



**IFAD**  
**INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT**  
**Executive Board - (Sixty-Third) Session**  
Rome, 22 - 23 April 1998

**REPORT AND RECOMMENDATION OF THE PRESIDENT**

TO THE EXECUTIVE BOARD ON A PROPOSED LOAN TO

**THE KYRGYZ REPUBLIC**

FOR

**THE AGRICULTURAL SUPPORT SERVICES PROJECT**



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### CURRENCY EQUIVALENTS

Currency Unit	=	Krygz Som (KGS)
USD 1.00	=	KGS 17.5
KGS 1.00	=	USD 0.0571

### WEIGHTS AND MEASURES

1 kilogram (kg)	=	2.204 pounds (lb)
1 000 kg	=	1 metric tonne (t)
1 kilometre (km)	=	0.62 miles (mi)
1 metre (m)	=	1.09 yards (yd)
1 square metre (m <sup>2</sup> )	=	10.76 square feet (ft <sup>2</sup> )
1 acre (ac)	=	0.405 ha
1 hectare (ha)	=	2.47 acres

### ABBREVIATIONS AND ACRONYMS

AsDB	Asian Development Bank
ABC	Agri-Business Centre
ASSP	Agricultural Support Services Project
ATAS	Agricultural Training and Advisory Service
EBRD	European Bank for Reconstruction and Development
EU/TACIS	European Union/Technical Assistance for the Commonwealth of Independent States
FSA	Financial Services Association
GTZ	German Agency for Technical Cooperation
IDA	International Development Association
KAA	Kyrgyz Agrarian Academy
KAFC	Kyrgyz Agricultural Finance Corporation
KHF	British Know-How Fund
MAWR	Ministry of Agriculture and Water Resources
PIU	Project Implementation Unit
RADC	Rural Advisory Development Centre
RADS	Rural Advisory and Development Services
RASC	Rural Advisory Steering Council
SDC	Swiss Development Cooperation
TA	Technical assistance
UNDP	United Nations Development Programme

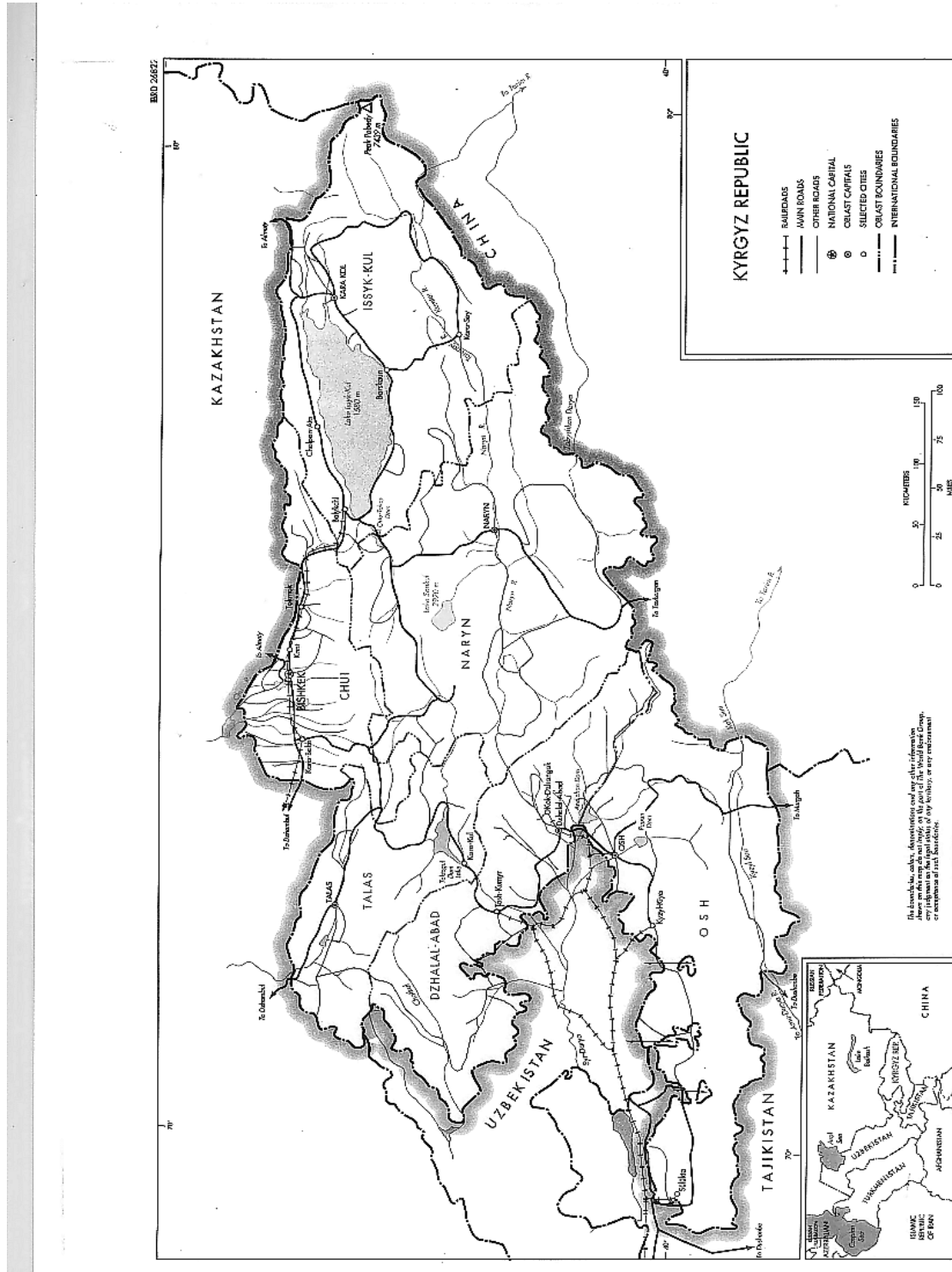
### GOVERNMENT OF THE KYRGYZ REPUBLIC

#### Fiscal Year

1 January - 31 December



MAP OF THE PROJECT AREA



Source: IFAD

The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.



**KYRGYZ REPUBLIC**  
**AGRICULTURAL SUPPORT SERVICES PROJECT**

**LOAN SUMMARY**

<b>INITIATING INSTITUTION:</b>	International Development Association (IDA)
<b>BORROWER:</b>	Kyrgyz Republic
<b>EXECUTING AGENCY:</b>	Ministry of Agriculture and Water Resources (MAWR)
<b>TOTAL PROJECT COST:</b>	USD 29.29 million
<b>AMOUNT OF IFAD LOAN:</b>	SDR 5.9 million (equivalent to approximately USD 7.92 million)
<b>TERMS OF IFAD LOAN:</b>	40 years, including a grace period of ten years, with a service charge of three fourths of one per cent (0.75%) per annum
<b>COFINANCIERS:</b>	IDA Swiss Development Cooperation (SDC)/Helvetas/Caritas German Agency for Technical Cooperation (GTZ) British Know-How Fund (KHF)
<b>AMOUNT OF COFINANCING:</b>	IDA - USD 14.23 million SDC/Helvetas/Caritas - USD 0.90 million GTZ - USD 0.43 million KHF - USD 0.76 million Through Sheep Development Project - USD 1.79 million
<b>CONTRIBUTION OF BORROWER:</b>	USD 2.01 million
<b>CONTRIBUTION OF BENEFICIARIES:</b>	USD 1.25 million
<b>APPRAISING INSTITUTION:</b>	IDA
<b>COOPERATING INSTITUTION:</b>	IDA



## PROJECT BRIEF

The project is targeted to the approximately 140 000 newly privatized farms that will emerge from the ongoing agrarian reform process. The majority of families on these farms are poor (as much as 75%, by one estimate), barely able to earn the cost of a minimum subsistence food basket. The most disadvantaged are the food-insecure households in geographically remote areas, herders/farmers at higher altitudes, poor women and women-headed households, unemployed youth, and the victims of natural or man-made disasters. Among this target group, the beneficiaries of the project's IFAD-financed components will be the estimated 35 000 rural households who will be reached by and adopt the improved practices and technologies spread by the rural advisory services under the project. Another set of beneficiaries will be the approximately 5 700 poor rural households that will ultimately benefit annually from small loans advanced under the project.

A major reason for the poverty of these rural families is the overall collapse in the country's agriculture and economy during the current transition, leading to loss of previous jobs or salary payments, with new opportunities to own and operate private land yet to materialize fully under the still incomplete process of land reform and restructuring. Farmers are without access to basic inputs and services — seed, fertilizer, plant protection materials, machinery services, irrigation supplies, market information, and credit. Moreover, these newly privatized farmers lack the range of farming and business skills required to run a private farm on their own, since their life has usually been spent either on non-farm jobs or in narrowly-specialized tasks in large collective farms which are now being disbanded. New institutions to service them and bring to them advice, training and technologies relevant to their new circumstances have yet to fully emerge. Local farmer organizations, through which they could exercise their collective strength, are only now emerging.

The project will help meet many of these needs and challenges. It will strengthen the institutions and procedures to speed up and complete the distribution of land and non-land assets to individual rural families, and make the process more fair and transparent. This will provide a potential source of livelihood to a vast majority of rural households. To enable the new leaseholders of the land to effectively put it to use for production and income, the project will provide them regular advice and training on farm management and cultivation techniques through a network of advisory centres, backed by adaptive research on improved techniques. For two critical inputs, quality seed and safe plant protection materials, the project will create the enabling conditions for the private sector to produce and supply these to the farmers. The project will also provide much needed credit to the farmers to enable them to finance the required inputs. Finally, it will provide them with information on marketing opportunities, government regulations, etc., to make farming more profitable and problem-free.

To ensure that the project is implemented in accordance with farmers' needs and that its proceeds and benefits reach the intended beneficiaries, project design incorporates the following: farmer representation and control in the project's steering councils at the central and *oblast* (region) levels; research trials and demonstrations conducted on farmers' fields, with farmer participation; a regular schedule of visits to farmers by the extension advisers, and technical advice based on farmer demand rather than top-down dissemination of preconceived messages; payment by farmers for the advisory service, at increasing rates over time; employment of women extension advisors in every *oblast*; participatory monitoring and evaluation, and regular annual beneficiary assessment workshops; small size of loans to the farmers, without collateral and through joint liability groups to ensure targeting to the really poor; and organization of farmers into groups such as water users' associations, farm machinery groups, marketing groups, and groups for extension advice.



**REPORT AND RECOMMENDATION OF THE PRESIDENT OF IFAD  
TO THE EXECUTIVE BOARD ON A PROPOSED LOAN TO  
THE KYRGYZ REPUBLIC  
FOR  
THE AGRICULTURAL SUPPORT SERVICES PROJECT**

I submit the following Report and Recommendation on a proposed loan to the Kyrgyz Republic for SDR 5.9 million (equivalent to approximately USD 7.92 million) on highly concessional terms to help finance the Agricultural Support Services Project. The loan will have a term of 40 years, including a grace period of ten years, with a service charge of three fourths of one per cent (0.75%) per annum. It will be administered by the International Development Association (IDA) as IFAD's cooperating institution.

**PART I - THE ECONOMY, SECTORAL CONTEXT AND IFAD STRATEGY<sup>1</sup>**

**A. The Economy and Agricultural Sector**

1. Kyrgyzstan is a mountainous country in Central Asia, with an area of 198 500 km<sup>2</sup> and a population of about 5 million, of which 3.8 million rural. After 1991, with its severance from the closely integrated Soviet production, trade and payments system, the newly independent country experienced considerable decline in production and incomes. Output had fallen by almost 50% by 1994, and inflation soared to 1 200%. Since then, with tight monetary and fiscal policies and various reform measures, the macroeconomic situation shows signs of improvement. Inflation is down to below 30%. Gross National Product per capita is estimated at some USD 700. However, about 50% of the total population, and by one estimate as much as 75% of the rural population, is below a poverty line based on the cost of a subsistence food basket.

2. Agriculture is one of the major sectors of the economy, accounting for 45% of Gross Domestic Product and 49% of employment. Total agricultural land is about 10 million ha, of which only about 1.5 million is cultivable, the rest being pasture on which sheep-breeding is the major occupation. Rainfall, dispersed throughout the year, varies from 200 to 700 mm, which limits crop yields; but snowmelt generally supplies sufficient water to provide irrigation to about 0.8 million ha under canal command. The variety of altitudes (500-4 000 m), associated with a wide range of climatic conditions, leads to a diversity of agro-climatic situations - sub-tropical areas where cotton, tobacco, vegetables are grown; temperate areas where wheat, barley, and lucerne dominate; and higher altitude agricultural land mostly used for summer grazing. Along with the general decline of the economy since the late 1990s, agricultural production also shrank between 1990 and 1996. Recently, there are signs of revival of agricultural production. However, the sector continues to face a complex of problems.

3. State and collective farms held most of the crop and pasture lands prior to 1991. Since then, arable land has been distributed to rural residents under the land reform programme, on 99 years lease with full usufruct rights. About 140 000 privatized farms are expected to emerge from this process.

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<sup>1</sup> See Appendix I for additional information.





However, the emerging “new farmers” have often had little exposure to operating small farms as independent enterprises. Most, having worked previously as narrowly-specialized workers in large collective farms managed from the top, lack the necessary broad-based farming skills and business knowledge to run their own farms. Many of them would have difficulty in holding on to their allocated lands unless they are supported by various services and inputs. Such services have been unavailable to most farms following the disruption of the country’s previous system of agricultural organization and management and the still incomplete process of transition. The decreased farm incomes and the breakdown in credit and financing facilities (following the collapse of banks, including the Agroprombank, the predominant rural credit provider) has reduced farmers’ ability to purchase inputs even where they are available.

4. The Government is creating an environment for providing the necessary inputs and services to the farmers through less State control and greater private sector and farmer-oriented activity. Former State enterprises are being privatized, and new directions and pilot activities are being encouraged. The role of the Ministry of Agriculture and Water Resources (MAWR) and of the agricultural offices at the *oblast* (region) and *rayon* (district) levels have been redefined. The Kyrgyz Agricultural Finance Corporation (KAFC) has been established, with a mandate to provide credit to agribusiness, with a special window for small farmers.

### **B. Lessons Learned from Previous IFAD Experience**

5. Lessons have been learned and incorporated into the project design, based on the experience of the ongoing IFAD/World Bank-financed Sheep Development Project; the World Bank and Asian Development Bank (AsDB) rural finance projects; the UNDP-supported credit activity under its Poverty Alleviation Pilot Project; some non-governmental organizations (NGO)-supported small-scale credit activities; and the pilot agricultural support projects being undertaken on a small scale in selected regions of the country by the European Union/Technical Assistance for the Commonwealth of Independent States (EU/TACIS), the German Agency for Technical Cooperation (GTZ), and the Swiss Development Cooperation (SDC) aid provided through Helvetas and Caritas. The multitude of new small farmers need a network of agricultural advisors, at the *rayon/village* level, who will be responsive to farmers’ needs and capable of advising directly on a range of topics (crop husbandry; tax system; land reform issues; credit; etc.) or will know where to obtain the information. To be most effective, the advisory system needs to be backed by appropriate technology development/adaptive research, farmer training, and farmer group development. There is a need to screen and adapt new technology for difficult ecologies, and this should be done on farmers’ fields. Farmers’ responses to agricultural advice has been enthusiastic, and they are also keen to visit and learn from each others’ experience. Farmers need help with formation of groups for various purposes. Leader farmers, who can influence others, should not be excluded by the agricultural advisory services. Women are active members of the farming community, and need support. For credibility and sustainability, the advisory service should be autonomous of the traditional government structures. The service should be able to pay for itself, but a portion of the cost (such as the initial overheads) will have to be met by the Government, as part of its socio-economic obligations. Availability of credit is an important requirement. Poor farmers with little collateral, who are in the majority, have difficulty in accessing credit. Small farmer groups based on joint liability have been seen to be feasible. Government counterpart funding in donor-financed projects has not been forthcoming promptly.

### **C. IFAD’s Strategy for Collaboration with Kyrgyzstan**

6. **Kyrgyzstan’s Policy for Poverty Eradication.** Reform and revitalization of the agriculture sector, coupled with reform in the system of social protection, have been central elements in the Government’s policies and programmes for poverty alleviation in the current period of transition. These include the following specific elements: distribution of land and property shares to collective



farm workers and rural residents, and transformation of the former narrowly-specialized farm workers into owners and managers of agricultural enterprises in their own right; restructuring of farms into appropriately-sized units; publicizing, clarifying and making effective people's property and tenurial rights, and making these rights transferable; elimination of subsidies and export taxes on agricultural products, and liberalization of input and output prices; elimination of State input supply and marketing monopolies; encouragement of private traders and suppliers; development of appropriate farm advisory services and market information; reorientation/revitalization of the system of agricultural research and technology generation; development of rural financial services and institutions, to make credit available to farms and agri-businesses; improvement of productivity in agriculture, and restoration of demand for fertilizers and other inputs; improvement in the management of the inherited large-sized machinery and equipment, and providing replacement for it; development of policies and programmes for the rehabilitation, ownership and sustainable financing of the deteriorating irrigation system and other infrastructure; promotion of farmer organizations, including water users' associations, farm-machinery groups, marketing groups, etc.; reorienting the MAWR and other public sector institutions, and building up their capacity to perform regulatory and promotional functions rather than direct production activities, leaving the latter to be taken up by a (hopefully) dynamic private sector.

7. At the same time, the Government is concerned to protect the vulnerable groups in the transition period. This it endeavours to do by: replacing the former generalized pensions and allowances by a system of targeted payments and subsidies to those most in need; poverty monitoring; and preservation of a minimum health cover in the face of severe fiscal constraints.

8. **The Poverty Eradication Activities of Other Major Donors.** Many donors are active in Kyrgyzstan, and a number of donor-supported initiatives and projects are related to IFAD's concerns and complementary to this project. Several pilot activities, covering a few *rayons/oblasts* of the country, have been carried out in support of family farmers, with emphasis on provision of technical and business advice, group organization and credit. These include projects by EU/TACIS, Agricultural Training and Advisory Services (ATAS) and the Agri-Business Centres (ABC) projects, SDC aid (provided through Helvetas and Caritas) and GTZ. Related assistance is planned by The Netherlands in the southern part of the country. The basic approach to the advisory services has been the same, in that the farm extension advisors visit the villagers by rotation four to five times a week and make themselves available for advice. Advisory services and farmer organizations are provided also under the ongoing IFAD/World Bank-financed Sheep Development Project which commenced implementation in late 1996. Experience so far under this project (20% of the IFAD loan disbursed) has been positive. The project has had enthusiastic response from the farmers, group formation is progressing, and farmers visit successful groups in order to learn from their experience. Two other donor initiatives, also closely related to the Agricultural Support Services Project (ASSP), are UNDP's field programme of lending to joint-liability groups through its Poverty Alleviation Pilot Project, and the World Bank's Rural Finance Project which provides agricultural credit to agri-businesses and smaller farms through the KAFC. However, farmers below the poverty line who normally cannot afford collateral need additional support.

9. Further donor activities include: credit delivery on a small scale by a number of United States-based NGOs; a larger AsDB-financed project aimed at providing credit through formation of credit unions; small-enterprise development and farmer training (SDC; the European Bank for Reconstruction and Development, EBRD); surface irrigation rehabilitation of primary and secondary structures, and later of tertiary and on-farm structures (World Bank); support to water users' associations (AsDB); agro-processing and inputs supply (EBRD-financed Kyrgyz Agri-Business Company); fruit and vegetable processing (SDC); seed development (Denmark); market information development on a pilot scale (British Know-How Fund, KHF); support to land reform and land



registration (USAID); food aid (EU and the United States); primary health care and medicine supply (United Nations Children's Fund); agricultural machinery, equipment and production inputs supply (Japan); dairy development (SDC); and institutional capacity-building through technical assistance (TA) and other support (AsDB; EU/TACIS).

10. **IFAD's Strategy in Kyrgyzstan.** IFAD's strategy for poverty alleviation in Kyrgyzstan derives from the specific challenges and opportunities prevailing and the activities being pursued by the Government and by the donors in this respect. Since the current rural poverty is mainly due to the overall disruption of agriculture in the present transition, the thrust of IFAD's strategy will initially be to restore rural incomes through productivity increase in agriculture. This will be targeted to the newly-privatized farms as a whole. However, a more targeted approach will also be pursued, focusing on disadvantaged areas and households, such as food-insecure households in geographically remoter areas, herders/farmers in higher altitudes, poor women and women-headed households, unemployed youths, and the victims of natural and man-made disasters.

11. The principal constraints facing agriculture at present are: a general shortage of agricultural inputs, technical skills, business knowledge, finance and market information; the absence of appropriate institutions to deliver these inputs and services to the vast newly-created body of privatized farms; and the deterioration or collapse of essential infrastructure, such as for irrigation. In the light of these constraints, the initial thrust of IFAD's approach will be to address these constraints by: consolidating the agrarian reform process and promoting incentives and enterprise through secure titles to land and other assets, especially by the poor; re-orienting existing institutions, or creating new ones, to deliver agricultural inputs, technology, advice to farmers, training, credit and market information to the increasing number of small-scale private farms emerging across the country; and rehabilitating necessary physical and social infrastructure. To ensure that its actions and interventions in all these respects respond to the needs of the intended beneficiaries, IFAD will follow a participatory approach in designing and implementing its actions. As a means to this, and also as a means to effective delivery of inputs and services to the farmers, IFAD will promote the organization of farmers into user groups and associations. Further, with a view to enlarging the impact of its interventions, IFAD will seek to form strategic alliances with major donors, international research institutions, key government agencies and NGOs. Through these alliances, IFAD will seek to promote responsiveness on the part of these other agencies to the needs of the small farmers and rural people living below the poverty line and select key activities to which to give its support.

12. **Project Rationale.** Agriculture is the mainstay of the Kyrgyz economy, and the revitalization of this sector is fundamental to reviving growth and reducing poverty. The newly privatized farms, the majority owned by small and poor farmers, face severe constraints to becoming economically-viable entities due to lack of post-privatization services. Critical to the survival of these new farms are the availability of: productivity-enhancing technologies, technical and farm management advisory services, irrigation water, farm machinery services, credit to purchase needed inputs, and access to markets and market information. Field surveys show that the new farm owners created by the process of land reform either have no knowledge of farming or, having worked in collectivized agriculture, have only narrowly specialized-knowledge in one or two activities under large-scale production conditions. Production, management and business skills for small-scale farming, with a total-farm perspective, are almost non-existent. Farmers now need support, advice and information from an advisory service aware of farmers' needs and geared to respond to them. Farmers respond well to technical and business advice: such advice, however, is sometimes not effective in raising productivity due to the farmers' inability to obtain credit to buy inputs, hire machinery, etc. Location-specific recommendations are required for optimum cropping patterns in different agro-ecological regions. On-farm demonstrations, field trials and adaptive research programmes should focus on farmers' needs and be conducted on-farm, with farmer participation. Links with regional and



international research institutions need to be established to introduce planting material and technologies adaptable to Kyrgyz conditions. In most circumstances, farmers will benefit from mutual cooperation and by organizing themselves in buying inputs, selling their produce, and sharing scarce resources such as irrigation water, farm machinery, etc.

13. The project, through its IFAD-financed components, will be able to respond to these farmer needs. In doing so, it will complement previous initiatives by other donors and by IFAD (e.g., farmer advisory efforts under the ongoing World Bank/IFAD-financed Sheep Development Project and the various small-scale farmer advisory service and credit initiatives being undertaken by several bilateral donors and NGOs; the proposed irrigation water projects of the World Bank and AsDB; and EBRD's support to inputs supply and agro-processing through the Kyrgyz Agri-Business Company).

## PART II - THE PROJECT

### A. Project Area and Targeting

14. The project will be implemented in all six *oblasts* of the country, since the need to revitalize agriculture, support agrarian reforms and provide essential agricultural advice, credit and other services to farmers exist throughout Kyrgyzstan. The project will draw upon the experience from a number of existing donor pilot activities, including: the EU/TACIS-supported ATAS project in Issyk-Kul and Talas; the SDC-supported projects in Nayrn, Dzalalabad and Osh; the GTZ-supported project in Osh; and the World Bank/IFAD-supported activities commenced in Nayrn and Talas under the Sheep Development Project.

15. Agro-ecological conditions vary between and within *oblasts* due to local variations in altitude, topography, rainfall, etc. Population densities also vary. Chui and Talas are the major grain-growing regions, with extensive irrigation. The southern *oblasts*, Osh and Dzalalabad, with their lower altitude, warmer climate and dense population, are suited to cotton and tobacco as important cash crops. In Naryn, with its sparse population and extensive highland pastures, sheep husbandry is the most important occupation. Issyk-Kul, with its favourable climate and landscape, offers potential for crops as well as animal husbandry.

16. The project is targeted to the newly-created farm holdings, in which most of the rural poor are to be found. These farms receive hardly any agricultural support services at present and the project will provide advisory services to them. The strategy will be to reactivate the farming sector as a whole, the collapse of which is one of the major causes of the present high level of poverty in the rural sector. However, a narrower targeting focus, on the poor and disadvantaged among the rural households will be achieved specifically through: (a) loans to small farmers through the project's Farm Development Fund (credit component) will be given collateral-free, through joint-liability groups, and with a loan ceiling, which will make the credit component self-targeting and of little interest to richer households; (b) the project will grant "vouchers" to poor households, which they will be able to use as payment for advisory services; (c) small-scale agricultural machinery will be promoted, such as two-wheeled tractors, that only the smaller farmers are likely to find of interest; (d) adaptive research will be poor-farmer oriented, with field trials and demonstration plots restricted in size to 1/4 ha and 1/8 ha respectively, which again will be of little interest to larger farmers looking for free inputs; (e) to overcome the problem of farms which are too small, these farmers will be assisted to form themselves into groups; and (f) women extension advisors, who will be appointed in all rural advisory development centres (RADCs), will cover the needs and issues related to women.



## B. Objectives and Scope

17. The objective of the project is to improve the productivity, profitability, incentives framework and sustainability of Kyrgyz agriculture by: accelerating the process of agrarian reform and farm restructuring; providing the emerging private farms with advisory (i.e., extension) services, backed by participatory, farmer-led adaptive research; assisting farmers to avail themselves of rural credit recently initiated by other projects, as well as itself providing a line of credit to the poorest farmers with little or no access to credit at present; improving the availability of quality seed by helping to develop the cereal and fodder seed industry; establishing a legal framework, organization and procedures for crop protection and plant quarantine; establishing an agriculture market information system; and strengthening national agricultural management capacity. The goal is to reactivate agricultural production and thereby raise rural household incomes and alleviate poverty, since an overall disruption in the country's agriculture has been a principal cause of widespread poverty.

## C. Components

18. The project will comprise the following components: (a) land and agrarian reform; (b) rural advisory and development services (RADS) (c) farm development fund and pilot activities (credit); (d) seed industry development; (e) crop protection; (f) agriculture market information; and (g) support to project implementation.

19. Of these, IFAD will finance components (b) and (c) only, and these are described below. The other components, which are not under the IFAD loan and are being financed by the World Bank and other donors, are described in Appendix III.

### Rural Advisory and Development Services (RADS)

20. The objective of this component will be to assist the newly-created private farms to undertake profitable farming on a sustainable basis, by making available to them the knowledge that they need, but lack, on private small-scale farming as a business enterprise. As the project-assisted farm restructuring programme proceeds, as many as 140 000 farms will emerge. To be able to effectively service them, the RADS will establish a network of RADCs, one in each of the six *oblasts*. The *oblast* RADCs will open some 44 *rayon*/village-level offices, 4-10 per *oblast* depending upon the *oblast* area and population. RADC *rayon* offices will each have an average of 2-3 mobile advisors (extension agents), about 100 advisors in total. The *rayon* advisors will provide a broad range of information and advice to farmers, and a link between the farmer and other private and public institutions serving the agriculture sector (such as the Centres for Land and Agrarian Reform (CLARs), the Irrigation Department, KAFIC, input suppliers, NGOs, etc.). The *rayon* offices will be backstopped by the *oblast* RADCs, each with 5-6 subject matter specialists (in the fields of agronomy, livestock, agricultural machinery, business management, and women's development). The RADCs will be equipped with audio-visual and training equipment, and supported by a secretariat in Bishkek to provide coordination, training support, monitoring and financial management. The secretariat will have a media unit to produce radio and television programmes on agriculture.

21. The RADCs' main functions will be to advise farmers, on a one-to-one or group basis, in appropriate techniques of farming. The approach will be to encourage farmers to ask for services, following a bottom-up approach that makes the *rayon* advisor accessible to farmers through scheduled visits to different villages, without "pushing" any pre-conceived message or idea. It is then for the farmers to ask for the type of assistance and advice they need. This contrasts with the approach of "delivering" preformulated messages which the farmers may or may not really need.



22. This network of rural advisory services, in order to be most effective, will be backed by: location-specific technology development through field demonstrations and adaptive research; training; group development; and provision of credit. These are reflected as specific components/sub-components in the project's design and costing. The technology development will concentrate on field trials and demonstrations, and these will be on farmers' fields at the farmers' request, as part of the necessary adaptive research. The trials and demonstrations will be conducted by the advisors and farmers in association with the RADC advisors. Contracted services of the Kyrgyz Agrarian Academy (KAA) will be used for the trials and adaptive research. Links will be established with international research centres (such as the International Centre for Agricultural Research in the Dry Areas and the International Service for National Agricultural Research) for developing appropriate technology for small family farms and capacity-building in farmer participatory research techniques. The trials and demonstrations are expected to increase farmer awareness and understanding of the basic principles of plant nutrition and protection, as well as of soil and water management, including the importance of rotations, and proper tillage and irrigation practices. This knowledge is generally lacking, as most of the new farm operators have no prior farming experience. Demonstrations and on-farm experimentation will help translate these principles into practices that increase farm efficiency. This will be a long-term investment in sustainable agriculture. The training programme will be planned primarily by the secretariat to avoid duplication of courses at RADC level, and will be arranged by the *oblast* RADCs. Training will be provided at three levels: training for trainers, training for RADC staff and training for farmers. RADCs will assist farmers in preparing business plans in support of credit applications, and in various forms of group development such as credit, water users, machinery and marketing groups, including associated training. These will enable farmers to organize themselves for obtaining improved services, solving common problems and improving productivity.

23. The advisory services under this project, along with on-going pilot advisory services being implemented by EU/TACIS (ABC and ATAS projects), the SDC and GTZ, and under the on-going IDA/IFAD-assisted Sheep Development Project, are all intended to be closely coordinated and integrated under a common RADS umbrella. The convergence of these various donor-assisted pilot activities into RADS is already underway.

24. The main items to be financed by the RADS component will include refurbishing some buildings for RADCs; laboratory and field equipment and vehicles; incremental operating expenses (including salaries of RADS staff) and technical assistance and training.

### **Farm Development Fund and Pilot Activities (Credit)<sup>2</sup>**

25. The objective of the component is to provide a line of credit to KAFC for on-lending without collateral to poor small farmers who are members of joint-liability groups and who have no access to other sources of credit because they are unable to afford collateral. For this purpose, KAFC will establish a Farm Development Fund of USD 1.5 million. Smallholder groups (SHGs) of poor farmers organized and developed under UNDP's ongoing Poverty Alleviation Pilot Project, or promoted and developed by any other NGO acceptable to KAFC, will be eligible to obtain credit from this fund and the disbursement will be decentralized down to *oblast* level. As a built-in poverty targeting mechanism, there will be a loan ceiling of KGS 5 000 (USD 300) for loans to an individual, graduating to USD 600, based on performance/repayment. Within this loan ceiling, the size of a loan will depend on a client's business plan. A group loan can be up to a multiple of group savings, usually five times. Peer pressure, group monitoring and supervision, joint and several liability, a sound business plan, and supervision of an NGO/social animator will be the main security, and not

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<sup>2</sup> For further details, see Appendix VI.



physical collateral. Technical advice to potential loanees on how to make business plans will be provided by the advisors in the *oblast/rayon* RADCS.

26. In addition to the Farm Development Fund, the component also provides for a Pilot Credit Fund (USD 300 000) to explore innovative methods of financial resource mobilization for the poor, such as Financial Services Associations (FSAs) tried successfully in IFAD projects in other countries.

#### **D. Costs and Financing**

27. Total project costs, including price and physical contingencies, are estimated at USD 29.29 million over the five-year implementation period (Table 1). The financing plan for the project is detailed in Table 2. An IFAD loan of USD 7.92 million will finance the RADS component and the farm development fund and pilot activities (credit) component. A World Bank/IDA loan of USD 14.23 million will finance all other components (land and agrarian reform, seed industry development, crop protection, agricultural market information and support to project implementation). IFAD's contribution will finance equipment, vehicles, training, technical assistance, operating expenses, civil works, and credit. The ongoing livestock advisory services under the earlier IFAD/World Bank Sheep Development Project will be integrated with the more comprehensive overall agricultural advisory services to be included under the ASSP, and those Sheep Development Project-funded activities are counted here as part of the overall cost of advisory services under the new ASSP umbrella. Similarly, advisory services in the ongoing pilot projects being implemented by SDC and GTZ in some districts of the country, closely linked and coordinated with this project, are to be integrated in a country-wide advisory services umbrella. These are counted in the ASSP's financing plan. The SDC and the British KHF will provide technical assistance for the group development/training component (USD 0.37 million) and in support of agrarian reform (USD 0.76 million) respectively. The Government will contribute USD 2.01 million for operation and maintenance costs and incremental salaries, and the beneficiaries will contribute USD 1.25 million for operating expenses and as payment for the advisory services, at a progressively increasing rate.

28. IFAD will separately provide a Special Operations Facility grant of USD 50 000 to finance essential project start-up activities.

**TABLE 1: SUMMARY OF PROJECT COSTS<sup>a</sup>**  
(USD million)

Components	Local	Foreign	Total	% of Foreign Exchange	% of Base Costs
A. Land and agrarian reform	0.81	2.44	3.26	75	13
B. Rural advisory and development services	1.99	1.45	3.44	42	14
Advisory and development services	1.31	1.65	2.96	56	12
Training and secretariat					
Field demonstrations and adaptive research	0.52	0.76	1.28	59	5
Group development	0.33	0.87	1.20	72	5
Group development	<b>4.16</b>	<b>4.73</b>	<b>8.88</b>	<b>53</b>	<b>36</b>
<b>Subtotal</b>					
C. Farm development fund and pilot activities (Credit)	0.01	1.79	1.80	100	7
D. Seed industry development	1.29	6.38	7.66	83	31
E. Crop protection	0.44	0.89	1.33	67	5
F. Agriculture market information	0.62	0.90	1.51	59	6
G. Support to project implementation	0.39	0.38	0.77	49	3
<b>Total base costs</b>	<b>7.70</b>	<b>17.51</b>	<b>25.22</b>	<b>69</b>	<b>100</b>
Physical contingencies	0.26	0.90	1.16	78	5
Price contingencies	2.20	0.72	2.91	25	12
<b>Total project costs</b>	<b>10.16</b>	<b>19.13</b>	<b>29.29</b>	<b>65</b>	<b>116</b>

<sup>a</sup> Discrepancies in totals are due to rounding.



**TABLE 2: FINANCING PLAN<sup>a</sup>**  
(USD million)

Components	IFAD		IFAD (Sheep Development Project) <sup>3</sup>		IDA		British KHF <sup>4</sup> SDC/Helvetas/ Caritas GTZ		Government		Beneficiaries		Total		Foreign Exchange	Local (Excl. Taxes)
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%		
A. Land and agrarian reform	-	-	-	-	2.66	69.6	0.76	19.9	0.34	8.9	0.06	1.5	3.82	13.2	2.74	1.08
B. Rural advisory and development services																
Advisory and development services	1.54	36.7	0.72	17.3	-	-	0.96	22.9	0.49	11.6	0.47	11.3	4.19	14.3	1.58	2.61
Training, and secretariat	2.18	62.1	0.99	28.2	-	-	-	-	0.14	4.0	0.14	2.7	3.51	12.0	3.57	1.75
Field demonstrations and adaptive research	1.41	92.3	-	-	-	-	-	-	0.06	4.0	0.06	4.0	1.53	5.2	0.84	0.69
Group development	0.99	71.8	-	-	-	-	0.37	27.0	0.02	1.3	-	-	1.37	4.7	0.92	0.46
<b>Subtotal</b>	<b>6.12</b>	<b>57.7</b>	<b>1.72</b>	<b>16.2</b>	-	-	<b>1.33</b>	<b>12.5</b>	<b>0.70</b>	<b>6.6</b>	<b>0.67</b>	<b>6.3</b>	<b>10.60</b>	<b>36.2</b>	<b>6.90</b>	<b>5.50</b>
C. Farm development fund and pilot activities (credit)	1.80	100	-	-	-	-	-	-	-	-	-	-	1.80	6.1	1.79	0.01
D. Seed industry development																
Crop breeding	-	-	-	-	1.78	95.1	-	-	-	-	0.09	4.9	1.87	6.5	1.58	0.29
Forage breeding	-	-	-	-	0.47	90.9	-	-	-	-	0.05	9.1	0.51	1.8	0.37	0.14
Super elite and elite seed production	-	-	-	-	1.20	100.	-	-	-	-	-	-	1.20	4.1	1.06	0.15
Commercial seed multiplication	-	-	-	-	1.84	0	-	-	-	-	-	-	1.84	6.3	1.60	0.24
Seed unit in MAWR	-	-	-	-	0.53	100.	-	-	0.05	8.7	-	-	0.59	2.0	0.45	0.13
Official variety testing	-	-	-	-	1.83	0	-	-	0.22	9.8	0.19	8.3	2.24	7.7	1.77	0.47
Seed certification	-	-	-	-	0.43	91.3	-	-	-	-	0.09	16.5	0.52	1.8	0.29	0.23
<b>Subtotal</b>	-	-	-	-	<b>8.10</b>	<b>81.9</b>	-	-	<b>0.27</b>	<b>3.1</b>	<b>0.41</b>	<b>4.7</b>	<b>8.78</b>	<b>30.2</b>	<b>7.12</b>	<b>1.65</b>
E. Crop protection																
Plant quarantine	-	-	-	-	0.58	76.7	-	-	0.18	23/3	-	-	0.76	2.6	0.34	0.42
Plant protection	-	-	-	-	0.74	90.0	-	-	0.08	10.0	-	-	0.82	2.8	0.66	0.16
<b>Subtotal</b>	-	-	-	-	<b>1.32</b>	<b>83.6</b>	-	-	<b>0.26</b>	<b>16.4</b>	-	-	<b>1.58</b>	<b>5.4</b>	<b>1.00</b>	<b>0.59</b>
F. Agriculture market information	-	-	-	-	1.22	68.8	-	-	0.44	25.0	0.11	6.2	1.77	6.1	0.96	0.80
G. Support to project implementation	-	-	-	-	0.94	100.	-	-	-	-	-	-	0.94	3.2	0.40	0.53
<b>Total disbursement</b>	<b>7.92</b>	<b>27.0</b>	<b>1.79</b>	<b>6.1</b>	<b>14.23</b>	<b>49.0</b>	<b>2.09</b>	<b>7.1</b>	<b>2.01</b>	<b>6.9</b>	<b>1.25</b>	<b>4.3</b>	<b>29.29</b>	<b>100.0</b>	<b>19.13</b>	<b>10.16</b>

<sup>a</sup> Discrepancies in totals are due to rounding.

<sup>3</sup> Farmer advisory services for livestock initiated under the ongoing IFAD/World Bank-financed **Sheep Development Project** will be merged with the overall agricultural advisory services to be provided under ASSP/RADS. The amount of funding for the latter that will be provided through the former is reflected in this column.

<sup>4</sup> Details are as under:

**British KHF** will provide USD 760 000 as TA cofinancing for the project's land and agrarian reform component

**SDC** will provide USD 370 000 as TA cofinancing for group development/training; and USD 534 000, which are anticipated to be provided under the **Helvetas/Caritas** ongoing farmer support programmes in Naryn, Talas and Osh, are treated as part of the overall donors-government coordinated RADS/ASSP umbrella

**GTZ** is anticipated to provide USD 431 000 under its ongoing advisory services support to farmers in Osh and Issyk-Kul; this is reflected as part of this project as it would be under the overall donors-government coordinated RADS/ASSP umbrella.





## E. Procurement, Disbursement, Accounts and Audit

29. **Procurement.** The Project Implementation Unit (PIU) will be responsible for all procurement under the project. A procurement workshop will be held in Bishkek immediately after the project effectiveness. Procurement of goods and services will follow procedures acceptable to IFAD. Contracts for civil works costing more than USD 200 000 will be through International Competitive Bidding (ICB), between USD 200 000 and USD 100 000 through Local Competitive Bidding (LCB), and below USD 100 000 through Local Shopping (LS). Goods, equipment and vehicles costing more than USD 200 000 will be procured through ICB, between USD 200 000 and USD 50 000 through International Shopping and less than USD 50 000 through LS. Consulting services will be hired following IDA procedures. Expenditures on maintenance of vehicles, office consumables and other operating expenses will be in accordance with the Government's procurement practices. For technical assistance and training, contracts valued at USD 50 000 and above for firms and all contracts for individuals will be subject to prior review. All terms of reference and selection criteria will also be subject to prior review. Other contracts will be subject to ex post review.

30. **Disbursement.** The IFAD and IDA loans will be disbursed over a period of five years. The closing date for the IFAD loan will be 31 December 2003. Funds will be disbursed through two special accounts, one for IFAD and one for IDA, to be opened in a bank acceptable to IDA and IFAD. The authorized amounts for the IFAD and the IDA special accounts will be USD 500 000 and USD 1 million respectively. IFAD's contribution will finance civil works (rehabilitation of office/laboratory buildings), goods (laboratory equipment, field equipment, vehicles and office equipment), operating expenses, incremental salaries, credit, technical assistance and training.

31. **Accounts and Audit.** A financial specialist/accountant hired by the PIU through project-provided TA will develop a financial management system, including accounting, audit and reporting. Annual accounts for the project components to be financed by IFAD, including statements of expenditure and special account for each fiscal year, will be audited in accordance with generally accepted auditing standards by an independent auditor acceptable to IFAD and to IDA. Implementing agencies under contract with PIU will provide annual financial statements for the components under their management, which will also be included in such audit. Audit reports and audited statements will be submitted to IFAD and to IDA within six months of the close of the fiscal year. RADS will submit separate audited accounts within four months of the close of the fiscal year.

## F. Organization and Management

32. **Project Implementation.** MAWR will have overall responsibility for implementing the project, with specific departments/units within MAWR designated to implement the different individual components. An inter-agency project steering committee will provide guidance and oversight. A PIU, headed by a project director, will be responsible for coordination. The IFAD-financed RADS component, however, will be implemented by the RADS Foundation, established as an autonomous non-profit organization, answerable to a rural advisory steering council (RASC), with a chairman elected by Council members and a small secretariat headed by a general manager. The advisory services will be managed primarily at the *oblast* level by the RADC manager and guided by the *Oblast* Steering Councils (OSCs) with overall coordination by the secretariat at project headquarters. The KAA will participate in the implementation of the adaptive research component by providing the services of researchers on a contractual basis. The IFAD-financed credit component (Farm Development Fund) will be managed by the KAFC and its regional branches, with UNDP's technical assistance support for organizing farmer groups.



33. **Beneficiary Participation.** The IFAD-financed RADS component will use a participatory approach, ensuring that farmers gradually become responsible for managing and financing the services they need. The RADCs will function under autonomous, decentralized management structures with participation from local farmers, and will be directed by steering councils at the central and *oblast* levels, composed predominantly of farmers' representatives. Emphasis will be on undertaking farm advisory work through organized farmer groups. Demonstration and field trials will be planned and conducted on farmers' fields, with farmer involvement. At the *rayon* level, the advisors will be required to respond to farmer needs, and will follow a system of informal consultation with farmers. More formal beneficiary consultation will also be established. Beneficiary workshops will be held annually in each *oblast* to assess farmers' needs and draw out from the farmers their assessment of the service they are receiving. In recognition of women's role in farming work, each *oblast* RADC will have a woman women's advisor (in addition to women women's advisers in the *rayons*) who will work with the women, particularly women-headed households, and focusing on women's activities. Women will be encouraged into joint-liability groups for credit. Beneficiaries will begin to pay for the advisory services, even if in small amounts initially, from the outset of the project, with progressive increase in the rates of payments over the project period.

34. **Monitoring and Evaluation.** Monitoring for the RADS component will be the responsibility of the General Manager of RADS and the RADC managers in the *oblasts*, and will provide the basis for the quarterly and annual reports. The PIU and its expatriate team will set up the RADS management information system. KAFIC will collect management information specific to the operations of the Farm Development Fund. Impact monitoring will be undertaken through contract with an academic or other institution rather than by setting up a permanent monitoring unit. A baseline survey will be conducted in project year (PY) 1. A mid-term review will be undertaken in PY 3. An independent evaluation will be made at project completion.

## G. Economic Justification

35. **Benefits and Beneficiaries.** The project will improve the enabling environment for agriculture, by making available needed information, technical and business advice and inputs, resulting in increased yields and production. It is estimated that production of the preferred crop, wheat, will increase by 80 000 t. Based on earlier ATAS experience, out of the eventually expected 140 000 farms, some 45% are likely to have had contact with project services by full project development; of these, about half will be expected to adopt the recommendations made. Thus, the project beneficiaries will be about 35 000 of the emerging new farms. As regards small farmer credit, about 5 700 households are likely to have benefited by full project development. Percentage increases in gross margins for crops will be of the order of 62% for wheat, 76% for barley, 71% for maize and 37% for cotton. Net farm income per household will increase by an average of 55%. The benefits arising from the project's institutional aspects include: acceleration of the process of farm restructuring and distribution of land and property shares to individual households; expanded privatized management of formerly collectivized farms; stimulus to private entrepreneurship and initiative; improved access of farmers to market information on profitable opportunities; creation of a sound legislative and effective organizational basis for plant protection and quarantine; introduction of regulatory services for improved seed quality and varietal purity; and the creation of a network of grass-roots farmer organizations, fulfilling a variety of beneficial functions for the sustainability of agriculture, such as being effective receiving mechanisms for inputs and services.

36. **Economic Analysis.** A cost/benefit analysis has been undertaken by using economic values, and aggregating farm models and project costs at the national level. Economic prices have been calculated for major tradable products using prices and price projections available in November 1997. The economic rate of return for the project as a whole is estimated at 21%. Sensitivity analysis



undertaken shows that the project can sustain more than a 20% reduction in benefits, more than 20% increase in costs, and more than a 25% reduction in extension coverage x adoption rates.

## H. Risks

37. A possible risk that agricultural production may not revive, due to lack of credit to finance associated inputs, will be mitigated by credit provided by the World Bank-supported Rural Finance Project, the AsDB-financed credit unions and other small ongoing bilateral and NGO-supported credit schemes. These will supplement the IFAD-financed line of credit in this project, with its built-in targeting mechanisms and TA support from UNDP. Another risk, of whether the project's advisory services will sustain beyond project completion, has been mitigated by: making RADS an autonomous body independent of Government, with its own organization and management structure; creating a light structure which the farmers can afford to pay, and with a minimum of office, land, laboratories and research farms, etc.; and instituting cost recovery from beneficiaries from the outset, though initially on a cautious and modest scale. The risk that government counterpart funding may fail is mitigated by keeping that funding low, recovering costs from the beneficiaries, and the expectation that the Government will be able to utilize funds released as a result of the discontinuation of various direct government transfers currently in force. A fourth risk, of project implementation delays and poor implementation capacity, will be mitigated by the fact that pilot activities have already been underway, nucleus advisory services under these and under the SDP already exist in several *oblasts*, the PIU has already been established, key TA advisors are already in place, and considerable TA, training and management support will be provided under the project, including an assistant general manager to look after training and capacity-building. A further risk, of slow adoption of new technologies, will be reduced by closely associating farmers with the adaptive research to allow rapid feed-back on possible constraints to adoption, by the increased access to markets and to inputs through a progressive liberalization of trade, and by greater access to credit. Finally, the possible risk of research organizations not responding to farmer priorities will be removed by siting participatory trials and demonstrations in the RADCs and in the farmers' fields, and having these controlled by farmers themselves, with support from the RADC advisors; and will be mitigated by conducting the adaptive research through performance-related, monitorable contractual arrangements with individual research scientists.

## I. Environmental Impact

38. The project is expected to have a positive impact on the environment and has been given a "C" rating. The land and agrarian reform is expected to lead to long-term investment in soil quality. The advisory services for crops (which in the past tended to receive high levels of pesticides, such as on vegetables), will raise awareness among farmers and introduce Integrated Pest Management methods. The plant quarantine sub-component will reduce the risk of introducing new pests into the country and will put in place a system to regulate and control the supply of pesticides, as well as their distribution, handling and utilization. This will allow the banning of particularly toxic chemicals, control of adulteration in pesticides (which result in higher levels of application), and introduction of proper labelling. These activities will complement the work of advisory and adaptive research services and result in safer handling and lower utilization of crop chemicals.

## J. Innovative Features

39. The project's innovative features, in the Kyrgyz context, include: breaking away from traditional structures, the farmer-advisory service will be independent of centralized government control, and will be directed by autonomous farmer-dominated bodies at the central and *oblast* levels; this will be backed by participatory farmer-led adaptive research conducted on poor farmers' fields;



beneficiaries will begin to pay for the advisory services from the very start, even if in small amounts to begin with; a “voucher” system will be included (paragraph 16(b)), to enable the advisory services to be targeted to poor farmers; collateral-free loans will be offered to resource-poor farmers, through joint liability groups; an alternative approach to small farmer credit will be tested on a pilot scale, in which a range of financial services can be developed rapidly from the grassroots, through farmers’ own FSAs; small-scale agricultural machinery not used in the former large-scale systems, will be introduced and tested for appropriateness to the needs of the newly-privatized small scale farmers and farmer groups.

### **PART III - LEGAL INSTRUMENTS AND AUTHORITY**

40. A loan agreement between the Kyrgyz Republic and IFAD constitutes the legal instrument for extending the proposed loan to the borrower. A summary of the important supplementary assurances included in the negotiated loan agreement is attached as an annex.

41. The Kyrgyz Republic is empowered under its laws to borrow from IFAD.

42. I am satisfied that the proposed loan will comply with the Agreement Establishing IFAD.

### **PART IV - RECOMMENDATION**

43. I recommend that the Executive Board approve the proposed loan in terms of the following resolution:

RESOLVED: that the Fund shall make a loan to the Kyrgyz Republic in various currencies in an amount equivalent to five million nine hundred thousand Special Drawing Rights (SDR 5 900 000) to mature on and prior to 15 November 2037 and to bear a service charge of three fourths of one per cent (0.75%) per annum, and to be upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board in this Report and Recommendation of the President.

Fawzi H. Al-Sultan  
President



**SUMMARY OF IMPORTANT SUPPLEMENTARY ASSURANCES  
INCLUDED IN THE NEGOTIATED LOAN AGREEMENT**

(Loan Negotiations concluded on 13 March 1998)

1. (a) The Government of the Kyrgyz Republic (“the Government”) shall make available to the Rural Advisory and Development Services Foundation (RADSF) such amounts as may be allocated from time to time for carrying out the rural advisory and development services component, except incremental credit, of the project, as a grant under the RADSF Subsidiary Agreement, acceptable to IFAD.

(b) The Government will make available to KAFC such amounts as may be allocated from time to time for carrying out the incremental credit component of the project, as a grant under the KAFC Subsidiary Agreement, acceptable to IFAD.

(c) The Government shall cause RADSF and KAFC to, respectively, apply the proceeds of the loan to the financing of expenditures on Part B of the project in accordance with the provisions of the loan agreement.

2. The Government will cause RADSF to open and thereafter maintain in a bank, satisfactory to IFAD, a project account in KGS, held in Bishkek, into which the Government will deposit an initial amount equivalent to USD 25 000 from its own resources and will thereafter semi-annually in advance replenish the project account by depositing the required local counterpart funds to be provided by the Government as estimated in the Annual Work Programme and Budget for the project, satisfactory to IFAD. RADSF will be fully authorized to operate the project account.

3. The Government will contribute to KAFC’s capital fund, in instalments, an aggregate amount equivalent to SDR 1 120 000 as its capital contribution for establishing and maintaining a Farmer Development Fund (FDF) for providing credit to poor rural households meeting criteria acceptable to IFAD. The Government will disburse the said capital contribution in instalments to be agreed between the Government, IFAD and KAFC, so as to maintain an agreed positive balance in the FDF account.

4. The Government will take reasonable measures to ensure that the project is carried out with due diligence in regard to environmental factors and in conformity with national environmental legislation and any international environmental treaties to which the Government may be a party, including the maintenance of appropriate agricultural pest management practices, where applicable. To that end, the Government will ensure that the pesticides procured under the project do not include any pesticide, either proscribed by the International Code of Conduct on the Distribution and Use of Pesticides of the Food and Agriculture Organization of the United Nations (FAO), as amended from time to time, or listed in Tables 1 (Extremely Hazardous) or 2 (High Hazardous) of the World Health Organization (WHO) Recommended Classification of Pesticides by Hazard and Guidelines to Classification 1996-97, as amended from time to time.

5. The Government will cause KAFC to establish and maintain a revolving fund for the project for keeping therein the principal and interest, net of operating and other expenses, received on the credits made to farmers from the proceeds of the loan provided for the incremental credit component of the





project. Amounts available in the revolving fund shall be used by KAFC for the expansion of credit facilities to poor rural households meeting criteria acceptable to IFAD.

6. The Government will give permission to KAFC to maintain, on a continuous basis, a positive balance in its project account.

7. During the execution of the project, the Government and IFAD will periodically review the interest rates to be applied to the credits to be made out of the proceeds of the loan. The Government, if necessary, shall take appropriate measures, consistent with the policies of the Government in order to harmonize the interest rates on credits with IFAD's policy on relending rates. In the implementation of the above, the Government will ensure that KAFC minimizes its costs in executing the credit activities as it affects the efficiency and sustainability of its operations.

8. KAFC will establish an FDF for onlending, without collateral, to poor small farmer families that become members of joint-liability groups and that have little or no access to other sources of credit. Groups of poor rural households organized by UNDP under its ongoing pilot field programmes for lending to joint-liability groups of poverty-affected rural people, or similar groups and individual members thereof, promoted by NGOs or other organizations, acceptable to KAFC and IFAD, will be eligible to obtain credit from the FDF.

9. KAFC will execute a memorandum of understanding with UNDP including, *inter alia*, arrangements by UNDP for technical assistance to strengthen the process of training and group formation.

10. KAFC will provide loans for amounts not exceeding initially KGS 5 000 to an individual, increasing to KGS 10 000, based on performance and repayment. Within these loan ceilings, the size of a loan will depend on a recipient's simplified production plan. A group loan may be up to a multiple of a group's savings, initially five times. The loan ceiling will be reviewed and revised periodically through agreement between KAFC and IFAD.

11. Peer pressure, group monitoring and supervision, joint and several liability, a sound production plan and supervision by NGOs and social animators will be used as the main security for loans, and not collateral.

12. Technical assistance advice to potential beneficiaries of the FDF on how to make business plans will be obtained from the advisers in the *oblast* and *rayon* RADCs.

13. Loans will be given for, *inter alia*, seasonal inputs, livestock, equipment and machinery and construction of farm structures. The first loan will cover only short-term seasonal working capital. Based on the track record, repayment and performance of a group, the second loan will include activities requiring longer maturity, up to two years. The groups and individuals in subsequent lending cycles will be eligible for longer maturities, up to a maximum of five years, linked to sound production plans and track performance.

14. The KAFC will carry out suitable expansion in its staff and facilities at *oblast* branch office levels to accommodate the needs of the expanded activities to be brought about by the project, and enable the decentralization of activities down to the *oblast*.



15. The credit officers of KAFC will screen the loan proposals and satisfy themselves that the production plan and cash flow projections are realistic. The branch credit officer of KAFC will be responsible for monitoring group development and group loans and will have close liaison with the UNDP-financed group animators.
16. KAFC will obtain the permission of the Government to maintain, on a continuous basis, a positive balance in its FDF account to compensate for some of the overhead expenses KAFC incurs in consequence of the project.
17. KAFC will submit to IFAD, for its review and comments, its draft Annual Business Plan no later than two months before the commencement of each fiscal year of the Government. KAFC will consider the comments of IFAD on the said Annual Business Plan prior to its finalization.
18. KAFC will, if so needed, provide office accommodation within allocated KAFC buildings at reasonable rates to the agencies working with KAFC for the FDF, including, *inter alia*, NGOs, community-based organizations and UNDP.
19. KAFC will prepare, in consultation with IFAD, revisions to the KAFC Operational Manual.
20. KAFC will delegate power to *oblast* offices to approve group loans up to KGS 50 000 per loan and aggregate loans up to KGS 500 000, or as may be agreed with IFAD.
21. The recipients of individual or group loans issued by KAFC under the FDF will carry out the purchase of, *inter alia*, farm inputs, small equipment and breeding animals, using local commercial practices.
22. KAFC will collect management information for the operation of the FDF through its management information system.
23. In accordance with its Charter, RADSFC will be an autonomous foundation. Its Secretariat, headed by a General Manager, will function under the overall guidance of RASC and its Chairman and will be responsible for the financial control of the RADCs and for monitoring their performance. The RADCs will be responsible for the day-to-day management of the rural advisory services under the project.
24. The PIU will provide coordination between the various components of the project and will also exercise responsibility for procurement and for monitoring of progress.
25. Until the RASC has been established and becomes fully operational, the General Manager appointed and the extension advisors have taken full responsibility for all project activities, the PIU and the project Director will remain responsible for initiating project activities. With the appointment of the General Manager, the role of the PIU in the setting up of the RADS will be reduced to: procurement of project needs; overall financial supervision; coordination; and project monitoring.
26. The RASC will oversee the implementation of the component through approval of annual work plans and budget prepared by the Secretariat in collaboration with RADCs. Each RADC will prepare an annual work plan and budget using the format and schedule agreed with IFAD, for approval by RASC and review by IFAD during project supervision.
27. Each RADC will prepare its annual work plan with beneficiary participation. These will be amalgamated by RADSFC Secretariat into the project's Annual Work Programme and Budget, which





will be submitted for approval to IFAD. The draft Annual Work Programme and Budget will be submitted no later than three months before the commencement of each fiscal year of the Government. The RADSf will consider the comments of IFAD on the said programme and budget prior to its finalization.

28. In the sequence of opening *rayon* centres, the RADCs will select the remoter *rayons* first.

29. RADSf will prepare by the project start-up date a plan for the progressive integration and merger, under a common RADS framework, of the ongoing donor-supported advisory services operating in various *oblasts* and *rayons*, complementary to the project.

30. The RADSf will arrange training for trainers, staff and beneficiaries, including exchange visits within and outside the country.

31. RADSf will organize the holding of farmer events and field days. Activities will focus, *inter alia*, on: the introduction of farmers to successful groups established for various purposes, such as joint-liability credit groups; training in group development, holding group meetings, and keeping records; marketing techniques and opportunities; purchasing and correct application of inputs; budgeting, cash flows, cash management and gross margins; and credit sources, application procedures and repayment.

32. The RADSf will use a participatory approach to advisory services, ensuring that farmers gradually become responsible for managing and financing the services they need. The RADCs will function under autonomous, decentralized management structures with participation from local farmers, and will be directed by steering councils at the central and *oblast* levels, composed predominantly of farmers' representatives. Demonstration and field trials will be planned and conducted on farmers' fields, with farmer involvement. Services of scientists will be hired for this purpose from the KAA and other sources on a competitive contractual basis.

33. RADSf will ensure that emphasis is placed on undertaking farm advisory work through organized farmer groups.

34. RADSf will arrange beneficiary workshops annually in each *oblast* to assess farmers' needs and to obtain an assessment from farmers of the service they are receiving.

35. Each *oblast* RADC will have a female women's adviser, who will work with the women, particularly women-headed households, focusing on women's activities. Women will be encouraged to become members of joint-liability groups for credit.

36. RADSf will make arrangements for the project beneficiaries to begin paying for the advisory services from the very start of the project, with a progressive increase in the rates of payments over the project implementation period. RADSf will, within six months of the effectiveness of the loan, submit to IFAD a strategy and action plan for instituting a system of payment and cost recovery from the beneficiaries.

37. With a view to assisting the poor rural households to benefit from advisory services, RADSf will introduce a voucher system, under which identified poor households will be issued special vouchers which they will be able to use in payment for such services.



38. RADSF will collaborate with KAFC and UNDP in assisting credit groups in resolving technical issues and advising them on credit-based investments and business plans. It will provide an ongoing technical support role for such groups during the production period, make available market information at harvest time, and advise on market opportunities and techniques.

39. The RADSF Secretariat will, in consultation and collaboration with KAFC, administer a pilot credit fund, using amounts from the loan, to explore innovative approaches to financial resource mobilization for poor rural households.

40. RADSF will carry out a baseline survey during the first year of the project.

41. The General Manager of RADSF and the managers of RADCs will be responsible for monitoring the project in the *oblasts*. The project will be monitored at two levels. The first will entail a routine internal management information system (MIS), which will form the basis of the quarterly and annual reports. RADS will use simple physical indicators, including financial reports, a number of farm visits and group meetings to monitor the project.

42. A Mid-Term Review (MTR) of the project will be carried out jointly by the RADSF, KAFC and IFAD, with the assistance of the Government, no later than the third year of the implementation of the project. The MTR will, *inter alia*, be used to evaluate the achievement of the objectives of the project and its constraints, as well as such design reorientation as may be required to achieve the said objectives and remove the said constraints.

43. No withdrawals will be made from the loan account in respect of payments made for expenditures:

- (a) for the part of the project to be carried out by RADSF until the Government shall have:
  - (i) caused the establishment of RADCs in each *oblast* and appointed the managers in each of the RADCs;
  - (ii) prepared an action plan and timetable, acceptable to IFAD, for the appointment of technical and support staff in the *oblast* and *rayon* centres;
  - (iii) opened, and deposited an amount equivalent to USD 25 000 into the project account for RADSF, as the first instalment of its counterpart contribution to the financing of the project; and
  - (iv) prepared and submitted to IFAD an action plan and time frame for the recruitment of the international and local long-term consultants under the project.
- (b) for the part of the project to be carried out by KAFC, until:
  - (i) the Government, UNDP and KAFC shall have executed a framework agreement, acceptable to IFAD;
  - (ii) KAFC shall have appointed a special manager for the FDF, strengthened KAFC's *oblast* offices through the provision of more staff and equipment, and delegated authority to *oblast* managers for loan approvals and other appropriate actions; and
  - (iii) KAFC shall have revised its existing credit manual, satisfactory to IFAD,



incorporating new elements to ensure the effective operation of its lending to poor rural households through the FDF.

44. The following are specified as additional conditions precedent to the effectiveness of the loan agreement:

- (a) RADSF shall have been established and registered, to the satisfaction of IFAD, the RASC and the Oblast Steering Committees (OSCs) shall have been established, the latter in each of the six *oblasts*, and the Chairman of RASC and the General Manager of the Secretariat of RASC shall have both been appointed, all acceptable to IFAD; and
- (b) an action plan and a timetable shall have been prepared and agreed by IFAD for the integration of IFAD-financed advisory services under the Sheep Development Project with the more comprehensive advisory service to be created under the project.



## COUNTRY DATA

## KYRGYZSTAN

<b>Land area (km<sup>2</sup> thousand) 1994 1/</b>	<b>192</b>	<b>GNP per capita (USD) 1995 2/</b>	<b>700</b>
<b>Population (million) 1995 1/</b>	<b>5</b>	<b>Average annual real rate of growth of GNP per capita, 1985-95 2/</b>	<b>-6.9</b>
<b>Population density (population per km<sup>2</sup>) 1995 1/</b>	<b>24</b>	<b>Average annual rate of inflation, 1985-95 2/</b>	<b>172.3</b>
<b>Local currency</b>	<b>Som</b>	<b>Exchange rate: USD 1 =</b>	<b>KGS 17.5</b>
<b>Social Indicators</b>		<b>Economic Indicators</b>	
Population (average annual rate of growth) 1980-95 1/	1.5	GDP (USD million) 1994 1/	3 028
Crude birth rate (per thousand people) 1995 1/	25	Average annual rate of growth of GDP 1/	
Crude death rate (per thousand people) 1995 1/	8	1980-90	n.a.
Infant mortality rate (per thousand live births) 1995 1/	30	1990-95	-14.7
Life expectancy at birth (years) 1994 3/	67.8	Sectoral distribution of GDP, 1995 1/	
Number of rural poor (million) 1/	1.7	% agriculture	44
Poor as % of total rural population 1/	52.2	% industry	24
Total labour force (million) 1995 1/	2	% manufacturing	n.a.
Female labour force as % of total, 1995 1/	47	% services	32
<b>Education</b>		Consumption, 1995 1/	
Primary school enrolment (% of age group total) 1993 1/	n.a.	Government consumption (as % of GDP)	23
Adult literacy rate (% of total population) 1994 3/	97.0	Private consumption (as % of GDP)	67
<b>Nutrition</b>		Gross domestic savings (as % of GDP)	10
Daily calorie supply per capita, 1992 3/	n.a.	<b>Balance of Payments (USD million)</b>	
Index of daily calorie supply per capita (industrial countries=100) 1992 3/	n.a.	Merchandise exports, 1995 1/	409
Prevalence of child malnutrition (% of children under 5) 1989-95 1/	n.a.	Merchandise imports, 1995 1/	610
<b>Health</b>		Balance of trade	- 201
People per physician, 1993 1/	303	Current account balances (USD million)	
People per nurse, 1993 1/	105	before official transfers, 1995 1/	- 331
Access to safe water (% of population) 1990-96 3/	n.a.	after official transfers, 1995 1/	- 288
Access to health service (% of population) 1990-95 3/	n.a.	Foreign direct investment, 1995 1/	15
Access to sanitation (% of population) 1990-96 3/	n.a.	Net workers' remittances, 1995 1/	n.a.
<b>Agriculture and Food</b>		Income terms of trade (1987=100) 1995 1/	n.a.
Cereal imports (thousands of metric tonnes) 1994 1/	120	<b>Government Finance</b>	
Food imports as percentage of total merchandise imports 1993 1/	n.a.	Overall budget surplus/deficit (as % of GDP) 1994 1/	n.a.
Fertilizer consumption (hundred grams of plant nutrient per arable ha) 1994/95 1/	197	Total expenditure (% of GDP) 1994 1/	n.a.
Food production index (1989-91=100) 1995 1/	n.a.	Total external debt (USD million) 1995 1/	610
Food aid in cereals (thousands of metric tonnes) 1994-95 1/	19	Total external debt (as % of GNP) 1995 1/	14.9
<b>Land Use</b>		Total debt service (% of exports of goods and services) 1995 1/	4.8
Agricultural land as % of total land area, 1994 1/	52	Nominal lending rate of banks, 1995 1/	n.a.
Forest and woodland area (km <sup>2</sup> thousand) 1990 1/	7	Nominal deposit rate of banks, 1995 1/	n.a.
Forest and woodland area as % of total land area, 1990 1/	4		
Irrigated land as % of arable land, 1994 1/	70.4		

n.a. not available.

Figures in italics indicate data that are for years or periods other than those specified.

1/ World Bank, *World Development Report*, 1997

2/ World Bank, *Atlas*, 1997

3/ UNDP, *Human Development Report*, 1997

**PREVIOUS IFAD LOAN/GRANT TO KYRGYZSTAN**

<b>Project Name</b>	<b>Initiating Institution</b>	<b>Cooperating Institution</b>	<b>Lending Terms</b>	<b>Board Approval</b>	<b>Loan Effectiveness</b>	<b>Current Closing Date</b>	<b>Loan/Grant Acronym</b>	<b>Currency</b>	<b>Approved Loan/Grant Amount</b>	<b>Disbursement (as % of approved amount)</b>
Sheep Development Project	World Bank: IDA	World Bank: IDA		14 Sep 95	02 May 96	30 Jun 01	G - I - 3 - KG	USD	45 000	51.6%
Sheep Development Project	World Bank: IDA	World Bank: IDA	HC	14 Sep 95	02 May 96	30 Jun 01	L - I - 390 - KG	SDR	2 350 000	18.7%





## PROJECT DESCRIPTION

1. The project will comprise the following components: (i) support to farm re-structuring under the land and agrarian reforms; (ii) rural advisory and development services (RADS); (iii) poor farmer credit (Farm Development Fund); (iv) seed development; (v) crop protection; (vi) agriculture market information; and (vii) project implementation support.

### Support to Farm Restructuring under the Land and Agrarian Reform

2. Under this component, the project will: (a) strengthen the *oblast* and *rayon* CLARs, village governments, and farmer groups to effectively carry out grass-roots level responsibilities for farm restructuring; (b) build up the State Agency for Land Management and Land Resources (SALMLR) capacity for physical demarcation of land boundaries and issue of land certificates, by providing essential equipment and staff training; (c) strengthen the Republican Centre for Land and Agrarian Reform (RCLAR) in carrying out programme coordination and implementation, public information preparation and dissemination, monitoring and evaluation, and management of the Agricultural Land Redistribution Fund (ALRF); and (d) help resolve legal aspects of land and agrarian reform and land market development. To implement these, the project will finance technical assistance, training, office equipment, vehicles and incremental operating expenditures.

### Rural Advisory and Development Services (RADS)

3. This component, which is financed exclusively under the IFAD loan, is described in the main text, paragraphs 21-25.

### Farm Development Fund and Pilot Activities (Credit)

4. This component, which is also financed exclusively under the IFAD loan, is described in the main text, paragraphs 26-27.

### Seed Development

5. The project will assist in establishing a viable, self-sustaining, seed industry, providing farmers with good quality seed of improved varieties. For this, the project will: (a) support the acquisition and development of plant varieties including the use of international finished germplasm for cereals and forage; (b) rehabilitate selected facilities for cereal and forage seed production, processing and storage; (c) demonstrate seed production on pilot farms to promote the development of a private commercial seed sector; (d) strengthen, first, MAWR's capacity to develop and implement seed policy and second, its regulatory services for variety testing, variety registration and seed certification; (e) establish a legal framework and procedures for the protection of plant breeders' rights; and (f) support publication and dissemination of official variety testing results and seed industry information. For these purposes, the project will finance: laboratory and farm equipment; seed-cleaning equipment; repair of farm buildings; cereal varieties obtained from International Agricultural Research Centres (IARCs); TA, training and study tours for technical staff and seed growers; working capital requirements; incremental salaries; and operating costs.

### Crop Protection and Plant Quarantine

6. The overall objective of the component is to assist the Government to develop pest management systems for the country that warrants user safety, public health and environmental and



agronomic sustainability. The project will not directly finance the import or purchase of pesticides, but help develop a system of sustainable pest management, by (i) on the one hand, assisting the Government to develop the framework and tools to ascertain the use and marketing of appropriate and safe pest control methods; and (ii) educating farmers in safe and sustainable pest prevention and control. The project-assisted RADS will be the vehicle available to the Government, to reach integrated pest management (IPM) messages to farmers and farmer groups. The project will finance critical facilities for the operations of the two laboratories and the six *oblast*-level centres, including vehicles, computers, communication equipment; technical assistance and staff training; and incremental operating costs.

7. In the sphere of plant quarantine, the project will rehabilitate on a pilot basis quarantine facilities at two sites (Bishkek and Osh) to improve quarantine controls on imported plants and plant produce consignments, and finance: (i) vehicles, computers and office equipment; (ii) membership of the European Plant Protection Organization; (iii) technical assistance to review quarantine regulations and procedures; and (iv) incremental operating expenses

### **Agriculture Market Information**

8. The project will provide equipment, technical assistance and training for the establishment of a nation-wide Management Information System (MIS), building upon the pilot project which is currently underway in two *oblasts*, Talas and Issyk-Kul, with financing provided by the British Know How Fund (KHF). The MIS will collect, process, and disseminate agricultural market information for the benefit of producers, processors, traders and policy-makers. It will help increase the transparency of market transactions; transmit incentives and opportunities to agricultural producers; improve producers' bargaining position; stimulate competition among traders; and expand processors' and consumers' choices in product selection. The project will also include support for: updating standards and grades for priority commodities, especially those intended for export to the Commonwealth of Independent States and other countries; dissemination of information on standards and grades; preparing legal framework for enforcing the use of standards and grades in market transactions; and strengthening MIS to report market information with reference to standards and grades.

### **Project Implementation Support**

9. MAWR will establish a PIU to coordinate overall project implementation. The implementation of individual components/activities will be entrusted to respective MAWR departments, SALMLR, Agrarian Academy (Crop Research Institute, CRI; Forage and Pasture Research Institute, FPRI); the seed farms; the RADS national secretariat and RADCs. The project will provide for financing of PIU's management costs including the cost of a national project director; an expatriate consultant and national procurement and financial management specialists.



**LOGICAL FRAMEWORK**

Narrative Summary	Key Performance Indicators	Monitoring and Supervision (Means of Verification)	Critical Assumptions/Risks
<p><b>Goal</b></p> <p>Facilitate agricultural recovery to increase the sector's contribution to overall economic growth; increase rural incomes; and alleviate rural poverty.</p> <p>Consolidate structural reforms; and strengthen institutional capacity.</p>	<p>Measurable improvement in economic growth; agricultural productivity, profitability and sustainability; increases in rural incomes; reduction in poverty and related social expenditures.</p>	<p>National statistics on: overall economic growth; agricultural growth; agricultural GDP per capita; agricultural production and productivity (annual); agricultural incomes, by farm size and per capita; rural population in poverty and absolute poverty; and trends in social expenditures.</p> <p>Farm management surveys covering a sample of crops and non-crop activities, farms and enterprises;</p> <p>Rural household income and expenditure surveys;</p> <p>Donors' economic reports and sector studies.</p>	<p>Continued macroeconomic stability;</p> <p>Political support for: processes of land reform; farm restructuring; farmer access to support services; phasing-out of remaining government interventions and promoting competitive marketing.</p>
<p><b>Project Development Objective:</b></p> <p>Improve incentive framework for and productivity, profitability and sustainability of Kyrgyz agriculture. This will be done by means of assisting the government in:</p> <p>(a) implementing land and agrarian reforms;</p> <p>(b) providing emerging private farms with advisory and development services and training (in conjunction with farm trials, farm demonstrations and adaptive research);</p> <p>(c) providing credit to resource poor farmers</p> <p>(d) developing seed industry;</p> <p>(e) establishing legal bases, organizations and procedures for plant protection and quarantine services;</p> <p>(f) establishing agricultural market information system; and</p> <p>(g) capacity- building in MAWR.</p>	<p>Physical outcomes in terms of land and property shares distributed; number of farms restructured and new farms created; farm management changes in terms of greater use of private (as against collective) management structures;</p> <p>Improvements in farm productivity, profitability, viability, and sustainability of private farming;</p> <p>Improvements in farmers' access to inputs, including credit, quality seeds, advisory and adaptive research services; crop protection; and market information.</p>	<p>Concurrent monitoring of key activities including PIU progress reports;</p> <p>IDA/IFAD supervision reports,;</p> <p>IDA/IFAD mid-term review; RADC surveys of farm and crop budgets;</p> <p>Prepare Implementation Completion Report (ICR) jointly with IDA/IFAD.</p>	<p>Macroeconomic conditions sufficient to stimulate increased agricultural production.</p>





Narrative Summary	Key Performance Indicators	Monitoring and Supervision (Means of Verification)	Critical Assumptions/Risks
<p><b>Project Outputs:</b></p> <p><b>IFAD-financed Component: Rural Advisory and Development Services, and Farm Development Fund (Credit)</b></p> <p>Assist newly created farms through the processes of land reform to establish profitable farming and increase rural incomes. Toward this objective:</p> <p>(i) Establish Rural Advisory and Development Centers (RADCs) at <i>oblast</i> and <i>rayon</i> levels;</p> <p>(ii) Establish a Secretariat in Bishkek to provide coordination and monitoring for RADCs and to oversee financial management and control;</p> <p>(iii) RADCs to assist and train farmers in (a) technology adaptation including training in the use of improved production practices, in conjunction with a program of field trials and field demonstrations on farmers' fields at farmers' requests; (b) preparation of business plans in support of credit applications; and (c) work on farmer group development for obtaining improved services and solving common problems, e.g., in small-scale machinery operation and water use;</p> <p>(iv) Establish a Farm Development Fund, including a line of credit (USD 1.5 million) and Pilot Credit Activities</p>	<p>Key performance indicators would relate to:</p> <p>(i) Adoption Rate and Participation: Number of villages and households directly receiving project advice; adoption rate of each technique; number of groups formed and supported by the project; number of farm trials and demonstrations completed; and number of farmers visiting demonstration plots and trials; number of farmers/groups assisted with business plans; number of adaptive research contracts signed, contracts completed, topics covered, results disseminated.</p> <p>(ii) Impact at farm level and attractiveness of techniques: number of techniques considered by farmers as worthwhile; assessment of yields and income increases on sample households adopting advice;</p> <p>(iii) Access to Credit: Number of business plans prepared with RADS/UNDP support; and subloans disbursed by KAFC through Farmers Development Fund;</p> <p>(iv) Cost Recovery. Amount of recovery from farmers of RADS running costs and other sources of income including media sales, and fees for preparation of credit applications.</p> <p>(v) Poverty Targeting. Classification of advisory visits, credit and training according to poverty status.</p>	<p>(i) Concurrent monitoring of physical progress and qualitative assessment through RADS progress reports, and PIU/IDA/IFAD supervision reports;</p> <p>(ii) PIU to conduct annual impact evaluation of those actually participated in farmer associations; which services under the component would be actually beneficial to farmers; and to what extent did non-participants benefit indirectly (information diffusion effect);</p> <p>(iii) Mid-term review of the project by IFAD/IDA backed by a survey of beneficiaries.</p> <p>(iv) MAWR (PIU)/RADS Foundation to prepare Project Completion Report (PCR).</p>	<p>Two main types of risks:</p> <p>(i) RADCs' sustainability;</p> <p>(ii) government commitment to economic reform:</p> <p>(i) <u>Sustainability</u>: For long-term sustainability of a farmer-driven advisory service: (a) RADCs must assure high professional standards; and (b) RADCs must remain fully oriented to provide advice that is impartial and free from political biases; encourage farmers to provide contributions to the cost of advisory services, and ensure participatory character of the service through on-farm trials, demonstrations, and training; and (c) assist farmers to access formal and informal credit.</p> <p>(ii) <u>Government commitment</u> strengthened through: (a) on-going privatization of land and non-land assets and productivity improvements in agriculture; (b) improved farmer access to credit; reducing dependence of RADCs on government budget; (c) on-going systemic and institutional reforms in MAWR functions and (d) use of a judicious blend of public, private and voluntary sector initiatives to improve farm productivity.</p>

## COSTS AND FINANCING

### Expenditure Accounts by Financing Agencies (Including Contingencies) (USD million)

	IDA		IFAD		IFAD (Sheep Development Project)		BENEFICIARIES		GOVERNMENT		SWISS		GTZ		KHF		Total		For. Exch.	Local (Excl. Taxes)
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	x	%		
<b>I. Investment Cost</b>																				
<b>A. Civil Works</b>	0.77	91.6	0.07	8.4	-	-	-	-	0.00	-	-	-	-	-	-	-	0.84	2.9	0.15	0.69
<b>B. Equipment</b>																				
Laboratory Equipment	0.63	94.9	0.03	5.1	-	-	-	-	-	-	-	-	-	-	-	-	0.66	2.3	0.66	-
Field Equipment	4.84	95.6	0.34	6.6	-	-	-	-	-	-	-	-	-	-	-	-	5.19	17.7	5.19	-
Office Equipment	2.12	79.3	0.47	17.5	0.02	0.6	-	-	0.00	-	0.05	1.7	0.02	0.8	-	-	2.67	9.1	2.08	0.59
<b>Subtotal</b>	<b>7.59</b>	<b>90.3</b>	<b>0.84</b>	<b>9.9</b>	<b>0.02</b>	<b>0.2</b>	-	-	<b>0.00</b>	-	<b>0.05</b>	<b>0.5</b>	<b>0.02</b>	<b>0.3</b>	-	-	<b>8.52</b>	<b>29.1</b>	<b>7.92</b>	<b>0.59</b>
<b>C. Vehicles</b>	0.99	56.3	0.63	35.6	0.04	2.0	-	-	-	-	0.07	4.0	0.04	2.0	-	-	1.76	6.1	1.76	-
<b>D. Contracted Services</b>	0.28	22.5	0.96	77.5	-	-	-	-	0.00	-	-	-	-	-	-	-	1.24	4.3	0.43	0.81
<b>E. Technical Assistance</b>																				
International Costs	1.30	36.2	0.90	25.1	0.47	13.0	-	-	-	-	0.37	10.3	-	-	0.55	15.4	3.60	12.4	3.60	-
Local Support Expenses	0.14	37.4	0.14	38.1	0.01	3.5	-	-	-	-	-	-	-	-	0.08	21.0	0.37	1.3	-	0.37
<b>Subtotal</b>	<b>1.44</b>	<b>36.3</b>	<b>1.04</b>	<b>26.3</b>	<b>0.48</b>	<b>12.1</b>	-	-	-	-	<b>0.37</b>	<b>9.3</b>	-	-	<b>0.63</b>	<b>15.9</b>	<b>3.97</b>	<b>13.7</b>	<b>3.60</b>	<b>0.37</b>
<b>F. Training</b>																				
Oversea Training	0.31	41.4	0.33	43.4	0.11	15.3	-	-	-	-	-	-	-	-	-	-	0.75	2.6	0.75	-
Local Training	0.10	8.0	0.71	51.2	0.38	30.3	-	-	-	-	-	-	-	-	0.13	10.3	1.38	4.7	-	1.38
<b>Subtotal</b>	<b>0.41</b>	<b>20.5</b>	<b>1.03</b>	<b>48.5</b>	<b>0.49</b>	<b>24.6</b>	-	-	-	-	-	-	-	-	<b>0.13</b>	<b>6.5</b>	<b>2.13</b>	<b>7.3</b>	<b>0.75</b>	<b>1.38</b>
<b>G. Credit</b>																				
Line of Credit	-	-	1.50	100.0	-	-	-	-	-	-	-	-	-	-	-	-	1.50	5.1	1.50	-
Pilot Activity Fund	-	-	0.30	100.0	-	-	-	-	-	-	-	-	-	-	-	-	0.30	1.0	0.29	0.01
<b>Subtotal</b>	<b>-</b>	<b>-</b>	<b>1.80</b>	<b>100.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.80</b>	<b>6.1</b>	<b>1.79</b>	<b>0.01</b>
<b>Total Investment Cost</b>	<b>11.48</b>	<b>57.4</b>	<b>6.38</b>	<b>31.5</b>	<b>1.03</b>	<b>5.1</b>	-	-	<b>0.00</b>	-	<b>0.49</b>	<b>2.4</b>	<b>0.06</b>	<b>0.3</b>	<b>0.76</b>	<b>3.8</b>	<b>20.26</b>	<b>69.2</b>	<b>16.42</b>	<b>3.84</b>
<b>II. Recurrent Cost</b>																				
<b>A. Operating Expenses</b>	2.30	38.2	1.03	17.1	0.04	0.7	0.85	14.2	1.43	23.7	0.20	3.3	0.17	2.8	-	-	6.02	20.7	2.71	3.32
<b>B. Incremental Salaries</b>	0.45	15.0	0.50	16.8	0.65	21.5	0.39	13.1	0.59	19.6	0.22	7.2	0.20	6.8	-	-	3.01	10.3	-	3.00
<b>Total Recurrent Cost</b>	<b>2.75</b>	<b>30.5</b>	<b>1.53</b>	<b>17.0</b>	<b>0.69</b>	<b>7.6</b>	<b>1.25</b>	<b>13.8</b>	<b>2.01</b>	<b>22.3</b>	<b>0.42</b>	<b>4.6</b>	<b>0.37</b>	<b>4.1</b>	-	-	<b>9.03</b>	<b>30.8</b>	<b>2.71</b>	<b>6.32</b>
<b>Total by Financing Agency</b>	<b>14.23</b>	<b>49.0</b>	<b>7.92</b>	<b>27.0</b>	<b>1.79</b>	<b>6.1</b>	<b>1.25</b>	<b>4.3</b>	<b>2.01</b>	<b>6.9</b>	<b>0.90</b>	<b>3.1</b>	<b>0.43</b>	<b>1.5</b>	<b>0.76</b>	<b>2.6</b>	<b>29.29</b>	<b>100.0</b>	<b>19.13</b>	<b>10.16</b>





Expenditure Accounts by Components - Base Costs  
(USD million)

Land and Agrarian Reform	Rural Advisory & Development Services (RADS)										Seed Industry Development				Market Info.		Physical Contingencies Total % Amount				
	Advisory and Development Services		Field Demonstr.		Crop Breeding Institute		Super Elite and Seed Production		Commercial Seed Multiplication		Official Variety Testing		Crop Quarantine		Protection			Market Info. System		Project Imple.	
	Training, Secretariat	Credit Research	Group Dev.	Research	Breeding Institute	Forage	Elite Seed Production	Seed Multiplication	Unit in MAWR	Official Testing	Plant Quarantine	Plant Protection	Plant Protection	Project Imple. Unit	Market Info. System	Project Imple. Unit		Contingencies %	Amount		
-	-	-	0.06	-	0.07	0.04	0.03	-	-	0.01	0.13	0.12	0.20	0.04	-	-	0.69	10.0	0.07		
-	-	-	0.03	-	0.04	0.02	-	-	-	-	0.11	0.03	0.06	0.28	-	-	0.58	10.0	0.06		
-	-	-	0.22	0.08	0.95	0.17	0.78	1.22	-	1.11	-	0.01	0.01	0.01	-	-	4.55	10.0	0.46		
1.20	0.25	0.20	0.02	0.02	0.03	0.02	-	-	0.02	0.04	0.01	0.03	0.10	0.10	0.30	0.02	2.27	10.0	0.23		
1.20	0.25	0.20	0.28	0.10	1.01	0.21	0.78	1.22	0.02	1.26	0.04	0.10	0.39	0.30	0.30	0.02	7.40	10.0	0.74		
0.57	0.45	0.05	0.12	0.08	0.06	-	0.05	-	0.01	0.01	-	0.03	0.06	0.06	0.02	1.55	10.0	0.16			
-	-	0.35	0.40	-	-	-	-	-	-	-	-	-	-	-	-	0.20	0.95	10.0	0.09		
0.54	0.18	0.87	0.18	0.45	0.15	0.05	-	-	0.33	0.05	0.09	0.03	0.05	0.05	0.26	0.27	3.48	-	-		
0.07	-	0.07	-	0.06	0.01	0.00	-	-	0.03	0.01	0.01	0.00	0.00	0.00	0.02	0.03	0.31	-	-		
0.61	0.18	0.94	0.18	0.51	0.16	0.05	-	-	0.36	0.05	0.10	0.03	0.05	0.05	0.27	0.30	3.79	-	-		
-	-	0.22	-	0.20	0.07	0.03	-	-	0.02	0.04	0.04	0.03	0.03	0.03	0.03	-	0.72	-	-		
0.09	-	0.65	-	0.18	-	-	-	0.02	-	-	-	-	-	-	0.06	-	1.00	10.0	0.10		
0.09	-	0.87	-	0.38	0.07	0.03	-	0.02	0.02	0.04	0.04	0.03	0.03	0.03	0.09	-	1.72	5.8	0.10		
-	-	-	1.50	-	-	-	-	-	-	-	-	-	-	-	-	-	1.50	-	-		
-	-	-	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30	-	-		
-	-	-	1.80	-	-	-	-	-	-	-	-	-	-	-	-	-	1.80	-	-		
2.47	0.87	4.21	1.80	1.04	1.06	1.37	0.86	1.24	0.42	1.48	0.31	0.39	0.57	0.72	0.54	17.89	6.5	1.16			
0.74	1.26	0.20	-	0.19	0.10	0.21	0.09	0.38	0.10	0.44	0.15	0.16	0.13	0.63	0.07	5.05	-	-			
0.04	1.31	0.34	-	0.05	0.04	0.05	0.02	-	0.02	0.02	-	0.07	-	0.16	0.16	2.29	-	-			
0.78	2.57	0.55	-	0.24	0.14	0.25	0.11	0.38	0.11	0.46	0.15	0.24	0.13	0.79	0.23	7.33	-	-			
3.26	3.44	4.76	1.80	1.28	1.20	1.62	1.06	1.61	0.53	1.94	0.45	0.63	0.70	1.51	0.77	25.22	4.6	1.16			
0.19	0.07	0.12	0.00	0.09	0.04	0.11	0.03	0.09	0.12	0.00	0.14	0.02	0.03	0.04	0.02	1.16	-	-			
0.38	0.67	0.43	0.00	0.17	0.14	0.14	0.05	0.10	0.05	0.16	0.05	0.10	0.07	0.21	0.14	2.91	3.1	0.09			
3.82	4.19	5.31	1.80	1.53	1.37	1.87	1.20	1.84	0.59	2.24	0.52	0.76	0.82	1.77	0.94	29.29	4.3	1.25			
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2.74	1.58	1.77	1.79	0.84	0.92	1.58	1.06	1.60	0.45	1.77	0.29	0.34	0.66	0.96	0.40	19.13	4.9	0.93			

I. Investment Costs

A. Civil Works

B. Equipment

Laboratory Equip.

Field Equipment

Office Equipment

Subtotal

C. Vehicles

D. Contracted Services

E. Technical Assistance

International Costs

Local Support Exp.

Subtotal

F. Training

Overseas Training

Local Training

Subtotal

G. Credit

Line of Credit

Pilot Activity Fund

Subtotal

Total Investment Costs

II. Recurrent Costs

A. Operating Expenses

B. Incremental Salaries

Total Recurrent Costs

Physical Contingencies

Price Contingencies

Taxes

Foreign Exchange

**ORGANIZATION AND MANAGEMENT**

1. The overall responsibility for project implementation will rest with the Minister of Agriculture and Water Resources, MAWR, who will chair an inter-agency Project Steering Council which will provide overall guidance and oversight to the project. Implementation responsibility for the individual project components will be with specific departments/units of the MAWR and the Deputy Minister in charge of these individual units. These Ministers will be members of the Project Steering Council. A PIU, headed by a Project Director, will be responsible for the day-to-day coordination of project work. The IFAD-financed RADS component, however, will be implemented by the RADS Foundation, established as an autonomous non-profit foundation, answerable to the Rural Advisory Steering Council (RASC) headed by a Chairman elected by Council members and a small secretariat headed by a general manager. The advisory services will be managed primarily at the *oblast* level by the RADC manager and guided by the *Oblast* Steering Councils (OSCs) with overall coordination by the secretariat at project headquarters. The Foundation will obtain its funds direct from the Ministry of Finance and Economy (MOFE). Although the RADS component will be autonomous of MAWR in its day-to-day functioning, it will liaise with MAWR's line departments on technical matters, and the PIU will provide coordination with the other components of the project and also exercise responsibility for procurement and the monitoring of progress. The credit component of the project (Farm Development Fund) will be managed by the Kyrgyz Agricultural Finance Corporation (KAFC) and its regional branches, in collaboration with UNDP (for group-organization work, through UNDP's ongoing Poverty Alleviation Pilot Project) and with technical agricultural support from the RADCs at the regional and district levels.

2. The agencies involved in the implementation of the project's components are listed below:

<b>Component</b>	<b>Implementing Agency</b>
1. Land and Agrarian Reform (Farm Restructuring Support)	<b>MAWR</b> - Republican and <i>Oblast</i> Centres for Land and Agrarian Reform. <b>SALMLR</b> .
2. (i) Rural Advisory and Development Services (RADS) (ii) Small Farmer Credit (Farm Development Fund)	<b>RASC/RADCs</b> . RASC and the national secretariat; RADCs at <i>oblast/rayon</i> levels (with support from MAWR and the institutes of KAA, agricultural universities and contract researchers). <b>KAFC</b> in collaboration with UNDP and RADCs.
3. Seed Industry Development	<b>MAWR</b> : Seed Unit and Variety Development and Seed Testing Organization; <b>Agrarian Academy</b> : Crop Research Institute (CRI) and Forage and Pasture Research Institute (FPRI); Super Elite/Elite Seed Farms (3); and Private Commercial Seed Farms (3);
4. Crop Protection and Plant Quarantine	<b>MAWR</b> : State Inspectorate of Plant Quarantine (SIPQ) and the Department of Chemical Supply and Plant Protection (DCSPP)
5. Agricultural Market Information System	<b>MAWR</b> : MIS Unit and Inter-agency MIS Management Committee.
6. MAWR Capacity-Building	<b>MAWR (PIU)</b> .

3. The organization charts below show the project's organizational set-up.



4. The PIU's main responsibilities will include: (a) oversight on project implementation including providing guidance to and coordination among agencies involved in the implementation of individual project components; (b) undertake procurement of goods and services; (c) accounting and financial management of project funds; (d) arrange audit of project accounts; (e) monitoring and evaluation of project performance including the preparation of progress reports; and (f) liaise with the national and local governments to ensure effective implementation of the project. The PIU will work under the direction of a national Project Director. The Project Director will work in collaboration with an internationally recruited Project Implementation Advisor.

### **Rural Advisory and Development Service (RADS)**

5. In order to ensure autonomy, professional competence and operational efficiency in delivering technical services and business advice to numerous farmers and farmer groups, the RADS will be established as a non-profit foundation with a charter acceptable to IDA and IFAD. This model is based on the concepts successfully used in the country for the EU-TACIS Agricultural Training and Advisory Service (ATAS). The RADS sponsors will include farmer representatives from the six *oblasts*, the Government (MAWR and MOFE) and bilateral donors. By ensuring that farmer representatives remain in the majority, both as RADS sponsors and as members of the national-level RASC, the RADS is expected to remain fully oriented to farmer needs. At the same time, since the bulk of the RADS initial financing will be provided by the Government (with IFAD cofinancing), the ultimate control over channelling of the funds will unavoidably rest with the Government. For this reason, the RADS will function as a semi-autonomous institution, until it becomes, over a period, a self-financing organization. Another important feature of the RADS will be that its management will remain decentralized as RADCs at the *oblast* and *rayon* levels will function as the main grass-roots level resource management and operating units.

6. The RASC will be the highest permanent management body for the RADS. The RASC Chairman will be elected by council members and will have qualifications and experience acceptable to IDA and IFAD. The RASC Chairman would be the main link between the RADS and the rest of the project (including the government and the KAA), as both the Minister of Agriculture and Water Resources and the President of the KAA will be the members of RASC. Other members of the RASC will include the representatives of key government agencies, including the President's/Prime Minister's Offices; the Ministry of Finance and Economy (MOFE); farmer associations (one from each *oblast*); and donors. Finally, the charter of the RADS Foundation will provide for a flexible institutional structure, so that RADS can effectively respond to the changing economic and sectoral environment. The RASC will oversee the implementation of the component through approval of annual work plans and budget prepared by the Secretariat in collaboration with RADCs. Each RADC would prepare an annual work plan and budget using the format and schedule agreed with IFAD for approval by RASC, and review by IFAD during project supervisions.

7. The RADS will have a national Secretariat in Bishkek which will be headed by a general manager and will include technical specialists as well as support staff for personnel management, training, accounting and financial management. Two international advisers (extension and training) will be attached directly to the Secretariat. In addition, a media unit will be located in the Secretariat although its principal clients will be the RADCs. The Secretariat will be responsible for the component implementation, in liaison with the MAWR (line departments) on technical matters and MOFE on financial matters. The Secretariat, being autonomous, will have the authority to: (a) open and operate bank accounts; (b) select and hire staff for itself and RADCs, and (c) sub-contract activities to various agencies and NGOs. The Secretariat's responsibilities will include: policy development; RADC administration; financial management and control; advice to media unit; and monitoring of RADC performance.



8. RADCs will be the main vehicles to deliver advisory and development services to farmers and farmer groups and will have the following main responsibilities: (a) prepare and implement technical programmes in advisory services; (b) carry out on-farm demonstrations and field trials on farmers' fields at farmers' request; (c) commission local adaptive research contracts; (d) manage *oblast* and *rayon* level staff and maintain accounts; (e) liaise with local governments; and (g) disseminate information. RADC managers will be responsible for the development of annual work plans for their respective *oblasts*, under the overall guidance of local *Oblast* Steering Councils (OSCs). The OSCs which will comprise of representatives of farmers, NGOs, and government agencies from within the *oblast*, will play the same pivotal role as the RASC will do at the national level, in terms of ensuring that RADS remains client-responsive.

9. In addition to the manager, there will be five specialist staff and two administrative staff as well as a TA-financed advisor, either from the associate donors (SDC, GTZ) or from local UN volunteers or equivalent. The group development adviser (financed by Swiss grant) will also work at RADC level, though based in Bishkek. RADCs' *rayon* offices will be staffed by two or three extension advisors capable of giving a broad range of advice to farmers. They will also advise farmers where to obtain additional help, from the specialists in RADC *oblast* offices, the *rayon* land reform offices, to KAFC or to research institutes as necessary. There will be no need for a formal committee structure at the *rayon* level.

#### **Farm Development Fund (FDF)**

10. The Government will establish a Farm Development Fund (FDF) in KAFC with a credit line of USD 1.5 million provided by IFAD. FDF will operate in coordination with but outside the RADS, using KAFC's institutional structure already in place. KAFC will give authority to its regional managers to approve subloans to small-holders initially up to about USD 1 000. This is seen as a necessary institutional development for KAFC if it is to efficiently serve its institutional mandate to finance the agricultural sector. The small-farmer credit programme will be implemented through a three party agreement under which: (a) KAFC will provide financial services; (b) UNDP technical assistance (USD 0.5 million) provided outside the project will develop credit-worthy groups; and (c) RADS/RADCs will provide technical services.

11. KAFC will: (i) lend to properly established joint liability groups formed by UNDP (or other agencies) without collateral; (ii) lend at commercial rates (30%) on normal terms (1 year for production credit, 2/3 years for livestock/equipment credit); (iii) strengthen its *oblast* level offices with additional staff (to be trained by UNDP) and equipment to respond to credit requests from properly established groups.

12. RADS will: (i) collaborate with UNDP and assist the groups in resolving technical issues, advising on proposed credit based investments and on business plans; (ii) provide an ongoing technical support role for groups during the production period; and (iii) make available market information at harvest time and advise on market opportunities and techniques.

13. Using a proposed UNDP grant of USD 0.5 million, the KAFC will build partnerships with community-based organizations for delivering credit to poorer farmers. As part of the project implementation, UNDP will hire an expatriate training-cum-group development expert to strengthen the processes of training and group formation and organize training programmes exclusively for KAFC staff and guide in appraisal of group loans, the documentation processes and portfolio management. KAFC and UNDP will share information on their respective activities and prepare quarterly work programmes for the FDF. They will associate RADC staff with these processes.

14. IDA has appraised KAFC in its role as the implementing agency for the Rural Finance Project (RFP) which is being regularly supervised. The terms and conditions for KAFC's sub-loans



from the FDF to farmer groups and individual farmers will also be broadly similar to those for the Small Farmers' Credit Outreach Programme (SFCOP) component under the RFP so that the interest rates charged by KAFC remain positive and the subloan maturities are consistent with the production cycle.

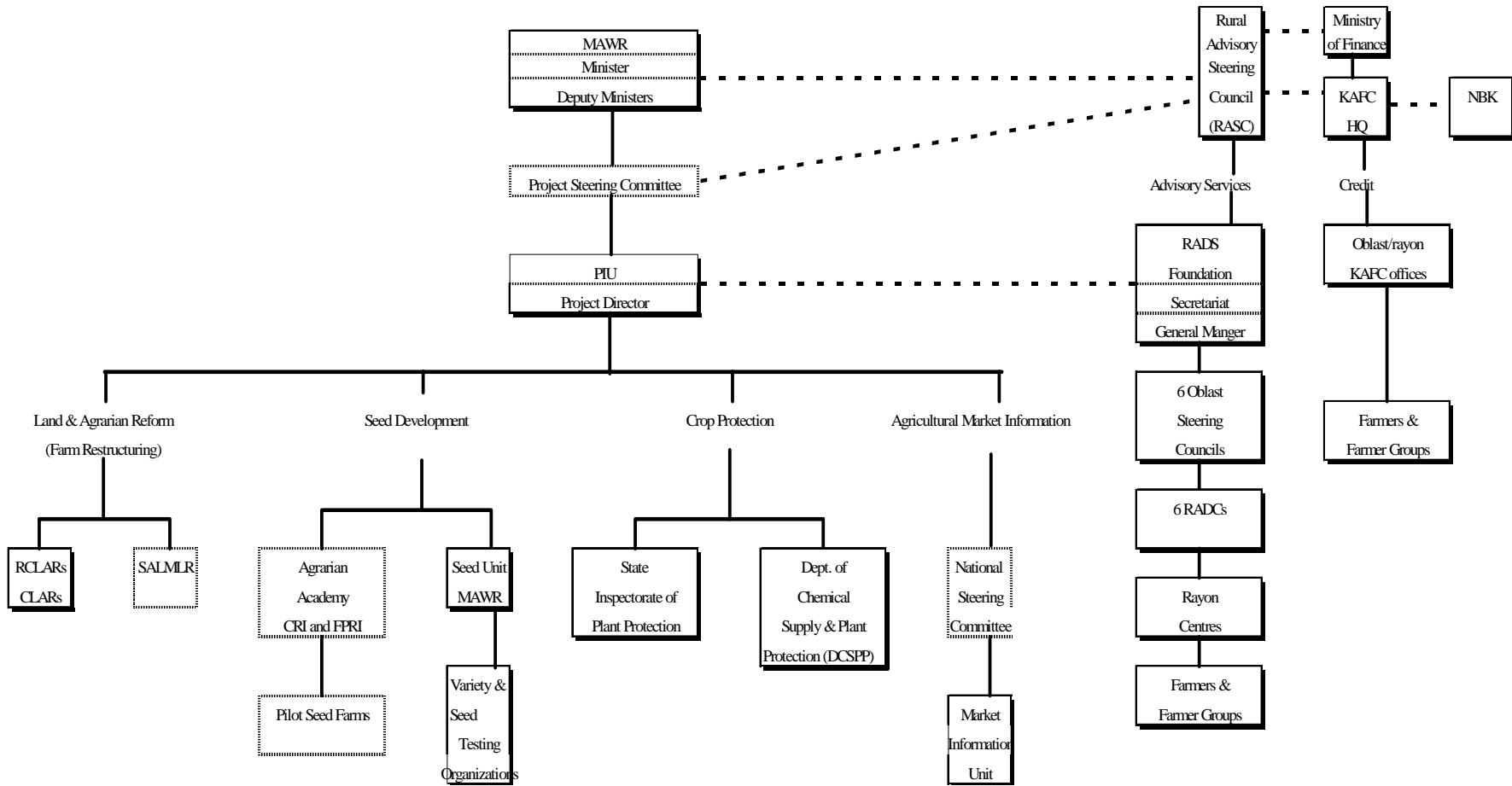
15. Loans will be given for seasonal inputs, livestock, equipment and machinery, construction of farm structures, etc. The first loan to a group will cover only short-term seasonal working capital. Based on track record, repayment and performance of a group, the second loan could include activities which require a little longer maturity (up to two years). The groups in subsequent lending cycle will be eligible for longer maturities up to a maximum of five years, linked to sound business plans and track performance. In view of savings mobilization by smallholder groups (SHGs) and use of savings following SHG rules and economic status of borrower, KAFC financing of working capital and investment loans would be up to 80% of cost, requiring 20% contribution by borrowers which can be in cash or in kind. The non-cash form may be family labour or retained inputs.

16. The branch credit officer of KAFC will be responsible for monitoring group development and group loans, and will have close liaison with UNDP animator or group animator and start attending SHG meetings coinciding with business plan and credit plan proposal preparation. He has a proactive role in guiding the SHG and NGO to conform to KAFC requirements and should satisfy himself that SHG has been formed and developed in accordance with accepted principles and methodology. After loan approval and disbursement, he will endeavour to attend the monthly group meeting of SHG. If not feasible, he should at least attend the alternative meetings. He will be a friend, philosopher and guide to the SHG. The close association will develop a strong banker-client bondship and will help him to initiate corrective actions if necessary.

17. The loan appraisal and evaluation will primarily be done by SHG and village development council following guidance and training provided by the NGO/animator as well as the credit officer. On receipt of the credit proposal, the credit officer will have to screen the proposal and satisfy himself that the business plan and cash flow projections are realistic.

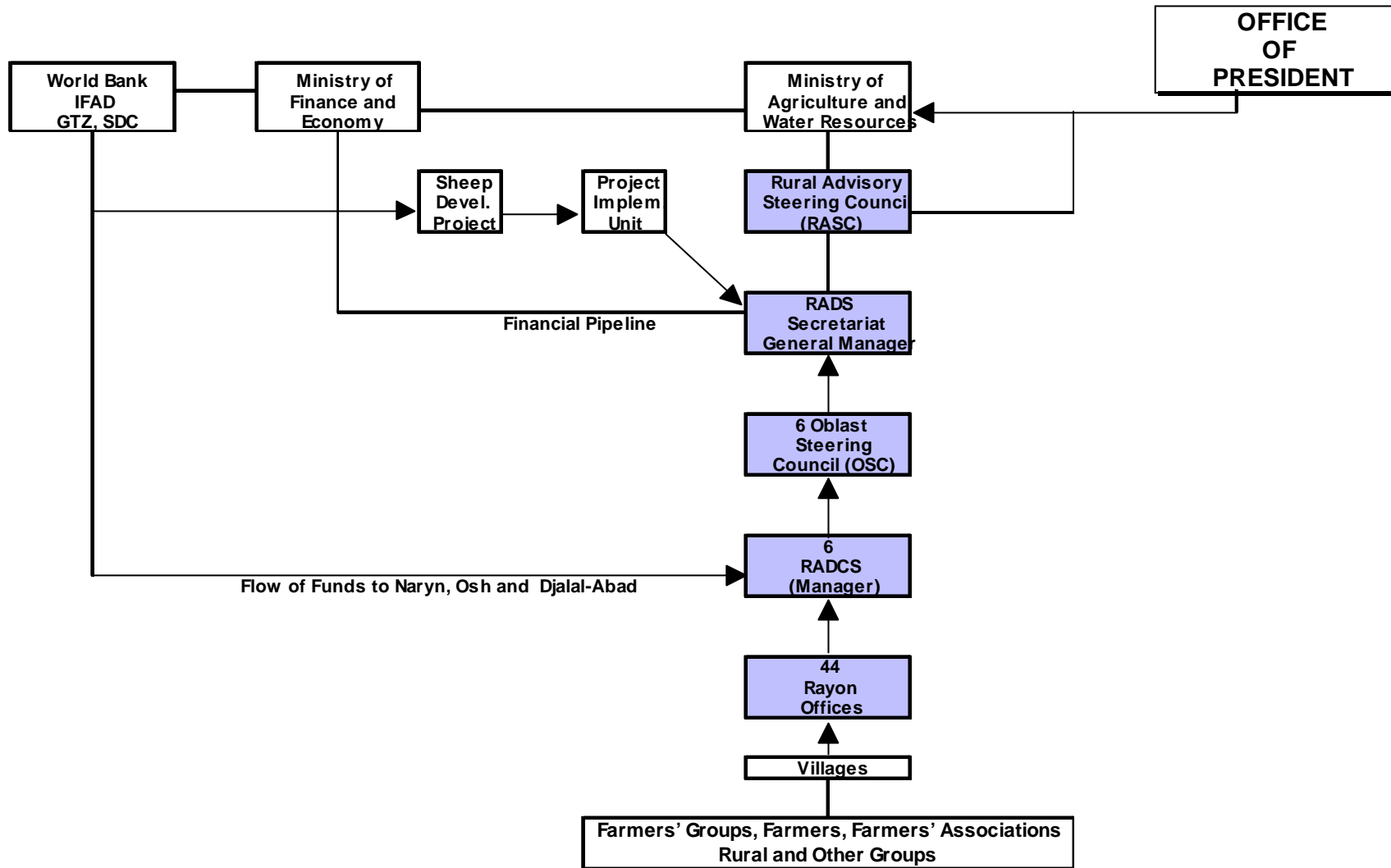
18. KAFC's Lending Manual and Guidelines, and its loan application formats and loan assessment are being adapted to suit SHG operations in consultation with UNDP.

## Project Organization and Management



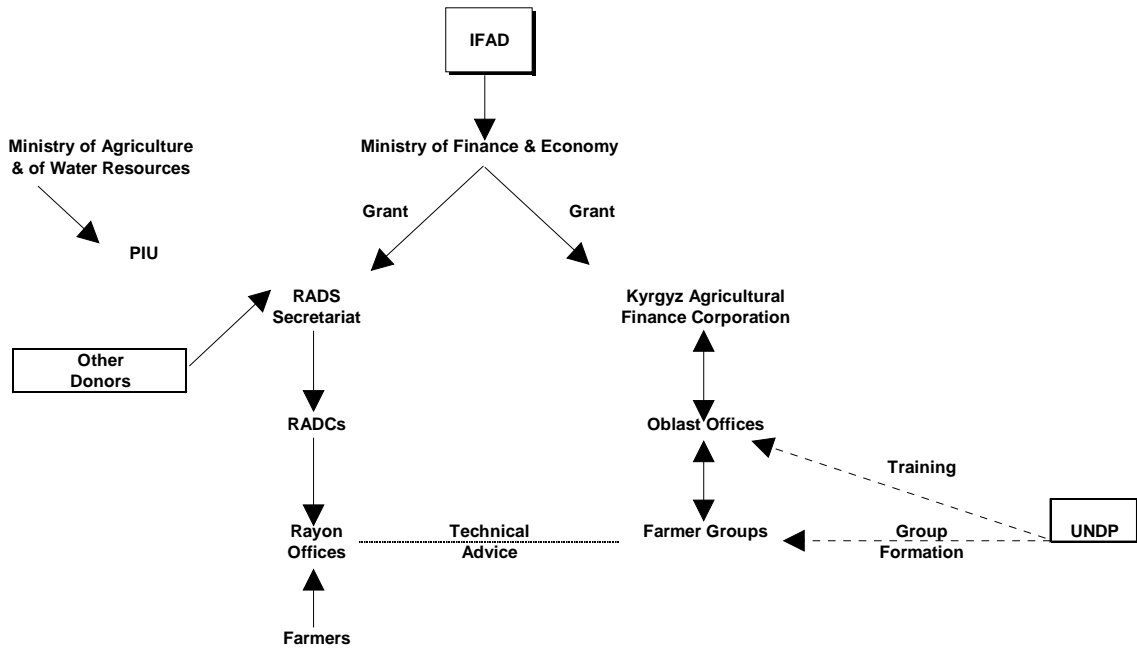


**ORGANIZATIONAL CHART  
RURAL ADVISORY AND DEVELOPMENT SERVICE (RADS)**





FLOW OF FUNDS



**FINANCIAL AND ECONOMIC ANALYSIS**

1. Prior to reform, agriculture used to be collectively managed with average arable land units of 3 000-4 000 ha and several thousands of people living on them. These enterprises are now breaking down into smaller farms, transformed into other types of organizations mostly managed by individual or groups of farm families. In order to assess the project's potential impact at the farm level, crop models have been prepared with reference to: individual farms and peasant farms (or associations), based on a 1994-96 survey of 24 farms which was updated in 1997. The survey was carried out by EU/TACIS, in two major representative regions of Chui and Osh. These models compare crop performances "without project" and "with project". Conservative assumptions have been used in projecting crop yield increases. For the "with project" situation, it is assumed that the project beneficiaries will be able to produce yields equivalent to the national averages in the years 1989-91. The "without project" crop yields are based on 1994-96 national averages (up dated in 1997) which had declined relative to the averages for 1989-91, in the wake of the transition to market economy. The following table summarizes the projected crop yields and gross margins calculated:

Crop	Yield Increase (t/ha)			Gross Margin (KGS/ha)		
	Existing Technology (*)	Improved Technology (**)	% of increase	Existing Technology	Improved Technology	% of Increase
Wheat	1.9	2.7	42%	1 552	2 512	62%
Barley	1.5	2.2	47%	1 143	2 008	76%
Maize	3.8	6.3	66%	2 750	4 710	71%
Sugar beet	12.4	16.5	33%	3 791	5 845	54%
Lucerne	6.0	9.0	50%	2 090	3 100	48%
Cotton	2.2	2.6	20%	3 673	5 046	37%

(\*) 1994-96 national average. (\*\*) 1989-91 national average.

2. The following illustrative farm models (financial) derived from a rapid survey undertaken in two *oblasts* for the purpose of this project, indicate the potential impact on individual farms and peasant farms (or associations):



	<b>Farm model 1</b> Farm Size: 10 ha	<b>Farm model 2</b> Farm Size: 47 ha	<b>Farm model 3</b> Farm Size 6 ha	<b>Farm model 4</b> Farm Size 20 ha	<b>Average</b>
	<b>Individual Farm in Kara-Balta</b>	<b>Peasant Farm in Kara-Balta</b>	<b>Individual Farm in Osh</b>	<b>Peasant Farm in Osh</b>	
<b>No of households</b>	1	5	1	5	
<b>No of people</b>	6	30	6	30	
<b>Cropping Pattern (ha)</b>	Wheat: 4 Barley: 2 Maize: 1 Sugar beet: 1 Lucerne: 2 Total: 10	Wheat: 20 Barley: 16 Maize: 2 Sugar beet: 3 Lucerne: 6 Total: 47	Wheat: 2 Cotton: 2 Maize: 1 Lucerne: 1 Total: 6	Wheat: 8 Cotton: 6 Maize: 4 Lucerne: 2 Total: 20	
<b>Net income (KGS/household)</b>					
w/o project	17 215	13 868	14 091	11 409	14 146
with project	27 559	22 505	20 745	16 947	21 939
incremental	10 344	8 637	6 655	5 538	7 793
% increase	57	62	47	49	55
<b>Net income (KGS/ ha)</b>					
w/o project	1 721	1 475	2 348	2 282	1 956
with project	2 756	2 394	3 458	3 389	2 999
incremental	1 034	919	1 109	1 108	1 043
% increase	60	62	47	49	53
<b>Working Capital (Credit requirements) (KGS)</b>					
Per household	5 422	5 025	7 058	4 680	5 546
Per ha	542	535	1 176	1 170	856

(1) Assuming half of the private households in individual units, half in peasant farms.

3. Households adopting improved technologies and seeds promoted by the project and having access to appropriate credit and water supply could increase their net household income by an average of 55% to about KGS 22 000 (USD 1 250). The average incremental income/ha would be about KGS 1,043 (or about USD 60). The FRR and ERR would be as follows:

<b>Rate of Return</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Average</b>
FRR	25%	21%	14%	10%	17%
ERR	23%	15%	24%	14%	23%

4. Farm models presented above assume a cropping pattern comprising of predominantly low value crops. There will be mostly one crop per year although some farmers might take vegetables as a second crop on a small area. However, the share of the second crop in the total cropping pattern is expected to be very small. Taking a conservative approach to financial and economic analysis, the farm models, therefore, assume neither any increase in the cropping intensity nor any fallow lands. Potentially, however, in response to higher prices and improved marketing, the cropping pattern may undergo structural changes relative to the base case. Such changes would inevitably lead to increases in household/ha incomes, and in the financial and economic returns to the project. To illustrate the impact of a potential change in the cropping pattern on the project's economic performance, a sensitivity analysis was undertaken assuming that the proportion of relatively high value crops such as maize, sugar beet and cotton could go up by about 20% at the expense of wheat and barley. The ERR in this environment, assuming other variables remain constant, could be as high as high as 34% relative to 21% under the base case.



5. **Economic Rate of Return (ERR).** A cost/benefit analysis has been undertaken by using economic values, and aggregating farm models and project costs at the national level. Economic prices have been calculated for major tradable products using prices and price projections available in November 1997. A conversion factor of 1 has been used for project costs as no distortions appear to affect the prices of items procured under the project.

6. Economic values are higher by 18% to about 50% compared with the financial prices. When introduced in crop budgets, the economic prices show positive results indicating that major crops supported by the project are economically justified. While aggregating costs and benefits at project level, two assumptions have been used: (a) approximately 40% of the benefits are attributed to the proposed project (ASSP); based on assessment of the contributions expected to be made by various inputs to total productivity improvement on participating farms. The incremental benefit is estimated to result from the improved incentive framework and services provided by ASSP and increased credit facilities; (b) it is estimated that there will be approximately 143 000 private farms when farm restructuring is completed. A recent survey to assess the impact of the experience of TACIS households (ABC and ATAS) shows that “farmer coverage” rates are between 47% and 70%. On this basis, at least 67 200 farms could be served by the project. Among these, only a proportion would adopt recommended technologies and/or improved seeds released by the project. The adoption rate has been estimated at 50% so that the number of participating farms would be about 33 600 or about 24% of the total: about 8% at the end of year 2 (11 200 farmers); 16% at the end of year 3 (16%); and 24% at the end of year 4 (33 600).

7. **The ERR for the project as a whole is estimated at 21%** (with a 12% discount rate). A sensitivity analysis has been undertaken using the following approaches: (i) farmer coverage rate of advisory services, and adoption rates for proposed technologies could be lower; (ii) farm benefits from project activities could be lower; and (iii) the cost of project activities could be higher than expected. The results are as follows:

#### Sensitivity Analysis: Participation Rates

Sensitivity Factor	Base Assumption	Switching Value	Switching Value in % compared with base assumption
Participating Rate (Coverage rate x adoption rate)	24%	17%	-29%

#### Sensitivity Analysis: Changes in Project Cost and Benefits

Benefits/Costs	ERR	Cost+10%	Cost+20%
Base Assumption	21%	19%	16%
Benefits -10%	18%	16%	11%
Benefits -20%	15%	13%	11%