Kyrgyz Republic Amended Proposal for

Additional Funding

for

Agriculture Productivity and Nutrition Improvements

under the

Global Agriculture and Food Security Program

(GAFSP)

Ministry of Agriculture and Land Improvement
and
Ministry of Health

June 2013

ABBREVIATIONS / ACRONYMS

AADP	Agriculture Area Development Project
ADB	Asian Development Bank
ADS	Agroindustrial Development Strategy
AFC	Agriculture Food Corporation
APNIP	Agricultural Productivity and Nutrition Improvement Project
AISP	Agriculture Investments and Support Project
ARIS	Community Development Investment Agency
CARs	Central Asian Republics
CFF	Concept on Food Security
DALY	disability-adjusted life years
DWRLI	Department of Water Resources and Land Improvement
ERR	economic rate of return
EU	European Union
FAO	Food and Agriculture Organization
GAIN	Global Alliance for Improved Nutrition
I&D	irrigation and drainage
IFAD	International Fund for Agricultural Development
IPM	integrated pest management
ISP	irrigation service fee
M&E	monitoring and evaluation
MADF	monthly allowance for disadvantaged families
MDG	millennium development goal
MNP	micronutrient powders
MOALI	Ministry of Agriculture and Land Improvement
MOF	Ministry of Finance
MOH	Ministry of Health
MOM	management, operation and maintenance
MSB	monthly social benefit
MSD	Ministry of Social Development
MTBF	Medium Term Budget Framework
MTDP	Medium Term Development Programme
MW	minimum wage
NGOs	non government organizations
NWRMP	National Water Resources Management Project
OIP	On Farm Irrigation Project
O&M	operation and maintenance
PIP	public investment programme
PIU	project implementation unit
RAS	Rural Advisory Service
SDC	Swiss Agency for Development and Cooperation
SPNQI	State Program on Nutrition Quality Improvement
SUN	scaling-up nutrition
SWaP	sector-wide approach
UNICEF	United Nations Children Fund
VHC	village health committees
WHO	World Health Organization
WFP	World Food Program
WMIP	Water Management Improvement Project

WUA	water user association
WUASU	water user association support unit

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Executive Summary

Economic growth in Kyrgyzstan has fluctuated substantially while its poverty levels have declined. Agriculture, although declining in its contribution to GDP remains the back-bone of the economy with irrigated agriculture key to increasing incomes, reducing poverty and improving food security.

Food insecurity is chronic, affecting over 30% of the population, with poverty and low agricultural productivity as the basic cause of poor food consumption. Under-nutrition is an important public health problem with stunting, wasting, low birth weight, and vitamin and mineral deficiencies causing annual losses of $32 million. The associated rates of infant, child and maternal mortality are amongst the highest in Central Asia.

The Government of the Kyrgyz Republic has recognized that food security, nutrition security and poverty reduction are interlinked. It is addressing this through a multi-sector approach. Its development program and investment plan highlight the importance of increasing agricultural productivity, improving the nutrition status of women and children, and improving the quality of social protection especially for vulnerable families.

The Government's overall development program has a financing gap for 2013-2015 of KGS 23,229.3 million or US$489 million.

This amended proposal for additional financing has been modified from the 2012 Proposal. The National Water Resources Management Project funded by the Swiss Agency for Development and Cooperation is financing the former Component 2: Capacity building in water management, except for the equipment for operation and maintenance of the water user associations, irrigation and drainage schemes, which is incorporated in Component 1 of this Proposal. In addition, there has been some minor modification to the original Upscaling Nutrition Intervention and Social Protection Project.

The overall objective is to increase agricultural productivity and food and nutrition security of rural households in selected areas nationwide. This will be achieved through rehabilitation and modernization of irrigation and drainage infrastructure, increased agricultural advisory services and training, and up-scaling nutrition interventions.

The coverage and expected results and beneficiaries of this Proposal have also been reduced as follows as a result of increased rehabilitation costs:

Result/Beneficiaries	2012 GAFSP Proposal for APNIP	APNIP Approved Funding	Amended Proposal for Additional GAFSP Financing
Area rehabilitated	86,342	27,000	42,000
Number of WUAs	48	17	24
Number of smallholder farms	100,000	31,000	48,000
Number of beneficiaries	450,000	140,000	216,000
Number female headed households	20,000	6,200	9,600

The project will be implemented over five years and is expected to reach over 42,000 households, with particular attention to women and children and vulnerable groups. The project will enable the government to address major issues that were identified during an extensive dual level two-phased consultation process involving over 500 people representing

government and non-government agencies, potential beneficiaries and international agencies working in the Kyrgyz Republic.

The overall cost for this amended proposal for additional financing is $23.5 million. Component details are as follows:

Project Component and Activities/Items	Estimated Cost (US$ million)	APNIP Financing	NWRMP Financing	Additional GAFSP Financing Requested
Component 1: Rehabilitation and Modernization of I&D Infrastructure	28.0	11.7		17.5*
Component 2: Capacity Building in Water Management	3.8		1.8**	0.0
Component 3: Agricultural Advisory Services	2.5	1.5		1.0
Component 4: Up-scaling Nutrition Intervention	3.8	2.5		2.0
Component 5: Project Management	2.0	0.8	0.2	1.0
Project base costs	**38.1**			**21.5**
+ 10% contingencies	**3.8**			**2.0**
Estimated total project costs	**42.0**	**16.5**	**4.0**	**23.5**

* These costs include equipment for WUAs.
** Technical assistance only, excluding equipment for WUAs.

The designated supervising entity is the World Bank. If successful, the Government and the World Bank will review the possibility to include the additional financing in an updated appraisal of the APNIP. The APNIP is currently being pre-appraised by the World Bank with appraisal scheduled for July 2013 and start of implementation in the 4th quarter of 2013.

Preface

In 2010 the Government of the Kyrgyz Republic submitted a proposal for funding to the Global Agriculture and Food Security Program (GAFSP) for the rehabilitation of irrigation and drainage systems managed by water users associations. This proposal was unsuccessful in securing funding. GAFSP Steering Committee commented on several key strengths of the proposal including its cost effectiveness, well-specified and realistic indicators, and a strong monitoring and evaluation framework. The weakness identified was that the long-term viability of irrigated agriculture depends on raising productivity so that water users associations can finance off-farm capital maintenance. Moreover, full financial sustainability would require a gradual increase in water user fees.

In response to GAFSP's second call for proposals in January 2012, the Ministries of Finance, Agriculture and Land Improvement, and Health submitted a revised proposal to GAFSP for $42 million. The proposal addressed GAFSP's comments and the re-design was based on a comprehensive dual-level two-phased consultation programme. The overall objective is to increase agricultural productivity and food security of rural households in selected areas nationwide. This is to be achieved through rehabilitation and modernization of irrigation and drainage infrastructure, institutional development and capacity building for improved water management, increased agricultural advisory services and training, and up-scaling nutrition interventions with social protection.

The proposal was partly successful, receiving $16.5 million from GAFSP. In their Notification to the Minister of Finance dated 23 May 2012, GAFSP stated that

> "if more funds were available at the time of allocation, a higher amount would have been awarded to the Kyrgyz Republic. Please consider resubmitting a proposal for the remaining amount when a new Call is issued."

According to the GAFSP Technical Advisory Committee the key strengths of the proposal included: its clarity; fit with a clear strategy of structural reform; well developed institutional arrangement; decentralized water user associations (WUAs) bring local democracy, efficient maintenance and high recovery of water user fees; low-cost of rehabilitating irrigation infrastructure ($274/ha); twenty thousand female heads of household will benefit and gain political influence as heads of WUAs; a social protection component is incorporated in association with the Ministry of Health; the Government's commitment to the social component and the prioritized list of WUAs is based on formal criteria that include regularity of payment of water user fees to maintain off farm infrastructure. The only identified key weakness is the integration of social protection in an agricultural engineering project requires new coordination across ministries and across organizational levels.

Based on GAFSP's funding of $16.5 million and the very positive comments from the GAFSP Technical Advisory Committee, the Ministries of Finance, Agriculture and Land Improvement, and Health are submitting an amended proposal for additional financing. Since the GAFSP approval of funds the World Bank and the Ministry of Agriculture and Land Improvement have progressed the design and implementation of the project through the review process and has leveraged additional funding from the Swiss Agency for Development and Cooperation specifically for institutional development and capacity building for improved water management. This proposal incorporates the comments of GAFSP and amends the design to accommodate the review of the design and additional financing from the Swiss Agency for Development and Cooperation.

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

1.1 Objectives and Indicators

1. **Background**. Since independence in August 1991, the Kyrgyz Republic has been a forerunner of reform in its transition to a market-oriented economy, especially amongst the Central Asian Republics (CARs). In these 20 years it has adopted substantial macroeconomic and sector reforms. At the same time it has experienced more economic, political, social and climatic shocks than its CAR neighbours, including the Russian crisis of 1998-99, the March 2005 "Tulip Revolution", 2007-2008 food crisis, 2007 drought, frost in 2008, the global financial crisis, establishing the first parliamentary democracy in Central Asia in 2010, ethnic violence in June 2010, Presidential elections in October 2011, government collapse in August 2012 and a new coalition in September 2012.

2. During this period of relative instability, many key policy, strategy, investment planning and sector specific documents reached their end, including the Poverty Reduction Strategy Paper – Country Development Strategy (2007-2010), Country Development Strategy 2009-2011, Joint Country Support Strategy for the Kyrgyz Republic 2007-2010, and the Agrarian Policy Concept of the Kyrgyz Republic to 2010.

3. Immediately following the political and food security shocks the Government's policies, strategies and investment plans were embedded in The Concept of Food Security of the Kyrgyz Republic for 2009-2019 (CFS), the draft Medium-Term Development Program (MTDP) in the Kyrgyz Republic (2012-2014), and the annual Medium Term Budget Framework (MTBF [2013-2015]). The new government has accelerated reforms to establish a stable political situation, improve governance and business environment,[1] efficiency of the public service, strengthening property rights, combatting corruption and social development, including pension reform to make the pension system more affordable and increase the pension in line with changes in the minimum subsistence level. Some of the key policy, strategy and legislation includes: Presidential Decree 147 "On measures to improve justice in the Kyrgyz Republic" (8 August 2012); Presidential Decree 24 "On urgent measures to strengthen public security in the Kyrgyz Republic" (1 February 2012); Presidential Decree 120 "Concept of National Security of the Kyrgyz Republic" (9 June 2012); National Anticorruption Strategy (February 2012); modifications to the Law of the Kyrgyz Republic "On Fighting Corruption" (August 2012);[2] Medium Term 2013-2017 Fiscal Policy Concept (draft); National Sustainable Development Strategy 2013-2017 (approved 2013)[3]; Education Development Strategy 2012-2020; National Health Care Reform System "*Den Sooluk*" (2012-2016); Social Protection Strategy 2012-2014; State Program on Nutrition Quality Improvement 2013-2017 (draft); Comprehensive Program for the Support of Family and Motherhood to 2015 (adopted in 2012); National Strategy for Gender Equality 2020 (adopted in 2012); Agroindustrial Development Strategy (ADS) of the Kyrgyz Republic till 2020 (draft); National Strategy on Livestock Breeding, 2011-2015; The Governmental Program on Development of Food and Processing Industry in Kyrgyz Republic, 2012-2016; Strategy on Sustainable Development of Pastures, 2011-2015; and National Strategy for Ensuring

[1] The Kyrgyz Republic is among the top ten countries that have improved their rankings substantially since 2005. World Bank and IFC, 2013. *Doing Business 2013*. World Bank. Washington D.C.

[2] In 2012 the Kyrgyz Republic moved from 164 to 154 on the Transparency International Corruption Perception Index.

[3] The detailed program and action plan is still to be approved by Government.

Comprehensive Security of the Public and Territories of the Kyrgyz Republic in Emergencies and Crises for 2012-2015 (adopted in 2012).

4. **Growth and Poverty**. The Kyrgyz Republic is a small, mountainous, landlocked country with limited resources. Real GDP growth has fluctuated substantially from 6.4% (2006-2008), declining to 2.9% (2009) and -0.5% (2010) and rising again to 5.7% (2011) and 5% (without gold mining) in 2012 an estimated 7.5%. It is projected to average 7.4% in 2013-2015. Despite the varying rates in economic growth, the poverty rate has declined from 39.9% in 2006 to 31.7% in 2009 but increased to 33.7% in 2010[4] and further to 36.8% in 2011.[5] It is predicted to drop to 27.4% in 2015.[6] Poverty is higher in rural areas (40.4%) than urban areas (30.7%) and varies significantly amongst the regions. Extreme poverty declined from 9.1% in 2006 to 3.1% in 2009 but also increased in 2010 to 5.3%, with 4.2% in urban areas and 6.0% in rural areas. Similarly, the Gini coefficient declined from 0.446 in 2006 to 0.363 in 2008 only to increase to 0.371 in 2009-2010. The majority of the poor are families with children. Child poverty is substantial with 40.9% of children (0-17 years) living in poverty, including 6.5% in extreme poverty. In rural areas it is 46.3 % and urban areas 30%.[7] Per capita GDP was US$910 in 2009, declined to US$886 (2010) and increased to an estimated US$1,296 in 2012. It is expected to increase to US$1,908 in 2015[8].

5. **Agriculture**. Agriculture growth fluctuates and its contribution to GDP continues to decline. The rate of growth averaged 1.3% in 2006-2008. In 2008 it was 0.8% due to severe frosts, recovered significantly to 7% in 2009 due to favourable climatic conditions only to decline in 2010 to -2.8% due to the domestic disturbances. A substantial increase of 5.7% was achieved in 2011. Agriculture is forecasted to grow 4.2% over 2013-2015. Agriculture's contribution to the economy has declined from 27.1% in 2006-2008 to 18.1% in 2009-2011, and is expected to decline further to 16.5% in 2015.[9] However, agriculture remains the backbone of the economy, employing about 40% of the population and 65% of the rural population where poverty is more prevalent.

6. Farm sizes are small. Over 300,000 smallholder farmers emerged from land privatization in the mid 1990s, resulting in an average farm size of about 3 ha.[10] While livestock is a major agricultural activity most of the livestock are owned by small-scale farmers. Crop yields are low and variable. Wheat production meets about 40-50% of requirements with the balance imported from Kazakhstan. Farm incomes in Kyrgyzstan are driven by irrigated agriculture, which represents about 80% of the arable area. In general, income from cropping is the most important source of household income, with the ownership and sale of livestock an important additional source of security and income. The continuing growth and diversification of the small crop and livestock farmers remains a major driver of poverty reduction and improved food security.

7. The agriculture sector continues to experience substantial adjustments in its transition to a market-oriented economy and the external shocks of recent years. Agriculture is important for growth, poverty reduction, and food security but continues to underperform, as many farms and agro-processing facilities are not operating efficiently and many are not profitable. The issues facing agricultural development are diverse and interrelated. The social

[4] This is attributed to the ethnic violence and food crisis in spring 2010, particularly in the south of the country.
[5] The National Statistics Committee
[6] The Kyrgyz Republic. *Mid-term Budget Framework 2013-2015*. Bishkek 2012.
[7] The Kyrgyz Republic. *Medium-term Development Programme of the Kyrgyz Republic for 2012-2014*. Bishkek 2012.
[8] The Kyrgyz Republic. *Mid-term Budget Framework 2013-2015*. Bishkek 2012.
[9] The Kyrgyz Republic. *Mid-term Budget Framework 2013-2015*. Bishkek 2012.
[10] There are also household plots that average 0.1 ha.

accounting matrix in the World Bank's *Country Economic Memorandum 2005*[11] shows high inter-sector linkage multipliers for all agricultural products above 2.6, with the multiplier for livestock products (3.2-3.5) exceeding crop products (2.6-2.8). The input supply industry multiplier is 2.7. This highlights the interrelatedness of the issues and the need for simultaneous investment in upstream and downstream sectors to take full advantage of the multiplier effects of agricultural growth. A more holistic, integrated and coordinated approach to agriculture growth and development is necessary.

8. The World Bank's *Agricultural Policy Update 2004*[12] presents a social mobility matrix for 662 households for 1999–2002. While the study is not recent, it clearly demonstrates the importance of agriculture in lifting those in the lowest income quintile out of poverty. The study concluded that income mobility was driven by land reform and subsequent agricultural growth. However, those who remained in the lowest quintile at the end of 2002 continued to be constrained by a low agricultural asset base that limits their potential for further agricultural growth: they derived only 35% of their income from agriculture (compared with 45% for the second, third, and fourth quintiles and 40% for the fifth quintile) and spend 47% of their cash on food. As long as nonagricultural opportunities remain limited, ensuring access to land and other agricultural assets is critical for increasing the incomes and food security of those in the lowest quintile.

9. **Food insecurity**. Food insecurity is chronic with poverty as the basic cause of poor food consumption. Table 1 compares the five food security assessments undertaken by the World Food Program (WFP). Food insecurity has fluctuated with about 1.3 million people being food insecure (March 2013). About 9% of the population have severe food insecurity. Food insecure households consume less vegetables, meat, eggs and dairy products. The deterioration in food security has been attributed to increased wheat flour prices, reduced wheat harvest and reduced frequency of remittances. The levels and severity of food insecurity vary both seasonally and regionally within the country. Food security is more prevalent in rural areas (31%) than urban areas (12%); is more prevalent in Jalalabad (52%), Talas (31%) and Naryn (30%); and is more likely to be in large households. More than half of the food insecure households rely on a single income, have small plot sizes and limited livestock. [13] As food insecure households spend about half their budget on food, any further shocks through sharp rises in food prices or general increases in the cost of agricultural inputs could continue to undermine the health and nutritional status of food insecure households.

Table 1: Results of WFP Food Security Assessments

Indicators	August 2010	March 2011	August 2011	March 2012	September 2012	March 2013
Severely Food Insecure (%)	4	14	2	3	9	4
Moderately Food Insecure (%)	23	32	16	15	16	20
Poor FCS	1	8	1	3	4	3
Borderline FCS	6	18	6	9	12	6

Notes: FCS = food consumption score - poor < 28 and borderline 28-42.[14]
Source: World Food Programme, *Kyrgyz Republic Food Security Assessment March 2013.*

[11] World Bank. 2005. *Kyrgyz Republic Country Economic Memorandum: Enhancing the Prospects for Growth and Trade.* Washington.
[12] World Bank. 2004. *Kyrgyz Republic – Agricultural Policy Update*. Washington, D.C.
[13] Source: World Food Programme, *Kyrgyz Republic Food Security Assessment March 2013.*
[14] The FCS is a composite score based on dietary diversity, food frequency and relative nutritional importance of different food groups. It is based on the number of days each food group (8 groups with different weights) are consumed over a 7 day period See World Food Programme, *Food consumption score – Construction of the FCS.* April 2008.

10. **Undernutrition**.[15] In 2006, stunting amongst children under 5 averaged 13.5% but varied across regions from 8.3% in Jalalabad to 27.3 in Talas. Wasting averages 4% nationwide but also varies from 1% in Osh to 9.2% in Jalalabad. Both stunting and wasting are more prevalent in rural areas, in poorer households, and lower educated mothers. Low birth weight averaged 5.3% with variations from 4 to 10% regionally, and is more prevalent in rural areas and less educated mothers. In the Talas region in 2008 anaemia in children aged 6-24 months and women were 50.6% and 24.5%, respectively. In addition, about 32% of children suffered from vitamin A deficiency. Only 39.5% of the population in 2007 were reported as consuming adequate iodized salt, with school children having adequate intake but pregnant women were consuming substantially less than the requirement. Poor infant and young child feeding practices are also prevalent, reflecting a lack of access to nutritious foods and a lack of awareness amongst mothers of proper nutrition for children. Breastfeeding and complementary feeding are identified as being inadequate. Undernutrition accounts for approximately 17% of disability-adjusted life years (DALY). [16] Total undernutrition attributable DALYs is 16.6%, of which low birth weight in children under 5 at 13.4% is most significant. Malnutrition attributable deaths are significant causing an estimated 21.8 % of 1,547 under-five deaths in 2004. Severe and moderate stunting caused 50% of deaths, 25% were due to low birth weight, 16% due to vitamin A deficiency, and 9% to wasting. It is estimated that annual losses of $32 million are due to undernutrition and micronutrient deficiency, with $4.5 million from mortality and $27.94 million from lost productivity. The rates of infant, child and maternal mortality are amongst the highest in Central Asia. The empowerment of women is particularly important for household nutrition outcomes, especially for children's nutrition.

11. The Government recognizes that achieving food security, nutrition security and poverty reduction are interlinked. These are multidimensional problems that require multidimensional and multisectoral responses that simultaneously address food availability, access, and consumption.

12. **Goal and Development Objectives**. The key documents reflecting the Government's policies and strategies for agriculture and food and nutrition security include: National Sustainable Development Strategy 2013-2017 (approved 2013); the Agroindustrial Development Strategy of the Kyrgyz Republic till 2020 (draft); the CFS 2009-2019; and the National Public Nutrition Improvement Strategy 2013-2017 (draft).

13. The NSDS (2013-2017) (Attachment 1) provides a coherent, comprehensive plan for nation building and the achievement of stated development goals. Agriculture is a significant element of NSDS. The sector is a key priority for economic development and the adoption of a comprehensive approach to addressing current problems is expected to help reduce social tensions and provide solutions to rural development in general. A key medium-term economic policy is 'ensuring food safety through increases in domestic production and productivity in agriculture and through creating government reserves'.

14. The NSDS goals for agriculture are: increase output, improve product quality and ensure food security; improve production efficiency and competitiveness; improve returns to agriculture; and provide a solution for social issues of the rural population.

[15] UNICEF and World Bank, *Situational Analysis: Improving economic outcomes by expanding nutrition programming in the Kyrgyz Republic*, June 2011.

[16] The DALYs is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

15. The NSDS identifies eight related objectives: Improve the system of management of the agricultural sector, improve efficiency and effectiveness of regulation; improve the quality and composition of the servicing and technical services for agriculture, create prerequisites for the technical and technological modernization of agricultural production; create conditions for the development of cooperation and improve product quality; establish a modern market infrastructure for the agricultural complex; increase production and exports of the agricultural complex and develop export-oriented clusters; introduce new lands; develop the processing industry; and increase effectiveness and efficiency of land use.

16. The NSDS elaborates more detailed policies and measures to be undertaken for each of these objectives (See Attachment 1).

17. The draft *Agroindustrial Development Strategy of the Kyrgyz Republic till 2020* (Attachment 2) describes the issues, policies and activities, and the expected results of a comprehensive agriculture development program. The **mission** is the "… *sufficient provision of the population in the country with quality and full-fledged nutrition produced locally*". **The long-term strategic objective** is the "… *transformation of Kyrgyzstan to one of the world's leaders of organic agriculture, ensuring sustainable economic development, public health, and conservation of environment.*" The key objectives are: growth of production, improving product quality and efficiency of agriculture, ensuring food security of the country and creation of a better management system for the agricultural sector, improving efficiency and effectiveness of state regulation.

18. The basis of agriculture in the future will be farms, cooperatives and large agricultural enterprises in clusters specializing in particular types of product, as well as by private farms, working closely with processing industry and modern logistics support systems outside the cluster. A two staged development process is proposed. Stage 1 (2013-2014) - preparatory and stabilization stage – will estalish the necessary regulations, material and technical basis, innovative models for modernization and sustainable development of agricultural production. It will focus on addressing the most pressing practical problems hindering growth of production and creating a platform for development and formation of competitive advantages. The establishment of sub-clusters oriented at production, processing and service provision, sale of products, scientific and technical support will be a primary focus. Stage 2 (2015-2020) - active stage of modernization and improvement of agricultural production methods, retention of sustainable dynamic growth trends and progress achieved- will provide a major change in the nature of agricultural production, and should increase the volume, growth rate efficiency, diversification, level of food security and export capacity. The development of sub-clusters will continue with some integrated to more specialized modern clusters.

19. Ensuring food security is a key focus area for the ADS. Food security issues are closely linked to the overall process of economic development. The four key priority areas to address food security are: agriculture, marketing, social protection and health, and macroeconomics and public finance.

20. The **objective** of food security *'is to create conditions to ensure access of the population to the required amount of foodstuff in accordance with minimal consumption rates that are based on availability, accessibility and safety'*. The **priority areas** include: meeting the domestic needs of the state in agricultural and processed products; timely organization of reserves and disposal of material assets; improved public financial management policies to ensure food security; ensuring state control of the safety of produced and imported agricultural products; ensuring the availability of safe and healthy food; antitrust regulation and improvement of state pricing policy; policy measures to provide foodstuff to vulnerable groups of the population in accordance with the norms; and improving quality and availability of information on food security.

21. The CFS (Attachment 3) states that '*Ensuring food security entails development and implementation of economic, organizational, and other measures, directed towards prevention of food crises and satisfaction of public needs, including socially vulnerable groups, in basic food products in accordance with food consumption norms*'. The aim is '*to provide all Kyrgyz citizens with permanent access to sufficient amount of foodstuffs in all regions and households*'. This is to be achieved through:

- encouraging domestic production to satisfy domestic market demand at prices competitive with imported products by stimulating the growth of the agriculture sector as the driving force of the country's developent;
- stimulating internal and external trade of agricultural products and processed goods in accordance with market and competitive rules, including price regulation, selected import quotas, improved information and marketing systems and export stimulation;
- guaranteeing adequate access to basic foodstuffs to all citizens of all socio-economic groups in all regions through employment creation; and
- creating and supporting favourable macro-economic and financial conditions for the provision of food security to all citizens by controlling and managing agricultural production, monitoring the food security situation, mitigating the consequences of the food crises, and providing assistance and ensuring food security in cases of a serious disaster.

22. According to the CFS, food security requires the integration of the economic and social conditions linked with the development of agriculture and the industrial complex, and general sustainable socio-economic development. The key issues to be addressed include: stimulating the marketing and processing of agriculture products; improving training and extension services in food production and processing, and agriculture generally; managing the natural resources to guarantee stable food supply; developing a competitive domestic food processing industry; strengthening disease control; developing a viable seed industry; establishing a social protection system to provide vulnerable groups with minimum guaranteed income to access food; developing a balanced nutrition and food culture amongst the population; creating a macroeconomic situation to strengthen and support food security; creating a public-private insurance system; strengthening the role of the Ministry of Agriculture, Water and Processing Industry (now Ministry of Agriculture and Land Improvement [MOALI]), particularly at local level; regulating food supply; financing research for seed, production technologies, processing and storage; centralizing monitoring and reporting of food security; and establishing a state reserve and buffer stock of food supplies.

23. A three-phased approach is adopted. Phase 1 (2009-2010) focused on addressing the emergency measures to overcome the reduced supply. Phase 2 (2011-2015) recognizes the importance of a more holistic approach to food security in emphasizing the development of the agriculture sector, its integration with other sectors, and increasing rural social development. This is to be achieved in an environmentally sustainable manner while securing the health of the population. Phase 3 (2015 onwards) sees the introduction and effective implementation of more modern technologies to reach an optimal level of food security and to focus food policy on safe food and good quality nutrition.

24. The State Program on Nutrition Quality Improvement (SPNQI) 2013-2017 (Attachment 4) recognizes that the challenge of inadequate nutrition levels in the population requires a complex solution that requires a comprehensive multisector approach incorporating

principles of human rights and gender equity within the framework of international agreements and the commitments of the Government. Implementation of the State Program will require extensive coordination of the efforts and activities of government, local self-government, civil society and international organizations.

25. The SPNQI goal is to achieve a level of health protection and health promotion for society and a reduction of morbidity and mortality rates associated with inadequate nutrition. The key priorities are:

- Improvement of the state management of processes related to ensuring adequate food products to population.
- Improvement of nutrition status of children and most vulnerable population groups.
- Organization of sustainable production of adequate food products.
- Formation of consumer demand to adequate nutrition by the country's population.

26. Each priority area has extensive actions and measures to be implemented. The achievement of the goal will not only improve the health status of the population but give a multiple benefits to the economy generally. The health of the population is a preliminary and compulsory condition for social and economical development.

27. **Investment Priorities**. The Government's investment priorities are articulated in the annual detailed plans elaborated in the three-year annual MTBFs. The MTBF's are designed to link the medium-term policy and strategy with the annual budget. The MTBFs, led by the Ministry of Finance, are developed through intensive consultation with development partners and are endorsed by Parliament.

28. The structure of the MTBFs has varied to accommodate changes in policy, strategy, priorities and organisational reform. The key elements of the MTBF 2013-2015 (Attachment 5) are in section 3: Plan Components to Achieve the Objectives.

29. **Monitorable Indicators**. Table 2 shows the key indicators to monitor the implementation of the NSDS, ADS, CFS and SPNQI.

Table 2 Selected Monitoring Indicators and Results Targets

Indicator	Base (year)	Target (year)
National Sustainable Development Strategy		
Poverty (%)	36.8 (2011)	30 (2017)
Real GDP growth (%)	6.0 (2011)	6.3 (2017)
GDP per capita ($US)	1,183.1 (2011)	2,135.7 (2017)
CPI (%)	108.0 (2011)	107.6 (2017)
Ave monthly pension (KGS	3,853.0 (2011)	6,877.2 (2017)
Monthly average salary (KGS)	9,304 (2011)	20,611.2 (2017)
Labor productivity growth (GDP growth/ growth of the employed) (%)	90.3 (2012)	104.6 (2017)
Subsistence monthly minimum (SMM) per capita for working people (KGS)	4,920.7 (2011)	7,205.9 (2017)
Ave monthly wage/SMM (%)	189.1 (2011)	286.0 (2017)
Social indicators		
Unemployment rate (%)	8.5 (2011)	7.7 (2017)
Live expectancy rate (years)	70.5 (2011)	73.2 (2017)
Male	65.7 (2011)	67.8 (2017)
Female	73.7 (2011)	76.8 (2017)

Indicator	Base (year)	Target (year)
Agroindustrial Development Strategy		
Labor productivity (KGS/person)	117.9 (2010)	271.2 (2020)
Capital\labor ratio (KGS/person)	308 (2010)	516.0 (2020)
Ratio of annual average income of agricultural worker to average annual income in Kyrgyzstan as a whole (%)	54% (2010)	75% (2020)
The number of farms having agricultural land (land shares)	351,605 (2011)	150,000 (2020)
Average area of agricultural land (land share) per one farm (ha)	2.8 (2011)	10 (2020)
Irrigated area with improved water supply (ha)	150 (2010)	800 (2020)
Growth of irrigated area due to rehabilitation of degraded lands (ha)		100,000 (2020)
Growth of irrigated area due to new land development (ha)		20,000 (2020)
The number of commodity and service cooperatives in agriculture (No)	374 (2010)	950 (2020)
State Program on Nutrition Quality Improvement	**2009**	**2017**
Anemia – per 100 000 population	2672	2138
Women with folate deficiency (%)	49.9	39.9
Pregnant women with anemia (%)	54.4	43.5
Anemia caused complications to births and postnatal period per *1000 births*	406,3	324,8
Ratio of 6 month- to 5 year-old children with anemia (in % to total number of children of this age)	25.1	20
of which children aged: 6 months to 1 year	39.3	27*
1 to 2 years	32.4	22,6*
2 to 5 years	15,9	12
6 months to 5 years (girls) 6 months to 5 years (boys)	22.9 20.8	18 16
Food Security Concept[1]		

Notes: Where key documents have the same indicator the most recent targets are adopted.
(1) The FSC shows actual levels for 2005-2009, preliminary for 2010 and projections for 2011-2016 for 9 separate food products. These will also be indicators for monitoring.

1.2 Key Elements of the Policy Environment

30. Since independence the government has pursued a market-oriented policy environment. Major policy reforms that continue to undergo change include: the liberalization of prices, subsidies and trade;[17] privatization of farm land and property and a developing land market; a reduced government role and increased private sector delivery of services including the Rural Advisory Service (RAS) for extension services, the Kyrgyz Agricultural Market Information System, and private veterinarians to deliver public vaccination programs; increasing community based management including: transfer of ownership and management of on-farm and some off-farm irrigation systems, including maintenance and cost recovery, by water user associations (WUAs) and federations (71% of the system); the establishment of village level organizations for the management of social infrastructure and public water, including some community level contributions; village health committees; and more recently community groups for pasture management. These organizations have improved the management of resources and services and allowed more effective inclusion of vulnerable groups; a legal framework for the seed industry and the development of a seed association, which will also support private sector seed marketing. Kyrgyzstan is a member of the international seed organizations (UPOV, ISTA and OECD); increased fiscal and administrative decentralization; legislation and regulations to improve the business

[17] Kyrgyzstan was the first CAR country to join the World Trade Organization.

environment; substantially improved legal framework for rural finance including laws on credit unions and microfinance and the establishment of a specialized rural financial institution (Kyrgyz Agricultural Finance Corporation) in 1997, which was transformed into Aiyl Bank in 2006; establishment of the Agribusiness Marketing and Competitiveness Center to address major constraints in the supply chain and improve products and marketing for export; and ratification of international initiatives on gender equality.

31. Since independence substantial progress has been made in establishing an appropriate legal, regulatory, and institutional environment for a market-oriented economy. However, significant internal and external events have sometimes prompted change. For example, following the food crisis in 2007-2008, the then government introduced the 2008 Food Security Law that established the Food Security Council in 2009, but also proposed greater government intervention in food markets including price and trade intervention measures and the establishment of the Kyrgyz Agriculture and Food Corporation (AFC) which, amongst other responsibilities, has the authority to buy and sell in the market. More recently, the Government has stated its intent to pursue the amalgamation of the fragmented smallholder plots into larger farms under a cooperative framework. The Government is still considering the approach to implementation of some of these proposals with the debate on an appropriate food security policy and amalgamation of farms continuing. It remains unclear to what extent these interventionist measures will be implemented and how effective they would be.

32. Two issues that continue to hinder progress include the Land Reallocation Fund and water pricing. The LRF is managed by local governments and was established to provide land for expansion of settlements, leasing to vulnerable groups, and allocated to eligible persons who formerly missed their claim to a land plot during the land privatization program. However, LRF land is leased to cooperatives, which partly voids the original poverty reduction objective. The price of water is set by the Parliament and remains at 3 tien/m^3. This is substantially below the amount estimated for proper maintenance and repair of the system.

33. Following the political and social instability of recent years, there is now an urgency to move the country to a higher level of growth and development, while also implementing fiscal discipline to address the budget deficit, improve governance, ensure security and restore the confidence of the people. As stated above the Government has made considerable progress in all these areas.

1.3 Plan Components to Achieve the Objectives

34. The key water resources, agriculture,[18] health, and social protection programs aimed to improve overall food security are set out in the MTBF 2013-2015. The MTBF is revised annually and as such provides the opportunity to revise the plan according to changing circumstances. The key elements of the MTBF are described below.

35. There are four programs in the ***agriculture and land improvement sector***.[19] Program 1: Planning, management and administration will address effective management, coordination

[18] Previously the MTBF separated agriculture and water resources program. In the MTBF 2013-2015 they are combined in four programs under the Agriculture and Melioration sector.

[19] The MTBF programs are in accordance with the following programs: Mid-term development program of the KR (2012-2014) that includes 5 agricultural projects; State program on development of selection and seed farming of agricultural crops; Crop production development program (2011-2015); National livestock breeding development strategy (2011-2015, approved by the KR Government); Livestock development strategy (2011-2015); Concept on fish industry development (until 2020) and Strategy on aqua culture development (until 2020); State program on cooperative movement development (2011-2015); Action plan on fish industry development (2011-2015, approved by the KR Government); Strategy on sustainable management, use and improvement of pastures (2011-2015); National agrarian doctrine on ensuring food

and organization of the MOALI and development of government policy with the aim to achieve a stable high level of food security.

36. Program 2: crop production aims to increase soil fertility and crop productivity. Specific measures include: pest and disease control; ensuring phyto-sanitary security; development of agricultural mechanization (including implementing government policy on mechanization, energy supply, new agricultural technologies, innovations and leasing; logistical support for agriculture; creation of conditions and regulations for machinery and technological stations); biological protection of plants; inspection, approbation and crop variety testing for quality seed and planting materials; design and survey of land development; and provision of credits for seed farms for supper-elite and elite wheat and barley seeds.

37. Program 3: livestock production aims for stable growth of livestock production and provision of basic livestock products for the population. Measures include: anti-epizootic; diagnostic, risk assessment and plans for animal diseases; veterinary, sanitary and preventive measures for infectious diseases; improve livestock breeding; conservation and enhancement of pastures; conservation and enhancement of fisheries; and implementation of the World Bank funded 'Agricultural Investments and Services' Project to improve pasture management, strengthening of veterinary services in livestock farming and improvement of food security situation

38. Program 4: support and development of State Irrigation Fund and land improvement with the aim of increasing cropping capacity, including on unfavorable lands. The measures include: maintenance and repair of public irrigation infrastructure; maintenance of public pumping stations; improvement in the quality of service through irrigation fund management; coordination of irrigation fund development; and implementation of the World Bank funded 'Improvement of Water Resources Management Project' and 'On-farm Irrigation Project – 2'; and construction of new water supply facilities and cultivation of new arable lands

39. A key part of the health sector plan has been the "Manas Taalimi" sector-wide approach (SWaP) program which included support for health outcomes related to the millennium development goals (MDGs), and improving the quality of health care focusing on maternal child health, and other key areas. A new "Den-Sooluk" Health Sector Reform Program will also be implemented as a SWAp. The MTBF 2013-2015 identifies several programs to: further develop and strengthen primary health care; improve awareness of safe motherhood awareness amongst pregnant women; improve the nutrition status of women and children (procurement of premixes, vitamin A supplementation program for children aged 6-59 months, additional nutrition supplements for children aged 6-24 months); the on-going "Community Action for Health" Program - a key mechanism on the long-term mobilization of communities and health promotion of the rural population, expand opportunities of local communities to solve their primary health care problems and contributes to the establishment of village health committees (VHCs) throughout the country; and enrichment of food products of the population with vitamin and mineral complexes. In addition to the SWaPs, development partners will fund improvements in health care standards, strengthening the targeted distribution of social benefits, and improvements in the health and nutrition of vulnerable groups. Some of the funds will focus on strengthening prenatal and maternity

security (2011-2015); and State program on construction of water resources system entities and new arable lands conversion in the KR in 2011-2015 (approved by the KR Government Regulation #229 dated May 16, 2011).

medical facilities and improving the quality of food and the role of village health committees to carry out campaigns to improve food quality for women and children.

40. Of eight programs for social protection two have elements directly or indirectly supporting food security. The highest risk group 'children' are seen as receiving inadequate support due to inadequate social services system, severe shortage of specialists, absence of interest by local government authorities and local self-government in developing the services. The social protection programs are expected to: improve the welfare level of socially vulnerable population groups, strengthen the targeting of the monthly allocation for disadvantaged families (MADF), improve the effectiveness of the monthly social benefits (MSB), and improve the quality and effectiveness of social services delivered to vulnerable population groups. Social support through the provision of state benefits is seen as an effective tool in reducing extreme poverty as the funds are focused on increasing the welfare of the poorest population groups.

41. The number of MADF beneficiaries as of January 1, 2012 was 376.8 thousand children, or 19% of all children. The average MADF rate is KGS 305 or 29% of the extreme poverty line. In 2011 the MSB rate was increased for disabled children to KGS 3,000, corresponding to the minimum standard of living per child in 2011. The MSB rate is expected to increase annually to 2014, depending on budget resources available. Table 3 shows the expected increase in key social benefits affecting children and women.

Table 3: Key social benefits for children and women 2010-2015

Benefit	2010	2012	2015
Extreme poverty line (KGS)	986	1155	1690
Guaranteed minimal income (GMI) (KGS)	310	580	845
Subsistence Minimum (KGS)	3,502.7	4666.6	5938.5
MADF			
Beneficiaries		390,000	571,200
Individual rate (KGS)		526	
Total Payment (KGS ml)		1,564.7	4,178.5
MSB			
Beneficiaries		72,700	81,000
Individual rate (KGS)		2011.5	
Total Payment (KGS ml)		1,777.7	2,728.4
Maternity Benefits			
Beneficiaries		24,300 (2013)	32,136
Individual rate (KGS)		1,500 (2013)	2,500
Total Payment (KGS ml)		145,800 (2013	289,200

Source: MTBF 2013-2015

42. The key agencies responsible for the delivery of the planned components include the MOALI for agriculture, Ministry of Health (MOH) for health and Ministry of Social Development (MSD) for social services. The MOF will be responsible for allocating budget resources. In addition, development partners and civil society will have a monitoring function to ensure programs are directed to achieve their planned objectives.

43. **Capacity to Implement**. The NSDS, draft ADS, FSC, SPNQI and MTBF present comprehensive programs for implementation. It is widely recognized that government organizations at all levels are constrained in terms of resources and capacity. The Government in the NSDS states that the existing governance structure is inadequate and government institutions are cumbersome and inflexible with superfluous functions. This hampers implementation of development plans. The NSDS proposes wide public service reforms at both the institutional and staff levels to enhance the quality, professionalism and implementation capacity of the government institutions.

44. **Environmental Sustainability**. The mountainous nature of the Kyrgyz Republic directly results in increased environmental vulnerability. The growing pressure on natural resource systems results from increasing population growth, increasing poverty, increasing resource consumption, and lack of infrastructural development exacerbated by irrational management of natural resources and environmental pollution. The NSDS states that the new state policy is aimed at a gradual shift to a system of strategic planning that provides equal attention to its economic, social and environmental components; environmental assessment of all projects; fee-based use and penalities for damage to the environment; improved environmental information and access; and increased participation of all interest groups in decision making on environmental protection and rational use of nature at both national and local levels.

45. **Climate Change**. The Kyrgyz Republic has been adversely affected by climate change with increasing floods, severe winters, and natural disasters. Such events continue to increase the incidence of poverty and food insecurity, temporarily and in some cases permanently. Farming systems and natural resources management have to be adapted to climate change. This has to be largely addressed through rehabilitation of irrigation and drainage systems, better farming practices and inputs, and better land, pastures and water management to increase productivity, climate change adaptation, and sustainable use of natural resources.

46. **Gender Equality**. Kyrgyzstan has a strong record of the inclusion of women in decision-making both at national and community level. Measures to ensure the inclusion of women in decision-making and to ensure that policies and investments address women's needs were originally set out in the National Action Plan 2007-2010 on gender equality achievement. Kyrgyzstan has also signed and ratified various United Nations documents, joined various international initiatives, and enacted the Law 'On state guarantees of equal rights and equal opportunities for men and women' to achieve better gender equality. The National Strategy to Achieve Gender Equality was adopted in 2012. Gender equality will be improved by bringing domestic legislation into agreement with international legal standards, improving institutional mechanisms for implementation of gender policy, implementing State programs to achieve gender equality, and increasing education and promotion of a gender equality culture. The goal is to create an institutional framework to ensure equal rights and opportunities for citizens, regardless of gender, age, social status, health opportunities, gender identity and other grounds of discrimination. The priority areas are: the economic empowerment of women; a system fo functional education; elimination of gender description and improvement of access to justice for women; and promotion of gender parity in decision-making and extension of women's political involvement.

1.4 Planned Composition and Level of Spending to Implement the Components

47. Table 4 shows investment revenue and expenditure State budget and Table 5 identifies key Public Investment Program (PIP) projects.

Table 4: Estimated Public Investment Revenues and Expenditures for State Budget and Selected Ministries 2012-2015
(KGS million)

	2012 (Estimate)	2013 (Forecast)	2014 (Forecast)	2015 (Forecast)
State Budget :				
Total Resources	82,255.2	92,392.7	107,350.5	123,108.3
Total Expenditure:	106,963.9	114,898.0	129,686.2	140,045.7

	2012 (Estimate)	2013 (Forecast)	2014 (Forecast)	2015 (Forecast)
Current	75,476.6	78,354.5	86,095.9	92,820.3
Capital	22,356.2	27,244.2	34,125.7	37,340.9
External financed	18,192.4	19,217.9	16,057.9	18,108.8
Domestic financed	4,163.8	8,026.3	18,067.7	19,232.1
Total Gap	(24,708.7)	(22,505.3)	(22,335.6)	(16,937.3)
Public Investment Program (PIP)				
State:				
Revenue	8,000.8	5,440.6	4,519.4	3,098.1
Expenditure	18,192.4	14,781.3	11,934.8	9,571.3
Gap	(10,191.6)	(9,341.7)	(7,414.4)	(6,473.2)

Notes: a = includes both irrigation and drainage ongoing projects.
Source: Medium Term Budget Forecast 2013-2015 and Ministry of Finance

Table 5: Key Public Investment Program Projects by Selected Ministries (KGS'000)

Ministry/Project	2013		2014		2015	
	Internal[a]	External	Internal[a]	External	Internal[a]	External
MoALI	**136,832**	**523,365**	**60,563**	**641,250**	**103,438**	**513,000**
Agricultural Investments and Services (WB, EC)	1,000					
Agricultural Investments and Services (grant)		71,250				
Agricultural Investments and Services 2			28,500		67,813	
Agricultural Investments and Services 2 (grant)				95,000		47,500
Agricultural Investments and Services 2 (credit)				95,000		71,250
OIP Project 2 (WB)	92,592					
OIP Project 2 (grant)		128,241				
Add financing of OIP 2 (grant)		238,445				
Add financing of OIP 2 (credit)				237,500		156,750
WMIP (WB)	43,240					
WMIP (grant)		85,429				
Irrigation system develop (WB)			32,063		35,625	
Irrigation system develop (grant)				118,750		95,000
Irrigation system develop (credit)				95,000		142,500
MoH		**126,075**		**356,250**		**152,000**
Health and social protection-2 KfW grant		26,800		0.0		0.0
Maternity and child care IV-V grant		99,275		356,250		152,000
MoF		**716,533**		**221,868**		**42,479**
Promotion of agriculture productivity (WB) (grant)		135,133		114,518		42,479
Rural finance development (KfW) (grant)		308,750		47,500		
Rural finance development-2 (KfW) (grant)		272,650		59,850		

Notes: a = cofinancing by the government.

Source: Ministry of Finance

1.5 Financing Sources and Gaps

48. The Government's revenue and expenditure are forecast to increase to 2015 resulting in a forecast financing gap of KGS 16,937.3 million ($US357 million). Both revenue and expenditure in the PIP are declining, due mainly to declining external funding. The forecast total investment gap for 2013-2015 is KGS 23,229.3 million ($US489 million). Domestically financed capital investment is expected to rise. Externally funded investment in selected ministries is variable with MOALI maintaining relatively steady investment flow over 2013-2015 while MOH and MOF relevant investments show an overall decline (Table 5).

49. Major completed and on-going investments in the rehabilitation of irrigation and drainage investments have only completed about 30% of the systems. The remaining investments costs for the balance of about 750,000 ha will cost over $200 million.

1.6 Process by which the Strategy and Investment Plan were Developed

50. The NSDS was based on contributions by Kyrgyz government, programs of political parties, proposals of Jogorku Kenesh (the Parliament), state agencies, local government, experts, public associations and citizens, and subsequently approved after extensive consultations. The Kyrgyz Government has developed the Program and Action Plan for Transition to Sustainable Development of Kyrgyz Republic for 2013-2017 in order to implement the NSDS. These documents, after they are approved by the Government, should be submitted to the Parliament for approval.

51. The MTBF is developed annually by the MOF in consultation with Ministries and other Government agencies and development partners with final endorsement by the Parliament. MTBF 2013-2015 was approved in May 2012.

52. In accordance with the revised Constitution (Articles 74 and 88) all documents are required to be submitted to the Jogoshu Kenesh for approval and gives civil society a significantly increased role in strengthening the democratic process.

1.7 Implementation Arrangements and Capacity to Implement

53. Implementation of the various sectoral programs will be based on annual work plans and budget allocations expressed in the three year annual MTBF. The Food Security Council is responsible for overseeing the implementation, monitoring and assessment of the CFS. The monitoring and assessment is to be carried out by a team of specialists reporting directly to the Chair of the Food Security Council. The level of food security is to be based on monitoring indicators approved in March 2009 by the Government. These indicators and their targets for 2012-2014 are appended to the CFS at Attachment 3. The assessment of food security will continue on a quarterly basis at both national and regional levels. Measures and corrective action will be taken in the annual action plan following the comprehensive assessment at the end of each year. The Food and Agriculture Organization FAO), WFP and European Union (EU) are jointly supporting the Government to strengthen the national food security information system. The support commenced in November 2011 and will be for three years.

54. Responsibility for the formulation and monitoring of the MTBF rests with the MOF in association with the line ministries and agencies responsible for their respective budgets.

55. The Government has introduced the compulsory involvement of civil society and Public Advisory Councils in the formulation of strategies and legal and regulatory documents and monitoring and evaluation. This is to be incorporated into the regulations of government

institutions to enhance the transparency and effectiveness of government's decisions. Moreover, in future, government decisions will be provided regularly to the public with the use of institutional web sites. Civil society will continue to be actively involved in the assessments and monitoring of key policies and strategies.

56. Capacity has been addressed in section 1.3: Plan Components to Achieve the Objectives, paragraph 43.

57. The priorities of the government's program are summarized in Table 6.

Table 6: Elements of Program of Food Security

Elements	Main actors	Government support
Food production	Farmers WUAs Government Cooperatives	Capacity building Capacity building Water supply Capacity building
Food storage	Private sector Government	Storage Price regulation
Processing/Marketing	Private sector Government	Credit Capacity building
Consumption	Government Households	Regulation Public awareness

Part 2: Specific Proposal for GAFSP Financing

58. The NSDS, (draft) ADS, CFS, SPNQI and MTBF reflect the political will to move to an integrated and multisectoral approach to address food security.

59. In moving to the Proposal, it is recognized that not all the elements of the strategies and investment plans can be implemented simultaneously, given the normal over ambition expressed in these documents, the available budget resources, development partner resources, and overall capacity in the public and private sectors and civil society. However, this does not inhibit the government from implementing a multi-sector approach to address poverty, nutrition and food security. The design of the investment project is based on the following principles:

a. a multi-sector approach, comprising the agriculture, health and nutrition sectors focusing on interrelations which are a key part of the government's mandate;
b. incorporate the key issues and priorities identified during the comprehensive consultation process;
c. minimize the introduction of new interventions and focus on interventions that have been tested, have succeeded, are cost effective, sustainable, and implementable by government;
d. communities should drive the demand for specific activities of each intervention to be implemented in their locality, primarily through various existing organized groups; and
e. civil society and development partners should play a key role in implementation through existing project activities and monitoring implementation through their participation in key stakeholder groups.

60. The proposal aims to take an area development approach that is more holistic, integrated, and coordinated. The approach is holistic in taking a multi-sector approach to addressing key constraints, integrated in terms of unifying interventions in specific geographic areas, and coordinated in terms of partnerships with other projects and where necessary outsourcing to effective local service providers. This proposal will address short-term investment needs in rehabilitating and modernizing irrigation and drainage infrastructure but also longer-term needs through the provision of advisory services and up-scaling nutrition interventions. The design and implementation arrangements will be sufficiently flexible to meet changing circumstances in implementation. The organizational relationships and cooperation of agencies and development partners will be key to its success.

61. This proposal includes the original proposal submitted to GAFSP in 2012 which was partly financed, and clearly distinguishes the project activities to be funded in this amended proposal for additional financing from GAFSP. The key difference is in the removal of the Capacity Building in Water Management which is now being financed under the National Water Resources Management Project funded by SDC. In addition, there has been some minor modification to the original Upscaling Nutrition Intervention and Social Protection Project based on the processing of APNIP to date.

2.1 Specific Objectives and Targeted Results

62. **Specific Objectives**. The overall project development objective is to increase agricultural productivity and food security of rural households in selected areas nationwide. This is to be achieved through an improvement in irrigation service delivery through rehabilitation of drainage and irrigation infrastructure at on-farm level; increased agricultural advisory services and training; and up-scaling of key nutrition interventions. The project will also enhance appropriate capacities of various stakeholders to support the integrated and multi-sector approach inherent in the project.

63. **Targeted results/beneficiaries**. Table 7 shows the expected results and beneficiaries of the original proposal, APNIP and this amended proposal for additional financing. The results and beneficiaries of NWRMP are not shown as they include some of these beneficiaries and others as NWRMP extends beyond the original proposal for APNIP.

Table 7: Results and Beneficiaries of Projects

Result/Beneficiaries	2012 GAFSP Proposal for APNIP	APNIP Approved Funding	Amended Proposal for Additional GAFSP Financing
Area rehabilitated	86,342	27,000	42,000
Number of WUAs	48	17	24
Number of smallholder farms	100,000	31,000	48,000
Number of beneficiaries	450,000	140,000	216,000
Number female headed households	20,000	6,200	9,600

64. It is expected that as a result of this amended proposal for additional financing, 42,000 ha of on-farm I&D systems will be rehabilitated and managed in an efficient and effective manner by 24 WUAs. About 48,000 smallholder farms and farming families, comprising about 216,000 people, with more than half irrigating less than one ha of land, and including 20% female-headed households will benefit. About 50% of smallholder farmers and farming families, including women will benefit from advisory service and training, including owners of household plots who are mostly women. Families and particularly women and children will benefit specifically from nutrition interventions. Vulnerable groups are expected to benefit from advisory services, nutrition interventions and social protection. Additional beneficiaries will be their farming households and rural agricultural labourers for whom both demand for labour and wages are expected to increase as farm-level productivity increases, as well as the rural and urban poor who are net food buyers, as both relative food price decreases and price fluctuations are flattened.

65. **Links with sector strategy and investment plan**. The objective fits with the NSDS, (draft) ADS, CFS and SPNQI in taking a multi-sector approach to food security by including agricultural development and nutrition interventions.

66. **Key performance indicators**. Following the successful evaluation method applied under the World Bank financed Second On-Farm Irrigation Project (OIP-2) and adapted for the agricultural advisory service and nutrition interventions, the following indicators will be used to measure performance:

(1) Area with improved/rehabilitated irrigation and drainage services (ha);

(2) Water distribution to farmers within 80 percent of the rehabilitated irrigation systems closely matches the crops' irrigation water requirements;

(3) Collection rates by WUAs at least 90 percent of total assessed fees (based on updated annual O&M plans) from the third agricultural season after completion of rehabilitation works;

(4) Service fees set at rates (based on maintenance needs as identified through asset management plans) sufficient to sustain the rehabilitated irrigation systems;

(5) Evidence, for the WUA as a whole and tail-end farmers in particular, of increased agricultural productivity in at least 90 percent of OIP-2 schemes from the third agricultural season after completion of rehabilitation works;

(6) Number of client days of extension workers provided to farmers, community members, etc. (disaggregated by gender

(7) Increased crop and/or livestock diversification;

(8) Increased participation by water users in development of a national strategy for the irrigation sector;

(9) Increased average crop and livestock yields

(10) Number of people receiving improved nutrition services disaggregated by gender, age and vulnerable group;

(11) Increased nutritional status of targeted households; and

(12) Reduced incidence of nutrition related health conditions.

2.2 Activities to be Financed

67. **Overall project structure**. The project will have four components[20] (i) rehabilitation and modernization of physical irrigation and drainage (I&D) infrastructure, (ii) agricultural advisory services; (iii) up-scaling nutrition interventions; and (iv) project management. The project will be implemented nationwide in selected locations.

68. The activities to be financed are based on completed and ongoing projects that have clearly shown success, progressive development, are cost effective, and sustainable. The design of APNIP has been delayed, primarily due to the negotations and agreemtns with SDC to finance NWRMP. It is expected that with additional financing a much shorter period will be required for preparation and funds can be absorbed quickly.

2.2.1 Irrigated Agriculture

69. **Development and organisation of irrigated agriculture**. The Department of Water Resources and Land Improvement (DWRLI)[21] of the MOALI is the government agency responsible for management, operation and maintenance (MOM) of the river system and structures and the off-farm[22] component of the government-owned irrigation systems. Water

[20] The 2012 Proposal to GAFSP for APNIP included a component for Capacity building in water management. This component is now funded by the SDC under the NWRMP except for equipment for O&M of WuA's I&D which is now part of Component 1 in this amended proposal for additional financing.

[21] In 2010 the DWRLI was renamed the State Committee on Water Resources and Land Improvement (SCWRLI) and included responsibility not only for irrigation and drainage but also water supply. In February 2012, SCWRLI was again renamed DWRLI and again became solely responsible for the irrigation and drainage.

[22] The off-farm system comprises the headworks and main (conveyance) canal up to the delivery point to the on-farm systems. On-farm systems generally comprise tertiary and quaternary systems delivering water to farmers' fields. Larger on-farm systems may also include secondary canals.

users, through WUAs manage the non-government and the on-farm irrigation systems. The DWRLI organizational structure is largely based on the country's administrative structure, with seven Oblvodkhoz and 43 Raivodkhoz offices located in each of the *Oblasts* (regions) and *Raions* (districts). DWRLI has about 5,200 staff, including 3,000 operations staff, with some being temporary staff employed during the irrigation season.

70. **Development Partner Projects**. Since independence in 1990, there have been a number of projects targeted at the irrigation sector. Table 8 summarizes the systems and areas rehabilitated under these projects, and identifies separate off-farm and on-farm rehabilitation. A significant amount of work remains to be done, with approximately 89% of all off-farm systems covering 56% of the total command area and 85% of all independent/on-farm systems covering 69% of the total command area remaining to be rehabilitated.

71. The World Bank funded projects have been the primary focus for I&D rehabilitation and institutional development and have substantially improved many aspects of both.

72. The OIP-1 was approved in May 2002 and closed in May 2008. A second phase commenced with the approval of OIP-2 in 2007. OIP-2 was originally planned for completion in June 2013 but has been extended, with Additional Financing of US$15 million approved in 2011, to December 2015. The project development objective for OIP-2 is to improve irrigation service delivery on a sustainable basis in order to contribute to increased agricultural productivity among irrigation farmers. The project was designed to build on the achievements of OIP-1 by expanding the rehabilitation program to cover a further 51,000 ha managed by some 29 WUAs and strengthening WUAs and the MOM at the on-farm level, particularly in relation to the maintenance work carried out and service delivered. Additional Finance has enabled a further 18 WUA systems, totalling some 35,000 ha, to be rehabilitated together with continued support for WUA development and strengthening.

Table 8: Summary of areas rehabilitated to date and remaining to be rehabilitated

Project	Implementation Period	Off-Farm Systems		Independent/On-Farm Systems	
		Number of Systems	Command Area (ha)	Number of Systems	Command Area (ha)
Irrigation Rehabilitation Project (IRP) (WB)	1998-2006	20	251,300	-	-
Agricultural Area Development Project (AADP) (ADB)	1999-2009	-	-	20	51,215
First On-Farm Irrigation Project (OIP-1) (WB)	2003-2008	-	-	63	121,436
Water Management Irrigation Project (WMIP) (WB)	2006-2011	20	85,000	-	-
Second On-Farm Irrigation Project (OIP-2) (WB)	2007-2013	-	-	30	70,036
OIP-2 Additional Finance (WB)	2012-2015	-	-	18	34,800
WUA Support Project (USAID)	2004-2010			28 partially	42,000 partially
Total irrigated I&D systems/area rehabilitated		**40**	**336,300**	**159**	**319.487**
Total number of I&D systems/ irrigated area in the Kyrgyz Republic		370	765,000	734[a]	1,020,900

Estimated I&D systems/area remaining to be rehabilitated	**330**	**428,700**	**612**	**701.413**
Percentage of total remaining to be rehabilitated	**89%**	**56%**	**85%**	**69%**

a = This figure is approximate, comprising 260 community managed I&D systems serving 304,000 ha, and a further 477 WUA on-farm systems serving 732,570 ha.

73. **WUAs, Supports Units, Councils and Federations**. In 1997 a Resolution was passed by the Prime Minister allowing the establishment of WUAs. This Resolution allowed for the formation of WUAs, but also the legal transfer of the physical on-farm irrigation and drainage works to WUAs. In March 2002, the Resolution was upgraded to a law. Since 2002 the Government has actively promoted the establishment of WUAs, with the support of OIP-1 and OIP-2. By April 2013, 481 WUAs had been legally registered serving an area of some 737,353, or 73% of the total irrigated area with over 235,866 members. (Table 9). The most significant impact of the formation of WUAs is that WUA management is now accepted and recognized by all farmers as the legitimate authority for water management and system maintenance at the on-farm level.

Table 9: Number of registered WUAs in the Kyrgyz Republic as of April 2013

№	Oblast Name	Total Irrigated Area (ha)	Number of registered WUAs	Area Covered by WUA (ha)
1	Batken	56,924	32	47,212
2	Jalalabad	125,620	68	97,252
3	Issyk-Kul	155,899	63	110,684
4	Naryn	119,836	48	68,160
5	Osh	129,606	94	100,529
6	Talas	112,976	70	98,354
7	Chui	312,110	106	215,162
	Total	**1,012,971**	**481**	**737,353**

Source: Central WUA Support and Regulatory Unit, DWRLI.

74. Under OIP-1 a comprehensive network of WUA Support Units (WUASUs) was established at the central, *oblast* and *raion* level, and under OIP-2 these WUASUs have been fully integrated into the DWRLI. A key on-going role of these WUASUs is to provide support to enable WUAs to build sustainable MOM procedures. A key part of this capacity building is improving water management and system maintenance.

75. Under OIP-2 the WUASUs have continued to assist in the formation of WUAs, though the majority of the WUA formation had been completed under OIP-1. With WUAs now functioning, the task of the WUASUs is to strengthen the MOM functions of the WUAs, and improve water users knowledge and skills in water management and crop production.

76. To address the issue of cost recovery, asset management plans will only be prepared to help in the identification of maintenance needs (the largest budget item for WUAs) which will then be incorporated with the operation and maintenance (O&M) costs to establish the required service fee level. WUA management will then submit the proposed service fee to the General or Representative Assembly for approval. As a transparent and accountable process, and evidence of the cost of not maintaining the irrigation and drainage (I&D) system, this approach will enable WUA management to justify raising the service fee to a level to sustain the system over time. This is a long-term process gradually increasing cost recovery.

77. The OIP-2 and WMIP also provide demonstrations on field productivity. There are several other initiatives to support on-farm and in-field water management in Kyrgyzstan, including FAO and programmes supported by the Swiss and German governments. OIP-2 has linked with all these initiatives and is promoting a program to improve water management by WUAs and water users through the WUASUs.

78. OIP-2 is on schedule to meet its development objective and will complete all rehabilitation works by project closing, with 28 schemes completed and a further 2 under construction, almost completed. The total command area rehabilitated has increased from a planned 51,000 ha to 70,036 ha. Under the Additional Finance surveys have been carried out for 28 schemes and design and construction has started on 6 schemes..

79. Further institutional development during OIP-1 and OIP-2 included the formation of Water Councils, Federations of WUAs, and the National Union of WUAs. In 2004 WUAs in some canal command areas grouped together to form a Water Council, a grouping of key stakeholders which included WUAs, the Ayil Okmotu (village government) and the Raivodkhoz. As of 1 April 2013, 40 Water Councils had been formed serving an area of some 258,600 ha. In other areas WUAs chose to form Federations of WUAs, a grouping of WUAs managing off-farm irrigation and drainage infrastructure. As of 1 April 2013, 25 Federations of WUAs serving a command area of 184,020 ha had been formed and legally established and are in the process of taking over the management responsibilities of some off-farm infrastructure. These Federations comprise between 2-8 members and cover command areas of between 3,501 ha to 16,501 ha.

80. A National Union of WUAs was formed in October 2005 and legally registered in March 2006. Currently 225 WUAs are members of the National Union, each paying a KGS 2/ha membership fee. The National Union established a secretariat and obtained funds from agencies such as the World Bank, USAID, JICA and the Swiss government to enable it to publish a quarterly newsletter "WUA Messenger", equip an office, purchase some technical equipment and publish manuals and brochures on a range of topics including budget preparation, project cycle management and water management. In 2011, a number of regional meetings were organised with WUAs, and in March 2012 the National Union organised a 2-day conference, the Second Republican Water Users Association Conference. The conference was attended by politicians, WUA managers and members, DWRLI staff, including WUASU personnel and the OIP-2 project staff. A total of 210 participants attended the conference.

81. The establishment of a National Union of WUAs represents an important stage in the development of WUAs. The manner in which it was formed is encouraging in that it emerged from amongst the WUAs and was not part of an "imposed" component of a project. It appears to be a natural progression of increasing confidence by the irrigation farming community in their own capabilities for management and control of their water-related environment, and is set to be a key influence on the development agenda for water users in the country.

82. **Selection of WUAs for I&D rehabilitation**. Both OIPs have established and refined a ranking system for selection of WUAs for I&D rehabilitation. Seven milestones were used, with WUAs achieving milestone 4 being eligible to enter into the planning and design process for rehabilitation. Among the 454 registered WUAs, 305 had achieved milestone 4 by the end of OIP-1, with the ISFs paid in accordance with a properly prepared operation and maintenance (O&M) plan. A total of 78 WUAs entered the rehabilitation planning and design process, of which rehabilitation was completed for 63 WUAs serving a command area of 121,436 ha. Availability of funds, rather than the availability of eligible WUAs funds, was the limiting factor. Under OIP-2 the criteria for selecting WUAs for rehabilitation was reviewed and updated, with the new criteria having higher expectations than under OIP-1.

The updated selection criteria include an assessment of: (i) the condition of off-farm infrastructure; (ii) the ISF collection rate; (iii) the WUA annual budget, in comparison with the average for the *oblast*; (iv) the expenditure on maintenance of the I&D system; and (v) the size of the irrigation command area.

83. **Service fee recovery.** Since 1990, due to the shortage of adequate finance, there have been significant difficulties at both the off-farm and on-farm levels with regard to lack of maintenance and the consequent deterioration of the I&D systems. These difficulties continue today, though there has been some alleviation at the on-farm level with the formation of WUAs and the gradual increase in service fees and increased funding of maintenance work.

84. With increasing pressure on the government's budget, recovery of service fees from water users is an essential component of the funding required for sustainable MOM of the I&D systems. The WUAs have an impressive record with recovery of the ISF by the DWRLI increasing from 71% of the assessed amount in 2001 to close to or over 106% in 2012,[23] Debts for previous periods of under-payment have been repaid. In 2002 the debt to the DWRLI was KGS 64 million and by December 2007 had been reduced to KGS 13,32 million.[24] At the same time the form of payment has been changing. In 2002 only 19 % of the irrigation service fee (ISF) was paid in cash, with the remainder being paid in kind (crops or labour). By 2012 the amount being paid in cash had increased to 94%.

85. The government's ISF rate has remained mostly static, while the average ISF set by the WUAs has been increasing as WUAs seek to increase the funds available to them for MOM. In 2001 the average fee set was US$0.06/m^3 (with a range over the seven *oblasts* from 0.96[25] to 3.72 tyin/m^3). In 2010, the average fee set was 6.65 tyin/m^3 (ranging from 2.8 to 9.28 tyin/m^3). As the WUA's O&M costs are relatively static, the major beneficiary from these increased fees is system maintenance.

86. The ISF makes an important contribution to the MOM costs of the DWRLI, contributing between 8-13% to the DWRLI budget. The total sum contributed has increased from around KGS 400,000 in 2001 to around KGS 1 million over the period 2004-2012 (Table 10). However, per unit area the ISF amount paid is low, in the region of US$1.50/ha. Since 2001 the DWRLI budget has increased markedly year-on-year (except 2005). Under WMIP, the DWRLI is reforming and modernizing its management systems. One of the key areas of reform is to change its accounting and performance assessment systems from *raions* to individual irrigation systems. This will significantly increase transparency and accountability by enabling water users (through their WUAs) to see how much is being collected and spent on their individual systems, and hold the DWRLI to account for this income and expenditure. Through this individual system performance assessment process the water users will be able to assess the level of service they are receiving, and will have a basis for discussing the service fee and service provided. From the DWRLI's perspective it should serve to help convince water users of the need to increase the ISF as the off-farm system maintenance needs are identified and the production cost impact of inadequate maintenance are highlighted.

[23] Repayments over 100 percent are made to cover repayments for under-payment in previous years.
[24] 2012 Annual Report and Quarter IV, 2012 Progress Report, WSU
[25] The lower fee levels are for Naryn where agriculture is problematic due to climatic and topographic conditions

Table 10: Contribution of the ISF to DWRLI costs, 2001-2012

Year	Indicators				
	DWRLI annual expenditure (US$'000)	Increase in annual expenditure (%)	Income from water users, ISF (US$'000)	Income from ISF as percentage of total DWRLI income[1] (%)	Average income per unit area (US$/ha)
2001	3,979.08	10%	408.26	9%	0.53
2002	5,585.66	40%	543.17	9%	0.71
2003	6,070.82	9%	825.45	12%	1.08
2004	7,477.72	23%	1,071.08	13%	1.4
2005	6,193.50	-17%	932.05	13%	1.22
2006	7,282.08	18%	1,135.51	13%	1.48
2007	9,447.11	30%	1,169.68	11%	1.53
2008	10,664.86	13%	1,096.83	9%	1.43
2009	12,010.53	13%	999.23	8%	1.31
2010	13,391.19	11%	1,007.65	8%	1.32
2011	14,177.029	6%	896.37	6%	1.17
2012	14,075.96	-1%	1,036.00	7%	1.35

Notes: Income from ISF is not included in DWRLI annual expenditure figure. ISF percentage is calculated as percentage of DWRLI expenditure and ISF income

Source: DWRLI records and OIP Annual Reports

87. Data from recent studies under OIP-2 of farm budgets and farm incomes for different sized landholdings in different *oblasts* show that increasing the ISF to sustainable MOM levels would raise its share of the net farm income from between 0.3-5% to between 3-20% without rehabilitation and 0.2-4% to between 2-13% with rehabilitation. These figures show that there is room for increasing the ISF from current low levels, given that irrigation is central to crop production and systems need to be maintained if they are to deliver irrigation water to farmers' fields.

88. From the data provided by these studies it is important to note the regional differences, with Issyk-Kul and Naryn being areas with particular difficulties in relation to net incomes and ability to pay the ISF. These factors are heavily influenced by the climatic conditions in these regions.

2.2.2 Agricultural Advisory Services

89. Agricultural advisory services are currently provided by RAS, the Center for Training Extension and Innovation, and smaller private entities. RAS is the largest provider and its establishment and development was substantially supported by the World Bank, International Fund for Agricultural Development (IFAD) and the Swiss Agency for Development Cooperation (SDC). RAS is country wide following its decentralization in 2001 and the registration of *Oblast* RAS units as autonomous public foundations in 2005/2006. With its decentralization the Center for Training Extension and Innovation was established to provide

technical support and training to the *Oblast* level RAS entities. In addition, in 2005-2006 an Association of Regional Rural Advisory Services was established at the national level.

90. A key project demonstrating the benefits of an integrated approach and the coordination and cooperation of various donors and agencies, including agricultural advisory services was the Agriculture Area Development Project (AADP) funded by the Asian Development Bank (ADB).[26] AADP was approved in December 1999 and closed in June 2009. The project had 4 components that included legal aspects of land privatization arrangements, advisory services and training, credit, rehabilitation of drainage and irrigation infrastructure, development of agribusiness and domestic and export market links. The key results include:

- rehabilitation of about 51,215 ha of irrigation and drainage infrastructure, with the World Bank OIP-1 providing the support for WUA development and water management. A clear demonstration of development partner cooperation;
- training of 14,700 farmers, about 45% of farmers in the WUAs whose I&D systems were rehabilitated, through competitive contracting and performance based payment of two extension agencies resulting in:
    - a substantial increase in yields with yields of trained farmers exceeding the average yields of all farmers across seven crops by an average 62% ranging from 33% for potatoes and 176% for onions;
    - significant change in cropping patterns and concentration on crops reflecting farmers freedom in crop selection, a shift towards animal feed crops, and the influence of prices and market trends;
- an increase in farm incomes per hectare from KGS 725 to KGS 8,170 (1999 prices); and
- an overall economic rate of return of 18.3% compared to 13% at approval.

91. Currently, most projects delivering advisory services are doing so through contracting of such services with varying independent demand driven roles of farmers. For example, the World Bank funded Agriculture Investments and Services Project (ASIP) is providing funding on a declining basis for the contracting of extension services directly by community-level Farmers *Koshuuns* (Unions). The *Koshuuns* will define their needs, contract services, monitor and pay for the services. In addition to farm management practices, agronomic and technical advice, integrated crop and livestock management, AISP is supporting integrated pest management and soil fertility management largely though demonstration and farmer field schools. Pasture management extension services will also be provided with the Community Development and Investment Agency (ARIS) responsible for channeling extension grants to the eligible communities and/or community institutions. Under WMIP has supported the establishment of four demonstrations by RAS to demonstrate improved cultivation and irrigation practices to WUASU and farmers. About four demonstration plots per *Oblast* are planned which will also provide opportunities for other extension services in crop and livestock husbandry. Other development partners including FAO, SDC and GIZ are also supporting advisory services.

2.2.3 Health, Nutrition and Social Protection

92. To date, undernutrition has been addressed largely through health programs. Several programs have been undertaken or are ongoing which have:

[26] ADB June 2011. *KGZ: Agriculture Area Development Project: Project Completion Report*. Manila.

1. improved breastfeeding and complementary feeding behavior as well as improved legislation to implement the World Health Organization's (WHO) international code for breast milk substitutes;
2. established a bi-annual distribution of high-dose vitamin capsules for children 6-59 months, reaching 95% of children;
3. piloted the distribution of micronutrient powders (MNPs) to enhance complementary feeding in Talas, which proved successful and has been expanded to all o*blasts* with support from Swiss Red Cross (Naryn), United Nations Children Fund (UNICEF) (Osh and Jalal Abad), and Soros Foundation (Batken, Chui and Issy Kul);
4. established VHCs to increase community outreach and work with the national health system to improve health in their own villages;
5. improved the curriculum and training of medical workers on nutrition requirements for children, adolescents, and adults; and
6. increased food fortification, particularly the fortification of salt with iodine and wheat flour with iron, folic acid and other B vitamins being guided by the Food Fortification Working Group under the Ministry of Health. Food fortification was initially supported by Asian Development Bank (ADB two projects) and subsequently by UNICEF, World Bank and the Global Alliance for Improved Nutrition (GAIN) providing technical support. Fortification requires a multisectoral effort to be effective.

93. Scaling up nutrition interventions will reduce undernutrition, productivity, and mortality. Estimates for an increased coverage of 20%, indicate reductions in low birth weight of up to 7.4%, stunting by 3.6%, iodine deficiency disorders by 3.3%, maternal anemia by 26% and childhood anemia by 4.2%. An estimated 122 deaths a year could be averted for children.

94. Kyrgyzstan was recently accepted as the first CAR into the global Scaling-Up Nutrition (SUN) Movement, which encourages a multi-sector approach to food security. The SUN Framework recommends two complementary approaches to reducing under-nutrition. One is the adoption of direct nutrition-specific interventions that focus on pregnant women and children aged less than two years. Interventions that are known to be effective such as the promotion of good nutritional practices, micronutrients (vitamins and minerals), and complementary feeding are recommended. Two is to adopt a broader multi-sectoral nutrition-sensitive approach to address the determinants of under-nutrition. This includes: promoting agriculture and food security to improve the availability, access and consumption of nutritious foods; improving social protection; and ensuring access to health care (including maternal and child health care, water and sanitation, immunization and family planning). This multi-sector nutrition-sensitive approach requires nutrition objectives in all sector policies so any negative consequences on nutrition can be identified and reduced.

95. The two social protection programs available that address poverty, vulnerable/low income groups, and food access are the MSB and the MADF. Both programs, which are financially insignificant compared to need and coverage, are expected to increase over the forthcoming years. Recently the World Bank in response to the food crisis provided $5 million to compensate for the loss in purchasing power for 360,000 people from socially vulnerable groups. The European Union continued the support, added a vitamin A supplement program to more than 1 million children aged 6-59 months and to nursing mothers, and supported the promotion of flour fortification, subsidizing the price for targeted vulnerable groups.

96. This amended proposal for additional financing largely retains the original description of the 2012 GAFSP Proposal and clearly indicates key changes in the description and financing arrangements. The most substantial change is the financing of the NWRMP by SDC and implemented by the World Bank which covers technical assistance of component 2: Support to WUAs in water management, including equipment for O&M of WUAs' I&D schemes, is now included in Component 1.

97. The 2012 APNIP Proposal resulted in $16.5 million of financing from GAFSP. Design of APNIP has progressed with the Concept Note and related documents approved on 20 March 2013. The World Bank is currently conducting pre-appraisal with the project expected to commence implementation in the fourth quarter 2013. In case the amended proposal is approved for financing by the GAFSP, the Government and the World Bank will consider the option to include the additional funds during project appraisal.

Project component 1: Rehabilitation and modernization of I&D infrastructure.

98. This component will focus on the rehabilitation and modernization of I&D systems on 42,000 ha managed by 24 WUAs and WUA Federations. Works to be carried out include the rehabilitation of irrigation canals, the cleaning of drains and storage reservoirs of sediment, and the rehabilitation/construction of outlets and other hydraulic structures. WUAs will be required to repay 25% of the costs relating to their I&D system, agreed upon by at least two thirds of the membership. This stipulation has worked well under OIP-1 and OIP-2 as it requires the WUA to consult with its members and gain full commitment to the rehabilitation and subsequent processes for fee recovery and sustainability. It is the starting point to develop the water users' sense of ownership of both the process and the physical works and serves to restrain the costs, focus improvements on priority works, enhance quality and minimise opportunities for misappropriation of funds. As the proposal is for grant funding, the 25% repayment will be repaid to a WUA Support Fund managed by DWRLI for other investments in WUA infrastructure and equipment in the future. This Support Fund is being established under OIP-2 following discussions between the World Bank and government. Rehabilitation work will be carried out through the same engineering staff structure as under OIP-2. This structure consists of an *Oblast* Reconstruction Team headed by a chief engineer, supported by two regional engineers, one based in Osh for the Southern *oblasts*, and another one in Bishkek for the Northern *oblasts*. Regular technical supervision by the World Bank has shown that this system yields good results, with high quality rehabilitation works and designs which are in line with the requests of the WUAs.

99. It is proposed to have two design teams, one in the south and one in the north. Supervision will be directly conducted by field supervisors under the control of regional engineers and chief engineer.

100. The average rehabilitation and modernization cost per hectare is estimated at US$ 302 including physical contingencies, but excluding 9% for design and supervision and some costs to address critical off-farm infrastructure (around 10%) and price contingencies. This per hectare cost is derived from recent construction contracts under OIP-2 and hence reflects recent unit prices of construction works. Although this provides a sound basis for component cost estimation, actual costs will vary widely, depending on technical needs, farmers priorities and willingness to repay their share, and, eventually, economic and financial viability. The average per hectare cost does not imply a target of a ceiling. Total estimated component cost for the rehabilitation and modernization of the targeted 46,000 ha would thus be US$17.5 million.

101. **Reasons for choice**

- **Development need**: I&D rehabilitation and modernization has proved in the past under OIP-1 and OIP-2 to be the basic condition and driving force of rural development. Due to existing albeit dilapidated I&D infrastructure, there is a physical base for water delivery (in the form of canals and hydraulic structures) coupled with experience in water management and irrigation amongst the already functioning WUA management and irrigation farmers. It is proposed under this project to rehabilitate and modernize both the physical and human/social assets leading to more secure and increased crop production and subsequently improve the income of irrigation farmers and the wider rural community.[27]
- **Food security**: Increased crop production contributes to improved food availability in rural areas which leads to better access to food at lower costs for the poor.
- **Country need and Government priority**: Irrigation is fundamental to crop production in Kyrgyzstan. As outlined earlier, a large number of I&D systems still require rehabilitation and modernization and the Implementation Completion and Results Report for OIP-1 has shown that the economic rate of return (ERR) was of the order of 20%.[28] For AADP at completion it was 18.3%. Estimated ERRs for OIP-2 is 23% and 22% for the Additional Finance for OIP-2, including a financial rate of return to farmers of 19%. Thus rehabilitation and institutional development provides a significant economic and social benefit to Government, as well as to the immediate beneficiaries.
- **Consultations.** Rehabilitation of I&D was one of the main concerns of farmers in Phase 1. There was unanimous support for the I&D component as improved access to irrigation water would enable farmers to increase sown areas, increase yields and hence increase incomes. Access to other inputs and credit were considered useless if access to irrigation water was not reliable.

102. In order to achieve women's economic empowerment including their participation in decision making, OIP-2 is conducting a study to better understand the current role of women in the irrigated agricultural sector in Kyrgyzstan. The study will be completed in summer 2013 and will make recommendations and prepare training material and other programmes to enhance the involvement and engagement of women in the sector. The project will build on and extend this work to a wider number of farming communities.

103. **Project Component 3: Agricultural Advisory Services**. The provision of agricultural services through various projects has clearly demonstrated the benefits to farmers in terms of increased yields, improved cropping practices and better farm and livestock management. This component will ensure the provision of advisory services either by leveraging existing projects in the targeted locations or financing providers to deliver appropriate services. As far as possible, the provision of services will be demand driven so

[27] Various studies have shown that the multiplier effect in the wider community of successful irrigation development can be up to 2-3 times the direct impact amongst irrigation farmers.

[28] The ICRR states that this is a conservative figure as the yield increases were measured for one year only while full benefits would materialize after several years, and other substantial benefits were not incorporated in the calculations. Other benefits included savings of water which could be used downstream, changes in cropping patterns, the benefits of institutional strengthening and social benefits including a reduction in conflicts over water and time spent irrigating.

where possible either *Kuushens* or other community groups will identify their needs and in some cases will directly contract the services.

104. Initially a survey in each location will be undertaken to identify potential groups such as WUAs, household plot owners, small livestock owners without farms, and other potential groups that would benefit from the provision of advisory services, demonstrations and training. Following the survey and the establishment of need and the identification of currently available providers, mechanisms for financing and monitoring the delivery of the services will be agreed with the community groups. Where services have to be financed this will be done on a competitive basis and all payments will be performance based determined by the evaluation by participants following selected training and demonstrations.

105. While the services required will be determined by the community groups it is expected farmers would be trained in farm planning and management, agronomy, crop production, farm diversification, livestock husbandry, water resources management, soil protection, integrated pest management (IPM), marketing, contracting, processing etc. The service can be provided through training, demonstrations, and advice. Where feasible training of trainers will be undertaken. Participants in training and demonstrations will be appropriately tested and awarded with a certificate on completing the training and passing the test.

106. **Reasons for Choice**.

- **Development need.** The rehabilitation of I&D systems and water management support ensures the supply and better distribution of water and its management. While it does improve yields from less water logging and more regular supply of water, the provision of advisory services has been shown to substantially boost yields of farmers even more to provide increased production. Increased yields in crop and livestock production are essential. Currently, while advisory services are available they are not always easily accessible by all farmers.

- **Food Security**. Kyrgyzstan needs increased supplies of essential crop and livestock products to meet the increasing domestic demand and for food security. Coupled with this increasing supply is the need to ensure food is of sufficient quality and nutrient value. Extension coupled with I&D rehabilitation, improved water management, and nutrition interventions provides a comprehensive approach to redressing the food security concerns.

- **Country need and Government Priority**. The Government is concerned about food security and is in the process of introducing various measures of protection and re-entering the market itself. While this is currently a substantial problem it is imperative farmers yields are substantially increased to at least average expected yields and not remain at minimum levels. Substantial increases in yields and overall production are necessary for the Government to minimize its direct involvement in food supplies.

- **Consultations**. Participants in Phase 1 emphasised a consistently a lack of knowledge and the need for training. Farmer field schools were specifically identified because farmers could continue to exchange knowledge after the completion of the project. The inclusion of this component was highly appreciated by the Phase 2 participants and emphasised in addition to theoretical training, demonstrations through farmer field schools would provide sustainable access to knowledge. The training should also attract

young farmers, be adjusted to the local situation and needs, and groups be homogenous with similar interests and the same level of knowledge.

107. **Project Component 4: Upscaling Nutrition Interventions** The purpose of this component is to improve the nutrition levels of beneficiaries especially women and children through both short-term actions to address the more vulnerable women and children immediately at risk and longer-term actions to provide more sustainable solutions to malnutrition and undernutrition. There are three[29] key areas of intervention.

108. **Nutrition education program**. Behaviour changes will be pursued through education programs at the community level. These programs will be aimed at mothers, adolescent girls and pregnant women and include early initiation of breast-feeding; exclusive breastfeeding until six months of age; breastfeeding from 6 to 24 months with timely and appropriate complementary feeding; and education on water sanitation and hygiene and treatment of diarrhea and malnutrition. A community-wide sensitization to make men as well as women aware of the importance of maternal nutrition and improved maternal and child feeding practices will be completed early in the project. As a part of the education program communities will be made aware of the requirements for accessing social protection benefits provided by the government.

109. **Supplemental feeding**. Pregnant women will be provided daily supplements of vitamins and minerals to meet their substantially increased nutritional requirements and micronutrient powders will be provided as complementary feeding for children 6 to 24 months of age to increase their vitamin and mineral intake that is not available from eating flour products. This will address the immediate and short-term needs for improved nutrition.

110. **Dietary diversification.** A program to work on household plots, commonly cultivated by women, to improve dietary intake by increasing the production and adequate consumption of micro-nutrient rich foods including both plant and animal products. Income and some asset accumulation by women will be generated through the sale of surplus food products which will also increase the availability and diversity of food for other people in the community. These activities can be closely linked with component 2 to set up demonstrations, provide technical advice and facilitate the availability of seeds, fertilizer, and animals. This program will address the medium to long-term requirements of improved nutrition.

111. **Reasons for choice**.

- **Development need**. Increasing undernutrition has both short term and long term effects that reduce immediate and long term productivity and infant and maternal mortality. Evidence exists in Kyrgyzstan of successful programs in up-scaling cost effective interventions.
- **Food security**. Food security issues have generally been addressed primarily through agriculture development. It is well recognised that a broader multi-sectoral approach is essential if food and nutrition insecurity are to be more effectively addressed.

[29] In the 2012 Proposal there were five areas of intervention. The additional two were social protection and inter-sectoral coordination. Social protection activities required no separate funding. The activities are now included under the nutrition education program and communities will be made aware of the requirements for accessing social protection via the Government's MSB and MADF. Inter-sectoral activities previously envisaged national level activities. As this project is community focused, the emphasis is on inter-sectoral activities to ensure effective implementation of activities at community level. An inter-ministerial Working Group, comprising MOF, MOALI and MOH has been established at national level for APNIP. Consideration is being given to expanding this working group to include development partners and civil society active in the project locations.

- **Country need and government priority**. Not to take a broader approach to food security, upscale nutrition interventions, develop longer terms community level education and household plot cultivation will ultimately result in additional health and medical costs, lost productivity of mature workers, and in some cases reduced educational achievement.

- **Consultations.** Through the work of the VHC, participants in Phase 1 were very aware of nutrition related diseases and the need for proper nutrition. Phase 2 participants greeted the inclusion of this component and suggested special attention to pregnant women and poor families, the need to learn about preventative measure against nutrition related diseases, the use of TV and radio media, and the inclusion of training on nutrition in component 2 and demonstrations on fruit and berry processing.

112. **Project Component 5: Project Management**. This component will provide the technical assistance, capacity building and day-to-day management, including administration, coordination of the project, procurement, financial management and monitoring and evaluation in line with the procedures of the World Bank. In order to aim at cost-effectiveness, as much as possible, use will be made of qualified existing staff within the PIU for OIP-2, with the core team comprising a project manager, one engineer based in Bishkek, two regional engineers, an M&E Team with two specialists, a financial manager, a procurement specialist, institutional specialist and policy/strategy specialist. If funding is approved project preparation will identify appropriate staffing for all components.

113. Various teams of consultants (individuals and local companies) asset management studies and training, monitoring and evaluation surveys, environmental and financial audits, food security, nutrition specialists will be hired as needed, mainly on short-term input.

114. **Reasons for choice:**

- **Country need and Government priority:** The country still lacks a sufficient number of qualified professionals able to manage on behalf of the Government such a relatively large and multi-sectoral project. The existing OIP-2 project management structure has evolved over time (since the beginning of OIP-1 in 2002), and is now considered to be efficient and effective. It is in the interest of the Government to continue in the proposed project with a model of management (viz. a "healthy" mix of local/international consultants and local companies) proven in the past and achieve economic project results through continuity of staff employed and methods applied.

- For the Government to begin to effectively address food security it is essential that it commences a more coordinated, integrated and multi-sectoral approach to addressing food security. While agriculture is fundamental to addressing food supply it is also important to be cognizant of the nutrition qualities and for the population to be made aware. The current project is taking initial steps in this regard by building on accepted activities and approaches that have worked within individual projects, PIUs and agencies to coordinate these activities in a more efficient and effective manner.

2.3 Implementation arrangements.

115. **Selection of locations**. The project will build on the successful OIP-1 and OIP-2 models in which WUAs have been selected for inclusion in the project according to agreed selection criteria. There are 104 possible WUAs identified covering a command area of some

177,000 ha. Following consultations with the *Raion* WUASU, this number was reduced to 62 WUAs with a total command area of some 130,000 ha. Currently 48 WUAs have been ranked according to priority and proposed to be included for funding. At December 2011 there were 97 WUAs (Table 11) requesting support to rehabilitate their I&D systems which substantially exceeds the administrative, technical and financial means of OIP-2 by a factor of 3.5.

Table 11: WUAs asking for support to rehabilitate their I&D systems

№	Oblast	WUAs	Command Area (ha)
1	Batken	10	15,606
2	Jalalabad	15	22,971
3	Issyk-Kul	17	29,996
4	Naryn	17	27,612
5	Osh	12	20,725
6	Talas	14	34,139
7	Chui	12	33,216
	Total Country-wide	**97**	**184,265**

Source: Written requests by WUAs submitted to Support Units, forwarded to OIP-2 Project Implementation Unit (PIU)

116. The WUAs will provide the initial target for the agricultural advisory services and nutrition intervention components. Both components will be aimed at WUA members but will be extended appropriately to include household plot owners, vulnerable groups, and VHCs to identify women, children and vulnerable groups.

117. The MOALI will be the executing agency for the Project. As the secretariat to the Food Security Council, MOALI is well placed to provide the essential coordination role of various stakeholders in the multi-sector approach being adopted. A working group has been established with LOALI as chair and including MOF and MOF. The working group will meet on a regular basis and at least quarterly to monitor progress and provide guidance on crucial policy and strategy issues. The working group will report to the Food Security Council on a quarterly basis. International and national technical assistance support will be provided to the working group principally to assist with the multi-sectoral nature of the Project requiring strong coordination arrangements with various agencies and development partner cooperation. This structure will be further discussed and agreed during preparation.

118. The implementation of component activities, especially components 2 and 3 will require close cooperation between development partners, NGOs and other agencies providing assistance in the target areas. The project will seek the cooperation of others to provide assistance in their respective activities and only where there is a gap between the needs and the availability of assistance will the project finance the necessary activities and services.

119. **M&E Framework**. For component 1 the proposed project will build on the M&E practices developed under OIP-1 and OIP-2. These practices combined the work of the project M&E Specialist and the WUA Regulatory Authority, enabling monitoring and evaluation of both the project and the WUAs. Monitoring and evaluation for component 1 requires the identification of outcomes arising from the following main processes (including those system tools recently introduced under OIP-2):

- Rehabilitation of some 44 WUA-managed I&D systems and subsequent benefits arising from the rehabilitation works, including levels of irrigation service fee recovery to ensure that systems are sustainable;

- Introduction of revised system maintenance identification, planning, and costing procedures using asset management procedures, leading to WUAs setting higher levels of ISFs to ensure that systems are sustainable; and
- Introduction of revised water management procedures leading to improved efficiency, productivity, and equity of water use.

120. *Organization of M&E*. As with OIP-2, the M&E team will coordinate and collate the monitoring information generated by management and operational staff on the physical performance and progress of the project, from which the results-based monitoring information will largely be drawn. The M&E team will also be responsible for overseeing the development and implementation of survey instruments associated with the project, covering internal performance monitoring, WUA performance monitoring, WUA monitoring surveys, and special studies, as well as the management and coordination of all monitoring and evaluation activities. The M&E team will liaise closely with the PIU project engineers and the Central WUA Support and Regulatory Unit on the planning and implementation of project activities. The internal monitoring activities will be similar to those carried out under OIP-2, and will involve the rationalization, coordination, and compilation of summaries and further analysis of the progress reporting carried out by the coordinators of each project component and the Central WUA Support Unit. Where appropriate the M&E team will be assisted by external consultants, for example for impact studies. The M&E processes and procedures will benefit from recommendations and updated procedures derived from a recent (December 2011) study carried out by an international M&E consultant.

121. *Data collection, analysis, und use of information*. The data for M&E will be drawn from internal project documents and records, secondary data sources where available, and from custom-designed surveys and studies, using both interviews and participatory techniques as appropriate. The main instruments will include:

- Internal monitoring by WUAs;
- WUA Annual Report and Annual Survey;
- Annual water users survey; and
- Baseline surveys and impact evaluation.

122. *Internal monitoring by WUAs*. A further task under the project is to develop the performance monitoring and evaluation capabilities of WUA management in order that they can provide better feedback for water users on system performance. This program is allied to the water and asset management programs as part of the pathway to raising the irrigation service fees and strengthening the sustainability of the I&D systems. This work will primarily be carried out under the direction of the WUA Regulatory Authority working with WUA management through the WUA Support Units. It is intended that this process, if followed properly, will enable the WUA management to: (i) identify areas where performance can be improved, and (ii) pick up on and arrest in good time any decline in performance.

123. *WUA Annual Report and Annual Survey*. Under the law, WUAs must submit an Annual Report to the Regulatory Authority. Experience with OIP-1 and OIP-2 has shown that WUAs take this requirement seriously, and as a consequence the WUA Regulatory Authority has a valuable database dating back to 2006. Under OIP-2 this data is being used to (i) identify the better performing WUAs which can be used as examples for training of other WUAs, and (ii) identify the less well-performing WUAs where further strengthening and support is required by the WUA Support Units. This work will continue under the proposed project, with special attention being given to WUAs where systems have been rehabilitated by the project.

124. *Annual Water Users Survey*. An annual survey will be carried out of water users and farmers to ascertain their awareness of WUA affairs and satisfaction with the services provided by the WUA. This survey questionnaire will be designed by the M&E team and procedures will be developed for randomized sampling of water users within a WUA. The survey will be administered by the WUA Support Unit staff.

125. *Baseline Surveys and Impact Evaluation*. Prior to any agreement to carry out rehabilitation work of an identified WUA-managed system, the project will prepare a Submission Form for IDA that details the current situation (annual water abstraction, cropping patterns, crop yields, etc.) and the works to be carried out. In the light of experience with the analysis of 13 completed sub-projects under OIP-1, more careful and detailed studies have been carried out under OIP-2 to establish the variation of water distribution, cropping patterns and yields within the WUA command area before and after rehabilitation. These updated practices will be continued under this project.

126. The impact study which will be conducted at the end of the project will make use of the baseline studies detailed above, together with household surveys and interviews with key stakeholders to establish project impact and surveys in control WUAs which have not been so closely involved with the project's activities (i.e. not rehabilitated). Experience gained from the final impact survey carried out under OIP-1, and that to be carried out under OIP-2 based on recommendations made following the recent study by an international M&E specialist will be used to refine the project's impact survey.

127. *Capacity for Monitoring and Evaluation*. There is currently good capacity in M&E within OIP-2, which will transfer through to the proposed project. IDA review missions have regularly reported on the consistent high quality of project monitoring and reporting, which has included checking of scheme feasibility (through the IDA forms discussed above), preparation of quarterly and annual reports, liaison with the DWRLI's WUA Support Unit, tracking of project costs and progress, etc. It is anticipated that these high standards will be sustained under this project. However, the capacity for monitoring and evaluation within the WUAs is under-developed at present and, as discussed above, will be strengthened during the project.

128. **Monitoring for components 3 and 3.** Several approaches are required to monitor and evaluate the activities, outputs and outcome associated with components 2 and 3. An initial needs assessment survey will help establish a baseline on the identified indicators in Section 2.3. This will also provide a basis for subsequent surveys and impact evaluation. Following the initial baseline survey it is proposed to conduct two surveys during the course of implementation. The first at about 2 years, the second at 4 years and the impact evaluation would be conducted in the final or subsequent year. In addition, beneficiaries will be required to evaluate certain project activities such as the provision of advisory services as this will assist in the performance based payment of service providers. Given the complicated nature of the monitoring and evaluation for these components international and national technical assistance will be required.

2.4 AMOUNT OF FINANCING REQUESTED

129. Table 12 shows the detailed financing arrangements.

Table 12: Project Costs by Component

Project Component and Activities/Items	Estimated Cost (US$ million)	APNIP Financing	NWRMP Financing	Additional GAFSP Financing Requested
Component 1: Rehabilitation and Modernization of I&D Infrastructure				
1.1 Rehabilitation and modernization: 46,000 ha @ US$ 315 / ha	23.6	10.3		14.5
1.2 Design of I&D systems	0.5	0.2		0.3
1.3 Oblast rehabilitation teams including vehicles and equipment	1.0	0.3		0.7
1.4 Supervision of construction works	0.8	0.3		0.5
1.5 Others (digital mapping and environmental management)	0.1	0.1		
1.6 Equipment for O&M of WUAs' I&D schemes[30]	2.0	0.5		1.5
Sub-total component 1	28.0	11.7		17.5
Component: Capacity Building in Water Management				
Funding for incremental activities of WUA Support Units (WSUs)	1.5			0.0
WUA training and promotion	0.3			0.0
Sub-total component	1.8		1.8	0.0
Component 2: Agricultural Advisory Services				
Funding to extension providers	2.5			1.0
Sub-total component 2	2.5	1.5		1.0
Component 3: Up-scaling Nutrition Interventions				
3.1 Nutrition education program	0.5	0.5		0.5
3.2 Supplemental feeding for pregnant women and children	1.5	0.5		1.0
3.3 Dietary diversification	1.0	1.5		0.5
Inter-sectoral coordination[31]	0.8			0.0
Sub-total component 3	3.8	2.5		2.0
Component 4: Project Management				
5% of total of component 1	1.5	0.6		0.9

[30] Previously 2.3 in the 2012 Proposal.
[31] Scope under amended proposal for additional financing has been reduced to focus on inter-sectoral coordination at community level.

7.5% of total of component 2 and 3 (US$6.3 million)	0.5	0.2		0.1
Sub-total component 4	2.0	0.8	0.2	1.0
Project base costs	**38.1**			**21.5**
+ 10% contingencies	**3.8**			**2.0**
Estimated total project costs	**42.0**	**16.5**	**2.0**	**23.5**

130. Of the original request for $42 million, GAFSP approved $16.5 million to finance APNIP, SDC is financing $2 million for NWRMP with this proposal requesting additional financing of $23.5 million. The additional financing will include US$17.5 million for physical I&D works, US$1.0 million for agricultural advisory services, US$2.0 million for upscaling nutrition interventions, and US$1.0 million for project management, and US$2.0 million for contingencies. The cost estimates for the physical work has increased from$274 to $315/ha based on current ongoing costs for physical works under OIP-2. Consequently, the area to be rehabilitated is slightly reduced to 46,000ha. Additionally, on average US$28 per hectare are required for design and supervision resulting in total I&D rehabilitation and modernization costs of US$343 per hectare. Considering an average irrigated area of 1,700 ha per WUA, this translates into US$583,000 per WUA. Project management costs are also derived from current OIP-2 costs for the Project Implementation Unit.

131. Similarly, for components 2 and 3 the cost estimates are generally based on costs associated with previous projects. However, the original costs underestimated the upscaling costs and so a slightly increased amount has been added to component 3 but still remains with the original cost of $2 million, including NWRMP funding of $2 million.

2.5 PREFERRED SUPERVISING ENTITY

132. The World Bank is the supervising entity for APNIP and will also be for this emended proposal for additional financing. It is requested that the supervising entity for all project components be the World Bank. Throughout the implementation of OIP-1 and OIP-2, and also in the ongoing WMIP, the World Bank has built up a comprehensive understanding of the I&D sector in the Kyrgyz Republic, and of the particular issues facing implementation of I&D projects. During the last decade, the World Bank has significantly contributed to the development of WUAs and their integration into the Country's legal system. The World Bank was instrumental in the issuance of the Water Law as well as in the development of the necessary by-laws. The project would be prepared and supervised according to World Bank procedures, in line with the social and environmental safeguards, and according to the fiduciary procedures required by the World Bank. The World Bank also has had experience through several projects that have included agricultural advisory services both in supporting the development of RAS as well as contracting service providers and also in selected nutrition interventions through health and social protection projects. The World Bank will undertake preparation for the additional financing quickly, as APNIP is at pre-appraisal and is expected to commence implementation in fourth quarter 2013.

133. The World Bank has played a supportive role to the preparation of both the 2012 Proposal and this amended proposal for additional financing. As these proposals are building essentially on on-going projects, with the exception of the upscaling of nutrition interventions and social protection, the proposal have drawn heavily on World Bank design and experience in implementation.

2.6 TIME FRAME OF THE PROPOSED SUPPORT

134. The project is expected to have a 5-year duration, with preparation and appraisal over late 2013/early 2014, and commencing in early 2014 with completion in 2019.

2.7 RISKS AND RISK MANAGEMENT

135. **Agency Coordination**. A key risk is that the required coordination and cooperation necessary for the success of this multi-sectoral approach is not forthcoming because of budget, institutional and capacity constraints. The proposed project management and implementation arrangements with the overall coordination by the MOALI, the establishment of a working group comprising diverse stakeholders, and the technical assistance are designed to improve overall cooperation and coordination between agencies and development partners. There has been evidence of cooperation between MOH and MOALI in the implementation of the World Bank funded Avian Influenza project and the project will consider such lessons during detailed design.

136. **Climate change**. Climate change effects are already being experienced in Kyrgyzstan with various unexpected climate events. This can add stress to agricultural systems resulting in higher prices for food and hence affecting the nutrition of the poor. Stress on natural water resources from climate change may cause farmers to adopt farming practices that are harmful to their own health and to the health of consumers. Irrigation is important in reducing climate change effects and equally important will be sustainable agricultural and nutrition practices which the project aims to achieve. Several studies are in still in progress that are examining the climate change implications for Kyrgyzstan.

137. **Funds for O&M**. As experienced under OIP-2, the main risk is that Government does not provide sufficient funds for adequate O&M of higher-order infrastructure (e.g. off-farm conveyance canals) to supplement ISF collected from the water users. Other risks concern the time of construction and the quality of construction works, such as hydraulic structures or canal lining.

138. The Government's record in providing adequate MOM budget for the I&D sector is weak, hence the emphasis under OIP-2 of increasing the ISF contribution from water users towards O&M of off-farm systems. This is also addressed in the selection criteria by selecting I&D systems in a reasonable condition, and excluding any systems where the off-farm systems are in a poor state. As carried out under WMIP, accounting procedures will be put in place under the project in order to be able to identify O&M needs and expenditure on a system-by-system basis, thus enabling water users to see the actual need and expenditure. Under OIP-2 service fees have been increasing, on both rehabilitated and non-rehabilitated systems, with water users seeking to sustain and improve the level of service delivery. Special attention will be given under the project to supervision and contract management in order to ensure timely completion of the works during the short time when construction is feasible, and not to obstruct field preparation and plant growth. The *oblast*-based rehabilitation teams (three staff in each of the seven *oblasts*) under the supervision of the two regional engineers, have played a crucial role in quality control of design and construction under OIP-2. They will continue to carry out their mandate under the proposed project as well. Furthermore, the Government will keep track of the budget allocation to WUASU and discuss incremental funding for the Support Units if required.

139. For components 2 and 3, the risks relate to effective community mobilization, capacity of the agriculture advisory services to meet demand and quality of service, and ensuring the sustainability of the nutrition interventions. There are many organized groups already in rural areas such as the WUAs, the VHC etc. that provide an initial focus for project activities. It is expected that there are adequate agriculture advisory service providers to meet

the expected demand. If not, it is preferable to ensure the quality of the service provided is not affected by expanding the coverage to broadly or too rapidly. Ensuring the sustainability of the nutrition interventions, particularly the supplemental feeding programmes requires continuous funding or support by government. However, the introduction of the diet diversification program is aimed at providing a more sustainable program to address nutrition deficiencies. The consultation process in the rural areas identified several implementation type risks that can be addressed at detailed design. The participants identified the following risks for each component. Component 1: lack of awareness of the program on start-up by all stakeholders; on-farm equipment is not recorded as an asset of the village administration; low quality equipment is procured; rehabilitation activities are in place during the farming season; lack of funds for maintenance of the rehabilitated irrigation systems; soil degradation around irrigation canals after rehabilitation works; water trays and irrigation water do not meet the requirements for delivering the certain volume of water; no roads to the irrigation canals; and concrete trays are located on farmers' plots, where they have already planted crops. Component 2: trainings are provided during the farming season when farmers are busy; poor farmers including women are not involved; manuals are not understandable for ordinary farmers; only theory is provided but not practice; and trainings are provided in the Russian language. Component 3: selection of beneficiaries is not transparent; if any products are provided through the project, they are of low quality; and lack of training on nutrition. Component 4: inefficient utilization of the project resources; and lack of a clear mechanism for control of project resource utilization.

2.8 CONSULTATION WITH LOCAL STAKEHOLDERS AND DEVELOPMENT PARTNERS

140. A comprehensive consultation process was undertaken for the larger 2012 GAFSP Proposal in two phases from 8 February to 28 March 2012. The details of this process are reported in Attachment 6. In summary, the process was in two phases. Both phases involved government agencies, development partners, civil societies, and communities. Phase 1 focussed on the issues and measures to address food security in Kyrgyzstan, reviewing the original proposal submitted by the government to GASFP in 2010, against these issues and needs, and identifying essential components for the proposal under preparation. Of significant importance in Phase 1 was the *Raion* level consultation in 5 *Oblasts*. These clearly identified community level understanding of food security issues, agricultural problems, training needs, WUA support and gender issues related to food security. Based on the phase 1 consultations the project design incorporated the components of agriculture advisory services and upscaling of nutrition interventions and social protection.

141. Phase 2 of the consultations took the new project design to all stakeholders, including repeat workshops in the *raions* with the participants from Phase 1, to seek their comments on whether the design addressed their issues and concerns voiced in phase 1, possible issues and risks in implementing the project, and to seek their support and endorsement for submission to GAFSP.

142. In addition, extensive consultation with all stakeholders involved in the implementation of OIP-2 has been continuous. The common assessment of needs for the rehabilitation and modernization of I&D together with *Raion* authorities and members of eligible WUAs ensures that the proposed project is demand driven and requested by irrigation farmers in need of assistance. This consultation was reinforced during the Second Republic Conference of WUAs on 1-2 March 2012. The meeting endorsed the proposal to be submitted to GAFSP.

143. For this amended proposal for additional financing the former comprehensive consultation process was not repeated, especially the community consultations at *Raion* level (See additional summary of the Consultation Process in Attachment 6). However, consultations were held with government agencies, development partners, civil society and

inter-ministerial working group. Meetings were held with government and development partners on 28 May 2013 and with Government and civil society on 30 May 2013 and inter-ministerial working group on 29 May 2013.