at very low prices with low returns. Poor financial incentives exacerbated by a highly inefficient and exploitative credit system inevitably resulted in severe farm indebtedness. Further, poorly defined land rights and widely discretionary powers to expropriate land provided local authorities with the necessary leverage to compel farmers into growing cotton at low prices. To keep prices low, local government authorities had also limited competition among cotton investors and ginneries, and facilitated the concentration of local and regional purchasers of gin and cotton for export. Private sector cotton investors and ginneries were the principal beneficiaries of these policies, extracting excess profits from farmers despite mounting cotton debt. These policies inevitably led to declining production and a cotton "debt crisis", which culminated in 2008 with a default on the international credit lines being used to ensure access to seasonal finance.

² In order to create favorable economic, financial and political conditions in the agricultural sector, the Government Decree No. 658 dated December 31, 2008 "On approval of the Agricultural Policy of the Republic of Tajikistan" was adopted. The main objective of the Decree is to promote economic development through modern techniques and methods in the agricultural economy. Further, in line with this policy, and in order to promote food security policy, the Government Decree No. 72 dated February 2, 2009 on "Food Security Program of the Republic of Tajikistan until 2015" was approved.

17. Recognizing the need to promote more rapid agricultural growth and reduce rural poverty, the government has adopted several key policy reforms over the last two years. In the wake of the debt crisis, the government has been working closely with donors to develop a broad-based reform program and to introduce measures to remove policy distortions, strengthen land rights, and increase competition among cotton ginneries and investors. A Presidential Decree concerning cotton debt resolution was issued in May 2009. This Decree was consistent with the “Road Map” on the reform of the cotton sector that was adopted by the Government in March 2007.

18. The current status of the agricultural reform process is outlined below. These actions will serve as the platform for developing and implementing agricultural reforms: ensure freedom to farm, ensure proper land titling, improve farmers’ access to finance and collateral practices, increase returns to farmers and promote cotton sector recovery.

Cotton Debt Resolution

19. The Government followed up with the Presidential decree on cotton debt resolution with a specific resolution in July 2, 2009. To date, all cotton related debt of farmers accumulated before October 1, 2008 has been written-off (including interest, fines and penalties). Farmers have been the principal beneficiaries of this program. The forgiven farm debt accumulated under the government sponsored credit arrangements is estimated to be US\$548 million. Farmers have received an official certificate confirming the write-off of their debts. According to a recent farm monitoring survey, most of the written-off debt had been inherited from the time of farm privatization and restructuring. The writing off the cotton debt has resulted in a sharp reduction in the percentage of farms reporting debt to cotton investors, with a consequent reduction of investor leverage over cotton producers. Hence, with the cotton debt resolution, the principle of “freedom to farm” has been significantly enhanced. In addition to the debt resolution, the Government also decided to write off payment arrears incurred by farmers due to unpaid state taxes, electricity fees, etc.

Implementation and Deepening Agricultural Reforms

20. The “Action Plan on Reforming the Agricultural Sector in the Republic of Tajikistan” (Resolution 406 of July 2009) signaled a renewed and stronger commitment to reforms, including changes in several legal acts and institutions. It details specific steps to implement a number of major reforms. Six working groups covering different agricultural policy areas are preparing strategic documents in the following areas:

- Agricultural reform;
- Social development in rural areas;
- Land reform and in particular establishing a functioning land use right market;
- A new mechanism of agricultural finance;
- Developing an integrated water resources management system;
- Reform of the agricultural administrative system at national, regional and local levels.

21. In all cases, a wide range of stakeholders were actively involved in preparing policy positions including several ministries, state institutions, research organizations, experts from donor and other international organizations. Farmers, NGOs and women's organizations were also regularly consulted.

22. Subsequent to the Action Plan, the Agriculture Reform Program draft was presented by the Ministry of Agriculture to the Government and donors in May 2010. The Ministry has sent the Program to other relevant ministries and agencies for comments. So far, positive feedback from most agencies has been provided. Comments and suggestions are also provided by international organizations and experts. After suggestions have been discussed and revisions incorporated as appropriate, the Program could be finalized by the end of 2010.

Freedom to Farm

23. Thanks to debt write-offs and to the substantial progress in the Land Registration and Cadastral System Project financed by the World Bank, significant progress in establishing a culture of freedom to farm has been achieved. There is now much less pressure on farmers to produce cotton. With the National Government endorsing the principle of "freedom to farm", local government authorities have less power to exercise pressure over farmers to grow cotton. Although progress is not rapid enough in some areas, according to the Monitoring Survey of December 2009, around 60% of farmers felt that they were free to decide when to collect cotton stalks. A sizeable percentage of farmers reported that they had the ability to decide whether or not their cotton crop would be followed by an alternative crop.

Land Use and Ownership Rights

24. A new land registration law has been approved as a critical initial step in the development of a market in land use rights. As noted already, substantial progress has been made by the Land Registration and Cadastral System Project. In 2009, 5,431 certificates were issued while an additional 9,000 have been issued so far this year. The total number of land certificates that have been issued - including those issued by State Land Committee - is almost 50,000.

25. At the end of August 2010 the concept of Tradable Land Use Rights was developed by a USAID project and it has been presented to key donor agencies for comments. Work is being undertaken on land valuation, which is considered an important issue for land market development. ADB is also joining other donors on land-related projects and activities. These reforms are being supported by amendments to the following laws: Law on Dehkan Farms, Law on Mortgages, Law on Registration of Immovable Property and Rights and Law on Service Cooperatives.

Access to Finance

26. Government and donors agree on the need to develop a broader base for agricultural lending and to strengthen the overall financial system. Government's

response has centered on budget-funded credit lines to commercial banks which amounted to 140 million somoni in 2008, 180 million in 2009 and an estimated 130 million for 2010 (US\$32.5 million equivalent). Banks were initially required to use most of this credit for cotton, at preferential interest rates. But government has now made this credit available for all type of agricultural products, with no preferential interest rates for cotton. In addition, the Government requires that commercial banks use the EBRD's (TAFF) loan screening methodology for loans made with budget-funded credit lines.

27. Moreover, cognizant that Government budget lending is not an efficient mechanism, it has been decided to gradually eliminate such lending. The Government is therefore seeking donor support to boost private sector lending for agriculture. EBRD is leading the response to this request through its support for commercial bank lending and the recent acquisition of a minority equity share in Agro-Invest Bank. The post-harvest credit line for cotton in the restructured Cotton Sector Recovery Project also responds to this need. A trade facilitation program by EBRD and IFC, and the planned introduction of warehouse receipts by ADB, will further broaden access to rural finance. The mechanisms for trade facilitation and for warehouse receipts are being finalized so implementation may start soon.

Cotton Grading and Regulation

28. The National Bank of Tajikistan's (NBT) exports controls have been eliminated thus removing another layer of government control and intervention. The legislative basis for a modern cotton grading system has also been adopted but it has yet to be widely applied in the coming years with the support from the ADB-funded Sustainable Cotton Sector Project.

Non-Cotton Sub-Sector

29. Non-cotton products produced from household plots, especially staple food commodities such as cereals, meat, milk, vegetables, and potatoes have recently emerged as a main source of agricultural growth. These commodities are relatively low cost commodities and have significant potential to raise the current level of productivity and they can be readily sold in domestic markets. The Government recognizes the importance of this (non-cotton) production and is committed to support it with better irrigation and drainage infrastructure, rural finance services, and better access to inputs.

Natural Disaster Risk Management

30. The government recognizes that reducing risk of environmental disaster is very important to mitigate macroeconomic risks and improve the population welfare. As part of its efforts to increase agricultural outputs, the government is planning to take on a new agenda to strengthen natural disaster risk management, weather forecasting, and climate change adaptation. There is some experience in new programs of this kind among former Soviet republics. These actions are particularly important in Tajikistan in view of its geography, topography and climate. The country is regularly affected by natural disasters such as floods, mudflows, landslides, avalanches, earthquakes,

droughts and epidemics. Climate change is also expected to exacerbate natural disasters associated with hydro-meteorological conditions. Natural disasters are particularly destructive to the rural economy. An active dialogue with some donors in this area is taking place to operationalize mitigation and adaptation programs.

Water Sector Reform

31. The identification of water sector reform measures is ongoing. A “Roadmap” was developed by a Working Group with assistance from international experts in December 2009. The Working Group presented its latest proposals in August of this year. The main reform planks are:

- A clear separation of policy aspects from operation and management of water resources.
- The Ministry should retain responsibility for policy making and for monitoring water resources.
- National tariff standards for all water users (agriculture, industry, energy and municipality) should be set.
- The role of WUAs should be enhanced.
- Establish a River Basin Management approach.

32. A critical first step is to transfer irrigation management from administrative areas to the river basin districts. This will also require the Ministry to desist from operations and management roles and to leave such functions it to the *mirob* (the person who is responsible for dispatching the water to water users) until the WUAs are fully ready to take responsibility for on-farm and off-farm canals.

1.3 Planned composition and level of spending to implement components

33. The country’s program for Food Security and Agricultural Development is provided in Annex 1. This program is linked to the PRS 3 and the Agrarian Policy Concept. The overall, longer term sectoral objectives are the following:

- Increase in agricultural outputs to a sustainable level of the order of 5-6% per year;
- Increase in labor productivity to a sustainable level of about 8-9% per year

34. Annex 1 contains the selected programs/projects, all considered of high priority to reach the above mentioned goals as well as the key objectives in each sub-program. It should be noted, however, that individual programs or projects may not be fully implemented during this period. Some of them may simply be designed and started to be implemented during the period. In those cases, completion would take place in subsequent years (albeit regular assessments of progress should provide clear indications of effectiveness). Annex 1 also identifies the financial needs for these projects/programs and constitutes, therefore, a useful operational tool for Tajikistan and the donor community.

1.4 Financing sources and gaps

35. Based on the development priorities and the implementation of reforms in the agricultural sector, the Government has designed an Investment Plan for the period 2010-15. The total investment amounts to US\$1.28 billion, or US\$200 million per year which is equivalent to 3-4 % of the GDP. We believe that the estimated amount can be absorbed by the economy provided that reforms continue to gather momentum and the implementation capacity of the relevant agencies are expanded with external and internal support. Donor financing for the investment program amounts to an estimated US\$380 million and Budget financing comprises about US\$72 million; thus, identified financing amounts to US\$450 million. The financing gap would be about \$830 million. Already identified financing would cover most of the investment needs for 2010-12. Therefore, identifying additional financing to cover the gap will be crucial to implement projects in subsequent years, 2013 onwards. We believe that such financing will be gradually forthcoming as it refers to priority project supportive of reforms and the environment of cooperation with donors and international institutions is steadily improving.

36. This proposal will reduce financing needs for the irrigation sector, identified as a priority investment area.

1.5 Process by which the strategy and investment plan was developed

37. The process of preparing of the NDS, the PRSs, the Agrarian Policy Concept, and the more recent Agricultural Strategy, involved intensive consultations among various stakeholders. Sector working groups comprising government officials, civil society organizations, private sector, including farmers, academia, and development partners discussed and prepared drafts which were then incorporated as parts of the above mentioned documents. Special care was exercised to ensure that women were well represented in all of these groups, particularly among farmer and NGO organizations. Drafts were also presented to a broad range of stakeholders through public forums and regional meetings. In addition, the draft NDS and PRSs were reviewed by the donor community. Several donors' recommendations have been incorporated in the final versions of all relevant documents. The Government, several NGOs and the donor community are undertaking joint efforts to ensure that such a participatory approach, especially involving participation of women, is translated into effective engagement at the project implementation level.

Part 2: Specific proposal for GASFP financing

2.1 Specific objectives, and targeted results

38. In the context of the previously described program and Investment Plan for the sector, the Government of the Republic of Tajikistan seeks GAFSP financing for US\$30 million to support the irrigation development of the country. The proposal would increase food security through increased crop production resulting from improved irrigation and drainage infrastructure and improved water resource management policies. The GAFSP-financed activities are intended to focus on a region of the country, where rural poverty and food insecurity rates are the highest. In this regard,

the activities anticipated under the proposed project complements the ongoing Public Employment for Sustainable Agriculture and Water Management Project (PAMP) while at the same time ensures long term and sustainable improvements in irrigation. The PAMP implementation has commenced with financing from the European Union Food Crisis Rapid Response Facility Trust Fund (EU-TF) under the Global Food Crisis Response Program administered by the World Bank, amounting to EUR 7.42 million (US\$10 million equivalent). Although the project has only recently commenced, it is already showing very promising results.

39. This proposal would merge the short term benefits associated with the PAMP with longer term productivity improvements that will follow from much needed investment in the irrigation system. The PAMP project finances a public works program to provide temporal employment to food insecure rural people, by rehabilitating the farm level irrigation and drainage network in selected high food insecurity districts. The project intends to assist the rural population suffering from a significant drop in remittances due to the global financial crisis. While alleviating a short term crisis, this proposal addresses a medium-term constraint to domestic food production: inadequate drainage and irrigation. This proposal also contributes to improved food security at a national level by financing the technical assistance needed to introduce water basin management as the basis for overall management of Tajikistan's water resources. It is expected that, with the additional finance, about 75,000 households will benefit permanently from increased incomes resulting from the improvement in the irrigation system. The additional funds would also create about 1.5 million working days, improve about 1500 km of collector and drainage canals, renovate about 5000 km of irrigation canals and fortify about 7,000 spillways. It will benefit farmers using water from rehabilitated canals, almost half of whom are women. Finally, additional funds should be channeled to improve the Water Basin Management system whose requirements are substantial³.

40. The main stakeholders in the project are (i) vulnerable households with high food insecurity, including women-headed households and unemployed and seasonally inactive workers; (ii) community level institutions including mahallah (local communities) committees, social self-mobilizing groups and Water User Associations (where they exist), and (iii) public institutions including the Ministry of Irrigation and Water Resources (MIRWR), local branches of the MIRWR (oblvodkhozes, raivodkhozes), regional and local khukumats (district administrations) and jamoats (local authorities), the working groups leading agricultural reform and the donor community. Vulnerable households will benefit from more efficient water use and delivery. Additional Financing from the GAFSP should increase household agricultural productivity thereby contributing to increased agricultural output and improved household food security.

41. The Khatlon region has been selected as the project area for two major reasons. First, evidence from surveys consistently show that this is the poorest and most food insecure region in Tajikistan. Second, the region has a high agricultural potential that

³ All these estimates are based on the work done for the initial PAMP and tentative at this stage.

remains unrealized due in part to the deteriorating irrigation infrastructure. However, due to the limited project funding, without the sought-for GAFSP finance the project can cover only 5 out of 24 districts in Khatlon. With the GAFSP finance as proposed the (scaled-up) project will provide jobs for 0.45 million working/days, rehabilitate 1,825 km of farm level irrigation networks and improve 576 km of collector and drainage canals.

42. The proposed financing will address Khatlon's pressing needs for rural employment and rehabilitation of its irrigation systems. According to a joint assessment of food security in Tajikistan carried out by WFP, WHO and DFID (as of September 2009), approximately 1.4 million people in Khatlon were identified as food insecure with 390,000 of them considered to be "severely" food insecure. Given an average family size of 7 people (UNICEF, 2000), approximately 200,000 rural households in Khatlon live below the poverty line and therefore face chronic food insecurity. The initial PAMP benefits around 10% of food insecure poor households in the region. Furthermore, according to the latest data of the Ministry of Irrigation and Water Resources (MIRWR), about 8,750 km of irrigation and about 2,329 km of drainage canals in Khatlon require cleaning and renovation works. Consequently, the GAFSP financing of \$US30 million would enable irrigation improvements to be extended to 10 additional districts of Khatlon. In addition to the long-term benefits provided by the project on irrigation, temporary employment will be provided to around 30%-40% poor rural households in the area.

Project's Long-Term Sustainability with the GAFSP AF

43. The GAFSP financing would contribute to the long-term sustainability of the irrigation system through improved water use management, which is a key determinant increased agricultural productivity output. This is, precisely, the major difference with the PAMP which concentrates on short term aspects. The GAFSP will finance the following activities that designed to underpin the sustainability of the irrigation system in the Khatlon region: (i) supporting national efforts in reviewing and reforming the existing institutional framework for water resource management; (ii) reorganizing the MIRWR and its subsidiary operations, including the establishment of river basins as the basis for water resource management; (iii) strengthening the network of Water Users Associations through training and capacity development; (iii) reforming policies associated with the assessment and collection of water use fees; and (iv) investing in water control equipment.

44. The GAFSP will aim at creating incentives for the irrigation sector to perform adequate maintenance works thereby impacting on food security in a sustainable manner. First of all, priority will be given to selecting those districts where land privatization is well advanced, as private farmers have greater incentives to continue maintaining their irrigation infrastructure after project completion. Second, where feasible, the project would be linked to ongoing projects so as to maximize the use of improved technology and access to seeds and fertilizer. This would be an extra incentive to maintain the irrigation infrastructure in good condition. Third, the reform in water fees and collection policies should allow the relevant institutions to carry out the

needed regular maintenance. Fourth, the role of the WUAs will be heightened. They will have an increasing voice in irrigation policies, maintenance and water fees. As the experience proves, this should play a decisive role in maintaining the irrigation system in good shape. Almost one third of the GAFSP will be used to improve the secondary irrigation canals so more water reaches the farms. Finally, the proper separation of irrigation policies from administration, the clear role of national and local authorities and WUAs and the elimination of the flat fees for water use should play a crucial role in increasing efficiency and facilitating maintenance. To sum up, this proposal will improve the irrigation infrastructure while introducing important reforms on irrigation which will create incentives for its continued maintenance.

Results Framework

45. The project's Monitoring and Evaluation system is based on the results framework already used in the PAMP albeit new targets will be identified in order to capture additional targets/objectives for the proposed extended investment. Some of these targets have been referred to previously. Outcome indicators will be disaggregated by gender as the relevant information becomes available:

*Table 3: Employment for Sustainable Agriculture and Water Management Project (PAMP)
Results Framework for Monitoring and Evaluation*

Project Development Objective	Project Outcome Indicators	Use of Project Outcome Information
The project objective is to increase food security through increased crop production resulting from improved irrigation and drainage infrastructure and improved water resource management policies.	<p>Average income per beneficiary as evidence of increased Food Security in the Project Area</p> <p>Amount of cash transferred to project beneficiaries</p> <p>% of the Farmers in the Project Area which have access to irrigation water on permanent basis Of which: (at least 45 % should be) woman farmers</p>	Verify the achievement of the project outcomes
Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component 1: Public Works to Renovate Irrigation and Drainage Infrastructure		
Rehabilitation of selected irrigation and drainage (I&D) canals as a result of public works	<ul style="list-style-type: none"> • Improved drainage of on-farm canals (Km of drainage, on-farm canals) • Improved drainage of off-farm canals (Km of drainage, off-farm canals) • Renovated on-farm canals (Km of renovation, on-farm canals) • Renovated secondary canals (Km of renovation, secondary canals) 	Monitor progress and impact of public works program
Public Works Program	<ul style="list-style-type: none"> • Number of sub-programs established • Number of sub-programs completed 	Monitor progress and impact of public works program
Component 2: Technical Assistance		
Prepare proposals for the	Water Basin Management Scheme	To implement a gradual shift

introduction of a Water Basin Management (WBM) scheme, including recommendations on the roles, responsibilities and institutions required for WBM and the basis for a gradual shift from the current system to WBM.	submitted to the Government Water resource management based on River basins is established Number of Water Users Associations benefitting from training and capacity development (Of which: --at least 30% should be-- WUAs headed by women)	from the current system to WBM
Prepare recommendations on how government can design and implement its public works programs as a means to provide temporary employment to alleviate food insecurity	Government approves recommendations on how to design and implement its own public works programs	To strengthen government capacity
Component 3: Implementation Support, Monitoring, and Evaluation		
Effective project management	Number of timely and completed project status reports Number of satisfactory audits, and satisfactory supervision ratings	Assess efficacy of project management

Government Strategy and Investment Plan

46. This GAFSP proposal is consistent with the, medium-term program of the NDS, the PRS 3 and the Agrarian Policy Concept, for agricultural and food security as set out earlier in this submission. In other words, it complements the Government's efforts to improve food security in the short-term (through incomes earned by food insecure households from public works), to increase crop production in the medium-term (as a result of improved irrigation and drainage), and to improve water resources management in the long-term (through technical assistance). As referred to before, this proposal would finance part of the financial gap for a key, priority activity.

47. The proposed project also complements the Government's Anti Crisis Plan of May 2009, that is designed to ameliorate the impact of income shocks on the country. Significant funds were directed by the Government towards social protection programs, including about 80 million Somoni or around US\$2million. Such funds provided the following benefits: (i) rural finance for 30,000 poor households; (ii) adult training centers; and (iii) scaling up a small road maintenance and mini-power construction program. These programs, while important, have not been sufficient. In fact, food-security monitoring systems have identified the need for further interventions to support employment and income generating activities in rural areas.

2.2 Activities to be financed

48. The GAFSP Additional Financing will support the Public Employment for Sustainable Agriculture and Water Management Project which consist of three main components. This project expands the coverage of the initial PAMP in the same region

but with more emphasis on TA aiming at improving water resource management. The objectives of this AF would be pursued with the following components:

49. **Component 1: Public Works to Renovate Irrigation and Drainage Infrastructure.** This component will finance minor renovation of on-farm irrigation canals and off-farm drainage infrastructure. It will also assist in rehabilitating selected secondary canals in the same areas to improve water delivery at the farm level. These public works will target ten additional (to the PAMP project) districts in Khatlon with high food insecurity and good agricultural potential in order to make the best contribution to sustainable economic development and rural livelihoods. The districts are Panj, Jomi, Rumi, Bokhtar, Nosir Khusrav, Yavan, Khuruson, Jilikul, Hamadomi, Vose. A map showing the 5 current (PAMP) project districts and 10 additional districts proposed under the GAFSP financing is provided in Annex 3. Public works programs for renovation and rehabilitation of irrigation infrastructure will involve the rental and/or importation of auxiliary equipment (excavators, bulldozers, etc.); repair and installation of new water metering facilities (so farmers are able to regulate timing and volume of water use), and the procurement of low-cost, locally available tools such as shovels, wheelbarrows, picks, and other tools.

50. **Component 2: Technical Assistance.** This component will finance preparatory work for the introduction of a Water Basin Management System including the delineation of water basins, an outline of the new roles and responsibilities and the institutional infrastructure needed to manage these water basins, and recommendations on how to move from the current institutional structure to the new one. A small additional technical assistance input will be implemented to provide recommendations on how the lessons learned in the project can be used for the design and implementation of future public works projects to be financed and managed by government in order to provide temporary employment.

51. Some of the activities mentioned before involved fundamental transformations in water sector management while others set in motion a process reinforcing such transformation. The TA will consist of the following elements:

- (i) A review of the existing legal and institutional basis for water resource management and a set of recommendations on the legislative reforms needed to establish and operate independent Water Basin Management Authorities. This review will include an analysis of the current funding requirements for maintaining irrigation and drainage infrastructure, and recommendations as to how this should be apportioned between government, Water Basin Management Authorities and farmers.
- (ii) Preparation and support in implementation of an Action Plan on how to sequence the re-organization of water resource management so it moves from the existing structure to the system of water basin management; a realistic schedule and timeframe for change will be recommended. These recommendations should include the legislative and institutional changes to be made at national level, a framework for the transfer of responsibility from existing authorities to the new Water Basin Management Authority, and the financial basis for operating the Water Basin Management Authority.

- (iii) Strengthening legislative and operational framework for Water User Associations accompanied by an expansion of their activity as the basis for demand-led water provision.
- (iv) Reforming policies and procedures associated with the assessment and collection of water use fees with the objective of increasing revenues.

52. **Component 3: Implementation Support, Monitoring & Evaluation.** The Project Management Unit (PMU) will be the main project implementation agency, providing overall coordination and monitoring of implementation progress under the project. The Unit will be responsible for financial management and procurement. A communications strategy is being implemented to inform rural households and local government authorities of the objectives of the project, the support to be provided and the eligibility criteria for support, and the measures to be taken to prevent corruption. This communication strategy will pay special attention to the participation and leadership position of women farmers particularly through WUAs.

Potential Environmental and Social Impacts

53. *Environmental Issues:* As the project will focus on on-farm irrigation and drainage infrastructure rehabilitation, the civil works will consist mostly of earth moving, concrete works and rehabilitation of existing canal structures, all of which are fairly small scale works. Some of these activities will be done manually and will not have significant environmental impacts. Excavated sediments and other materials will be dumped beside the irrigation and drainage canals but the environmental impact of this will be negligible.

54. The selected subprojects are located in existing irrigation areas. Therefore, none of them will have an impact on protected areas, critical habitats or culturally or socially sensitive areas. At the same time, improvements in the irrigation systems will raise agriculture production, arrest the declining productivity of irrigated land, protect natural “assets”, and prevent the degradation of soil fertility. The reduction in water losses and improved irrigation distribution should reduce seepage losses from the main canals and excess water distribution. This should have a beneficial impact on project areas through lower water tables, lower risk of salinity, and less stagnant water pools in villages which are associated with health problems.

55. *Gender Issues:* Women make an important contribution to agricultural production in Tajikistan. In project areas, like elsewhere in the country, the ratio of employed women is lower than of men. Agriculture is the main source of employment for 45% of women. In this regard the benefits of the PAMP appear to be obvious as women will be directly affected by improvements in irrigation infrastructure. In agriculture, women are mostly involved in heavy manual labor, which is seasonal, such as weeding, hoeing, and harvesting. In general, women are in charge of garden and household plots, which are often the main source of household food supplies. In addition, they are also responsible for daily feeding of their livestock.

56. Due to civil war and labor migration of males, many women play multiple roles of earning income, and taking care of the household and their children, on their own.

Some anecdotal evidence suggests that after 12 months or longer, men send very little or no remittances back to their families. Women in such conditions are under a lot of social and psychological pressure. However, despite their indispensable role in agricultural production, women continue to be reluctant or have a limited role in decision-making concerning farms. This is particularly difficult for women in single-headed households.

57. While women will benefit from assets created by the public works, the heavy labor required for rehabilitation works precludes women from the same opportunity to short-term earnings as men. In this regard, to address gender imbalance in women's participation in the project, they need to be included in the decision-making. Furthermore, there should be measures to monitor the full compliance with the national legislation concerning health and labor safety for both men and women. Women will have a particularly prominent role to play in the WUAs.

58. In this project, farmer-women participation will be systematically encouraged and monitored in three main aspects. First, in the consultation process care will be exercised to maximize their participation. The final documentation for this proposal will provide detailed information of such consultations. Second, training provided for the WUAs will be monitored so at least 30% of the benefiting WUAs have women as their leaders. Third, among the farmers benefiting from this additional financing through the GAFSP 45% will be women.

Project Implementation Arrangements

59. In order to reduce administrative costs, the arrangements in place for PAMP will be extended to this project. Overall management responsibility for the project will rest with the Ministry of Irrigation and Water Resources (MIRWR) and the Administration of the Khatlon Region. The Ferghana Water Resource Management Project Management Unit (PMU) is the lead operational institution for the PAMP and carries out implementation of the PAMP in accordance with a specific Project Operational Manual (POM). The PMU will retain overall responsibility for project procurement, disbursement and financial management. It will also provide regular reporting and oversee communication and Monitoring and Evaluation arrangements for the project. An additional Public Works Division is being established within the PMU and will be adequately staffed for the required activities. The Public Works Division will also receive support services from other PMU personnel, including the information technology service, procurement, finance officers and others.

60. The local branches of the MIRWR, District Water Authorities (raivodkhozes) will carry out a preliminary assessment about the demand for rehabilitation of on-farm and off-farm irrigation systems. Active consultations will take place after this technical work regarding interventions, works to be carried out and the required finance. Subsequent maintenance work, particularly by local communities, will be emphasized. These consultations will be required before any final decision is adopted and must involve local communities (makhallahs) and local authorities (jamoats). Women's participation will be

encouraged actively and monitored. If necessary, consultations with local communities will be repeated to guarantee a good level of participation by women. The final documentation and/or supervision reports will provide detailed reporting on these events.

2.3 Amount of financing requested

61. Restoration of irrigation networks and ditches, exploration of new lands, supporting the establishment of the Water User Associations aimed at effective management of water resources have been identified as priority activities for the Food Security and Agricultural Development in the Poverty Reduction Strategy for 2010-12. Even with the additional amount of resources being sought in this proposal it will be impossible to reach all potential beneficiaries in the selected project area. In fact, due to a limited financing amount of the EU Grant in the PAMP, it was possible to include only 5 districts in the Khatlon Oblast. As already mentioned, the coverage of the number of the districts in the country's most food insecure region could increase with the GAFSP additional finance to reach 10 additional food insecure districts in the Khatlon Region. The TA component of this proposal, however, will benefit the water irrigation sector as a whole.

62. At present, with the EU financing of EUR 7.42 million, PAMP is expected to provide temporary employment of around 459,000 man-days to poor rural people and supplement their incomes by EUR3.9 million, rehabilitate more than 1,825 km of irrigation and 576 km of drainage canals, fortify 2,630 spillways, construct 503 outlet gates, repair 14 pumping stations. Once this work is completed, it is expected to result in increased food production by around 6,500 tons of cereals and 9,800 tons of vegetables from an area of approximately 49,000 Ha. It will also result in the preparation of a new policy framework for the management of irrigation infrastructure, based on water basin management. Should the additional financing for US\$30 million be granted to the country, these benefits would be substantially increased with a greater impact on poverty reduction and food security in Khatlon, as well as improvement of the irrigation structure and increased agricultural productivity for the whole country.

63. The PAMP methodology of calculating the cost estimates has been used to prepare the budget for this GAFSP proposal. These are preliminary estimates that will be refined during the final preparation of the project should the proposal be successful. The additional finance will be used to scale up the existing activities under the PAMP as indicated below. In view of scarce resources available in the GAFSP Trust Fund, three scenarios have been projected in the relevant cost table: (i) *Priority One*: rehabilitation of the irrigation systems in 10 districts (this is the scenario we would prefer); (ii) *Priority Two*: rehabilitation of the irrigation systems in 7 out of 10 districts, and (iii) *Priority Three*: rehabilitation of the irrigation systems in 4 out of 10 districts.

Table 3: Project Cost Estimates

Project Activities (amounts in US\$)	PAMP (original project) in US\$	GAFSP TF AF <i>Priority 1</i> (10 districts)	GAFSP TF AF <i>Priority 2</i> (7 of 10 districts)	GAFSP TF AF <i>Priority 3</i> (4 out of 10 districts)

Component I	8,879,000	25,500,000	17,850,000	10,200,000
Sub-project selection, detailed design and supervision	499,000	2,550,000	1,785,000	1,020,000
Manual labor employment (social mobilization)	3,965,000	7,150,000	5,005,000	2,860,000
Mechanized cleaning and labor intensive on-farm works (contractors)	3,295,000	5,000,000	3,500,000	2,000,000
Procurement of material, tools and other equipment	1,120,000	3,000,000	2,100,000	1,200,000
Rehabilitation of secondary irrigation canal	0	7,800,000	5,460,000	3,120,000
Component II				
Technical assistance	600,000	3,000,000	3,000,000	3,000,000
Component III				
Project management, monitoring & evaluation	533,612	1,500,000	1,500,000	1,500,000
Total	10,012,613	30,000,000	22,350,000	14,700,000

2.4 Preferred supervising entity

64. Since the PAMP is currently being administered by the World Bank, the Government would prefer to continue with this arrangement. The World Bank has funded public sector work programs (PWPs) throughout the world in the last 20 years thereby providing a good international experience in designing and implementing this type of project.

65. Furthermore, the World Bank assistance in the country's agriculture and irrigation sectors has been important over the last decade. It has led the policy and institutional development dialogue with the Government in these sectors and has a strong portfolio of investment operations. In addition to a recently completed Rural Infrastructure Rehabilitation Project, the World Bank is also implementing community-based and irrigation-related projects in the Community Agriculture and Watershed Management Project and the Ferghana Valley Water Resources Management Project. As mentioned before, the World Bank is implementing a Land Registration and Cadastral System Project which is a key infrastructure in advancing the Government's commitment to "freedom to farm". Lessons learned from these projects are regarded as very useful for the implementation of the PAMP and the proposed scaled-up project under the GAFSP.

2.5 Time frame of proposed support

66. This GAFSP proposal may take around 4.5 years to be fully implemented. This estimate is considered a realistic, achievable time-frame, commensurate with the design of the project. Longer term irrigation issues, particularly involving the development of systems for sustainable management policies will also be tackled through the TA component. According to the previous programming, one year was required to implement the PAMP as currently being financed by the EU Grant. That timing was predicated on the short term nature of the project. However, it may have been optimistic and the implementation may take longer.

2.6 Risks and risk management

67. Project risks have been already assessed for the PAMP (under the EU grant financing). No substantial changes in assessment are expected for the proposed additional finance. However, there may be additional risks on the TAs components if there is not full implementation of those aspects of the project deemed necessary to improve the institutional management of the irrigation system. Overall, risks will require a careful monitoring. Policy risks on institutional arrangements for irrigation are substantially reduced by the perceived enhanced commitment to reforms in recent years. The risk that women's participation is not realized will be addressed by an active communications' and monitoring strategy.

<p>Risk 1: The government's sub-optimal agriculture and irrigation policy framework remains unchanged or changes slowly.</p> <p>Mitigation Measures: Strong donor involvement and dialogue; The project will select project districts with better agricultural policy framework: out of 24 districts in Khatlon, 20 districts are considered to exhibit a good and improving agricultural policy framework.</p>
<p>Risk 2: Government entities (central and local level) do not perform to the expected standard; different government agencies fail to cooperate and/or resolve operational problems in a timely manner.</p> <p>Mitigation Measures: Frequent monitoring and supervision by the GAFSP's Supervising Entity; Deputy Prime Minister and Government of Khatlon Oblast have pledged their full support to resolving day-to-day operational matters.</p>
<p>Risk 3: Financial management arrangements are generally satisfactory, but funding mechanisms that involve community participation may carry additional risks.</p> <p>Mitigation measures: Funding mechanisms and control measures are described in the Project's Operational Manual. Information about beneficiaries and worker remuneration will be posted on information boards in Jamoats. In addition, there will be a local NGO contracted to undertake monthly sample spot checks of workers' time sheets.</p>
<p>Risk 4: Procurement risks – delays in procurement, low levels of competition, inadequate contract management, and poor quality of works.</p> <p>Mitigation Measures: Careful procurement planning and realistic scheduling; advanced preparation of technical specifications or TORs; further procurement training will be provided during project implementation, close supervision and monitoring by the GAFSP's Supervising Entity. Careful procurement design will be developed to foster competition; effective advertising campaigns; proactive search for potential suppliers, contractors or consultants. Regular physical inspections by the Project Management Unit and regular missions of the GAFSP's Supervising Entity.</p>
<p>Risk 5: Possible social issues – conflicts, disputes and lack of interest in participation. Lack of women participation and leadership position in WUAs</p> <p>Mitigation Measure: Community involvement in planning and implementation; awareness campaigns to reduce potential for conflict; experienced social scientists involved in project preparation. Communications strategy included in one of the components and careful monitoring.</p>
<p>Risk 6: Low sustainability of investments in irrigation works.</p> <p>Mitigation Measures: Areas with good agricultural potential and support to further progress with farm restructuring are likely to secure the sustainability of investments. Strong attention to on-going projects on training of communities in sustainable management of community resources through an active use of the WUAs.</p>

Risk 7: Possible use of child labor in project implementation.

Mitigation Measures: Tajikistan has adequate child labor laws, consistent with international conventions on child labor; the project will include appropriate measures to monitor, raise awareness and prevent utilization of child labor.

Risk 8: Potential environmental impacts: The project will mainly support on farm irrigation and drainage activities. The civil works will mainly consist of earth moving, concrete works, rehabilitation of existing canal structures, all of which are fairly small works. The great majority of these activities will be done manually. None of these will generate significant environmental impacts. However, they might cause minor adverse environmental impacts such as water logging and salinization; soil erosion and degradation of natural habitats; dumping of excavated sediments and other materials from irrigation and drainage canals, structures, etc.

Mitigation Measures: Since the PAMP is administered by the World Bank, minor adverse environmental impacts fall under the Category B projects, for which the Bank requires a simple Environmental Management Plan (EMP). The purpose of the EMP is to provide the World Bank's and national rules and procedures for the project's Environmental Impact Assessment, identify the significant environmental impacts of the project (both positive and negative), to specify appropriate preventive actions and mitigation measures (including appropriate monitoring scheme) to prevent, eliminate or minimize any anticipated adverse impacts on environment. The current EMP for PAMP will be applicable for the proposed GAFSP project.

Positive impacts: Furthermore, as the selected subprojects are located in the existing irrigation areas, none of them will have impacts on protected areas, critical habitats or culturally or socially sensitive areas. The proposed rehabilitation of the irrigation infrastructure is expected to have a positive impact on the environment. Thus, improvements of the irrigation structure would increase agriculture production, prevent the risk of decreased productivity of irrigated land, protect natural "assets", and prevent the degradation of soil fertility. The reduction in water losses and an improved irrigation distribution will also reduce seepage losses from main canals and over-supply of water, with a beneficial effect for the areas concerned such as a lower water table, a lower risk of salinity, and a less stagnant water pools in villages with potential associated health hazards. The project will also bring a number of both direct and indirect positive social impacts. Direct positive impacts will be generated by increased production, more employment and increased income leading to enhanced food security. Indirect positive impacts will relate to overall contribution to poverty reduction and health.

2.7 Consultation with local stakeholders and development partners

68. A very active consultation process has been carried at the following levels: national authorities, local governments, local communities, donors, civil society. While consulting with local communities, particularly farmers, the participation of women is being given a high priority. Consultations will be repeated if needed so as to secure increased level of participation. The consultation process precedes final decisions and implementation. The process of consultations with national and local authorities as well as WUAs will continue during preparation and implementation, particularly in connection with maintenance work. Activities to enhance the capabilities for the WUAs may include some training as part of the TA. The content of training programs will be discussed with the intended beneficiaries. WUAs that benefit from such training will be lead by women in, at least, 30% of the cases. Farmers that benefit from the project will involve women at least in 45% of the cases. All these targets and implications have been discussed

among stakeholders. The communications strategy provides a framework for such discussions.

69. The conclusions of a Social Assessment that has been recently undertaken for the PAMP will assist in the final design of the proposed GAFSP project. The analytical conclusions of the Assessment are supportive of the activities proposed in this submission. The results of the Assessment indicate that poverty and food insecurity of households are directly linked and are indicative of the population's purchasing power and its limited access to social services and a lack of adequate nutrition. Purchasing difficulties extend beyond goods such as meat, sugar and food oil. They also include traditional goods like vegetables, fruits, rice, and butter particularly in the aftermath of the global financial crisis. Purchasing power has obviously been further curtailed by the price hikes for food items that have been widely experienced throughout the country. In the Assessment, several reasons were identified as driving food insecurity: lack of employment with decent pay, inadequate pay for labor in the dekhan farms and low returns to agricultural production on farms, subsistence plots, presidential lands, and household plots.

70. The Assessment confirms the view that inefficient drainage and irrigation system is a chief reason for low agricultural productivity. The irrigation system, especially on-farm, has deteriorated significantly during the last 15-20 years because of prohibitive maintenance costs and poor management structures. From the Assessment, it is clear that farmers favor the rehabilitation of on-farm and off-farm drainage and irrigation infrastructure, partly due to the project's emphasis on public employment. The latter was particularly welcomed since 60-80% of unemployed population was willing to become involved in the project. In the past, some partial irrigation infrastructure repairs were done either for free or by contributions made from family budgets.

71. Farmers see the benefit of improved irrigation infrastructure as a way to increasing production, improved productivity and greater food access. According to farmers with effective irrigation grain yields could increase by 25%-30% and vegetables by 50%-70%. Furthermore, they could use rehabilitated land 2-3 times per year. Finally, farmers see the importance of their role in maintaining the irrigation system and thus they support through participatory training and extension. To effectively manage water they underscore the need for capacity building of rayvodhozes, jamoats, dekhan farms through training, as well as the extension of technological innovations in water management.

ANNEX 1: Map of the Project Area

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