

**INTEGRATED WATER MANAGEMENT IN THE FERGHANA VALLEY**

**(WA 300701)**

**INCEPTION REPORT**

**SEPTEMBER, 2001**

**INTERNATIONAL WATER MANAGEMENT INSTITUTE (IWMI), COLOMBO  
SCIENTIFIC INFORMATION CENTER OF THE INTERSTATE COMMISSION ON WATER  
COORDINATION (SIC-ICWC), TASHKENT**

# 33093

# INTEGRATED WATER MANAGEMENT IN THE FERGHANA VALLEY

## INCEPTION REPORT

### EXECUTIVE SUMMARY

This is the inception report of the project titled "Integrated Water Management in the Ferghana Valley" financed by the Swiss Agency for International Cooperation and Development (SDC). The International Water Management Institute (IWMI) and the Scientific Information Center of the Interstate Commission on Water Coordination (SIC-ICWC) jointly prepared this report. IWMI and SIC-ICWC are the partners of the association responsible for implementing the project activities during the inception phase with IWMI being the leading partner.

The project comprises of two phases, a six-month inception or preparation phase (September 2001 to February 2002) followed by a three-year implementation phase. During the inception phase, a number of activities will be carried out to collect data and information, which will be analyzed to identify activities, inputs, approaches, and methodologies to help reform the water management in the Ferghana Valley (parts of Uzbekistan, Kyrgyzstan, and Tajikistan) along hydrologic boundaries instead of administrative boundaries. The first implementation phase will be a pilot project with an opportunity for a further extension to more irrigation systems if required and found feasible during the implementation phase. The framework of this project is to assist the appropriate institutions at the canal and (inter) farm level water managing institutions to manage water and associated infrastructure along hydrologic boundaries and assess the water productivity, as well as monitor associated changes using field experiments and remote sensing tools.

The Interstate Commission on Water Coordination (ICWC) is the parent organization of the project. The relevant ministries of agriculture and water resources, provincial water managing organizations, and the water related research institutions at republic levels are the partners in the project. A steering committee, comprising of the representatives from the above-mentioned partners will supervise the activities of the project.

The findings of the inception phase will be discussed by the stakeholders in the project preparation workshop at the end of the phase. This workshop will formulate the project for implementation and the steering committee will approve the project document.

The inception phase budget comprises three parts: US\$ 120,000 for IWMI, US\$ 66,000 for SIC and US\$ 14,000 for the project preparation workshop.

### 1. INTRODUCTION

This is the inception report for the project titled "Integrated Water Management in the Ferghana Valley". The project is to be carried out by the International Water Management Institute (IWMI) in association with the Scientific Information Center of the Interstate Commission on Water Coordination (SIC-ICWC). The Swiss Agency for Development and Cooperation (SDC) is financing the project. The

project comprises of two phases; project preparation (inception) phase and the project implementation phase.

This report, jointly prepared by IWMI's Tashkent Office and SIC's Office, entails the background, project objectives, activities, arrangements, and the budget for the inception phase. During this phase, the project will focus on carrying out activities necessary to collect and analyze information required to develop the project document for implementation.

## **2. BACKGROUND**

During the Soviet period, inter-republic river management in Central Asia was the responsibility of Basin Water Organizations (BWO's). Oblast and Rayon authorities delivered water to state farms (Sovkhoz) and collective farms (Kolkhoz), which were responsible for water management within the farm.

Following independence, these farms (Kolkhoz and Sovkhoz) have been transformed into cooperatives, family farms, and 'private peasant farms'. Attempts are being made to form Water User Associations (WUA) to take over operation & maintenance of farm/inter-farm irrigation and drainage infrastructure.

An Interstate Commission for Water Coordination (ICWC) of Central Asia has been formed in 1992, as a parent organization of the former BWO's, to allocate water among the Republics. Within a Republic, the Ministry of Water Resources (or its equivalent) is responsible for water management. Irrigation water is managed within administrative boundaries by Provincial (Oblast) and District (Rayon) authorities. There are several irrigation areas in the Central Asian Republics that cross through more than one district. In such a case, water management will be the responsibility of more than one district, and at times the responsibility of more than one province. In the case of Ferghana valley, irrigation water management is the responsibility of three countries, namely, Uzbekistan, Tajikistan and Kyrgyzstan and seven provincial and several district administrations within each republic.

The Ferghana valley is one of the ancient irrigation areas. The seasonal variations in water availability and poor irrigation practices have led to inappropriate and excessive water use and, therefore, higher drainage volumes are recycled back to irrigation systems resulting into water quality problems, especially in the downstream. Managing water in primary canals along political and administrative boundaries results in sub-optimal use of water. In a number of countries where irrigated agriculture is

practiced, including Mexico, Australia, Armenia, Georgia, and Pakistan, water management in primary canals is promoted along hydrologic boundaries. Similar considerations are being given to the formation of new institutions to manage water in a primary canal along its hydrologic boundaries in the Central Asian Republics. However, such institutions are not in place at present.

These institutional changes should be introduced as a package of reforms coupled with concrete technical, institutional and management assistance and training activities on the level of Canal Water Organizations and Water Users Associations. It implies that the sustainability of these institutions depends on a number of conditions. These include a long and consistent political commitment, an enabling legal framework, irrigation delivery infrastructure in operational condition and consistent with land and water rights, and authority of the institutions to assess and collect water fee and apply sanctions when appropriate.

Furthermore, the water productivity must be determined, and the potential for its improvement must be identified. Systems of water demand planning based on cropping patterns must be introduced and functionaries be trained to effectively use such systems. Necessary technical improvements on water distribution, drainage and measuring systems must be identified and implemented. Adequate communication systems between the different levels of water management must be re-established.

## **2.1. Project Location**

The project will be carried out in the Ferghana valley, which is located in the southwest part of the Tyan-Shang Mountains. Main rivers are Naryn and KaraDarya which enter the valley in the east and their confluence creates the Syr-Darya. The Syr-Darya runs along Ferghana valley from northeast to south-west. Valley surface is plain and made of ancient terraces of the Syr-Darya and cones of removal transiting in Adirs. In pre-mountain zone and inter-mountain valleys, the soils are typical light and dark serozoms. In west part gray-brown gypsum-bearing soils are present. In the central part of the valley there are sands and solonchaks bounded with fine-grained deposits of cones of removal. The climate is dry, sharply continental with non-freezing period of 230 days. Under these conditions monoculture farming of cotton developed, which needs irrigation. During a long period of development, a complex web of irrigation canals has been created to support irrigated agriculture in the valley.

Administratively, the valley falls in the republics of Kyrgyzstan, Tajikistan and Uzbekistan. Favorable climatic conditions, rich natural resources, fertile lands, presence of vast irrigation network and

geographic location on the crossing between east and west facilitated intensive development of the valley, which has led to a high population density of 600-800 people per square kilometer.

The 1.2 million ha of irrigated lands of the valley are administratively divided among 7 oblasts: 3 in Uzbekistan (Namangan, Andizhan and Ferghana); 3 in Kyrgyzstan (Osh, Batken and Jalalabad) and 1 in Tajikistan (Sugd). Irrigation network is managed along the administrative divisions of the valley. Therefore, there are not only trans-boundary water management issues, but also inter-oblast and inter-rayon issues abound the management scene of water resources and complicate allocation and distribution. The presence of the complex network with water diversion from trans-boundary sources recharged from small rivers and wells alone, despite sizeable groundwater extraction cannot provide equitable water supply to farmers.

As a result, following situation has emerged:

- Unproductive water losses are high - especially where two or more administrative units share the infrastructure;
- Water supply to farm units is at times unreliable leading to inefficient use;
- Inter-farm irrigation and drainage infrastructure is deteriorating due to lack of financing for infrastructure operation and maintenance (O&M);
- Water distribution is becoming more inequitable due to administrative pressure from local power; and
- There is a lack of attention to environmental requirements.

The management along hydrographic boundaries instead of management along administrative boundaries offers potential benefits leading to the solution of aforementioned problems.

## **2.2 Planning Process**

In May 1999, IWMI submitted a concept note titled 'Water management to improve performance of irrigation schemes in the Central Asian Republics' to the Swiss Agency for Development and Cooperation (SDC). The concept note identified the SIC of ICWC as a potential collaborator. In July 1999, SDC representatives visited the SIC-ICWC. In September 1999, at SDC's request, IWMI hosted a planning workshop in Lahore. Participants included SDC Berne, SDC Tashkent, SIC-ICWC and IWMI.

In November 1999, participants met in Tashkent to develop the three objectives further. Additional representatives from other Central Asian Republics participated in this workshop. SDC informed that CHF 1.5 million might be available to the Project for duration of three years. In January 2000, IWMI and SIC submitted a proposal to the SDC. In June 2000, SDC representatives visited the SIC-ICWC, which prompted the third workshop in August 2000.

The participants at the third workshop (August 2000) agreed that the Project should maintain the three components; institutions at farm level, institutions at canal level, and the third on water productivity. It was also agreed that during the first year, an inventory of WUA activities in the three republics will be developed, and the reasons for varying degree of success will be analyzed. Emphasis on the third component was placed on establishing a framework for extension services to improve water productivity.

In February/March 2001 the first mission of the new SDC water sector consultant was undertaken and intensive discussions with representatives of the Coordination Office in Bishkek, SIC-ICWC and BWO Syr-Darya, Oblast and inter-Rayon water management authorities and farms in Namangan and Ferghana Oblast and with various donor organizations active in water management in Central Asian countries were held. On the basis of these discussions several critical issues of the project design developed and the SDC consultant proposed following principal modifications to the design:

- Project objectives, expected results, activities, indicators and inputs: To be defined clearly and specifically, not giving way to different interpretations.
- Approach: More emphasis on bottom up approach instead of pure scientific top down approach.
- Level of intervention: Emphasis on support to water user's associations and the reorganisation of the water management in Ferghana valley. Interventions on political level guided by the requirements determined on local level.
- Geographical areas of intervention: Necessity to restrict activities to one or two clearly defined canal systems and to selected farmer groups as pilot areas with later extension and multiplication. Countries to be involved during the first project phase determined by the selected canal system(s).

- Physical works: Availability of a certain budget to cover the cost for physical rehabilitation of irrigation and drainage systems including measurement of flows and communication is a precondition for a successful project on farm/inter-farm level
- Expatriate project manager: Indispensable for a successful project implementation under the given political and social environment.
- Learning from others: Necessity to evaluate experiences, and to apply methodologies and systems developed and introduced by other organisations related to water management on basin, canal, inter-farm and farm level, to water demand planning using computerised models, use of satellite imagery for agricultural performance and water productivity assessment, creation and management of water user's associations, etc.
- Cooperation: Close cooperation and coordination with other institutions involved in water management, particularly in Ferghana valley, is a must.

Appropriate modifications to the project design were subsequently made and incorporated to the project proposal. The inception phase activities will lead to a clear conceptual basis for the project, elaborate the project objectives and activities further and result into a concrete project proposal for three years.

### 3 PROJECT STRATEGY AND OBJECTIVES

The new system envisaged to be introduced in the framework of the Project would organize water management in Ferghana Valley on three levels along hydraulic boundaries with the following allocation of responsibilities:

- **BWO Syr-Darya** would maintain its responsibility for the management of the river systems and headworks within the large river basin, and would feed the main canals of the valley according to available run-off and calculated demand, based upon agreed water allocation mechanisms. It is hoped that on a long-term perspective a new trans-national water management of the river basin can be established through improved regional cooperation among the countries concerned.
- New **Canal Water Organizations** would be responsible for the water management along the main canals between the headworks and the off-takes at farm/inter-farm level. Whenever possible, their responsibility would extend over the whole length of the main canals, i.e. trans-Rayon, trans-Oblast and, where applicable, trans-national.

- At the lower end, **Water Users Associations (WUA's)** on farm/inter-farm level would receive water at the main canal and be responsible for the water demand planning, water allocation and distribution to individual farms and Kolkhozes/Sovkhozes along secondary and tertiary canals, operation and maintenance of the distribution systems, establishment of tariff structures and billing systems, and management and administration of the associations.

In consultation with the major stakeholders, a three-year project was proposed, which was subsequently approved by the SDC for financing, and includes three components. The overall objectives of the three components are:

- To assist collective farms, cooperatives and individual farmers in selected areas of Ferghana valley to establish and to manage Water Users Associations and to improve farm/inter-farm level irrigation and drainage management and operation. To facilitate the creation of a related enabling environment through development and introduction to policy makers of a related legal, institutional, economic and managerial framework.
- To assist Water Management (Oblast and Rayon) authorities along one or two selected canal systems of Ferghana valley to transfer water management responsibilities from the present system of managing water along administrative boundaries to institution managing water along hydrologic boundaries. To develop and to introduce to policy makers the related legal, institutional, economic and managerial framework.
- To determine water productivity using remotely sensed satellite images and field experiments, identify opportunities for real water savings; to introduce and train systems of water demand planning and to establish a framework for extension services for improved water productivity.

These project objectives will further be elaborated during the inception phase.

#### **4. PLANNED INCEPTION PHASE ACTIVITIES AND ARRANGEMENTS**

The activities and broad arrangements for the inception phase were identified during the discussions among SDC, IWMI and SIC, and have already been presented in the project document. As proposed by the project document, following activities will be carried out during the inception phase.

1. **Project Steering Committee (PSC) Membership Reconfirmation:** The SIC has already got the membership re-confirmed from the ministries of agriculture and water resources of the republics,



oblast level water managing organizations, ICWC, IWMI and SIC. The list of PSC members is presented at Annex 1. The representation from the Ministry of Agriculture and Water Resources of Turkmenistan has, however, not been received despite three requests. The draft terms of reference were proposed and agreed with SIC (Annex 2) as well as with the participants of the first meeting. These terms of reference were further confirmed during the first PSC meetings, and may be refined during the inception and implementation phases of the project. The membership will also be evaluated and revised during the inception phase.

2. **Identify Country Partners:** The SIC had already initiated the arrangements for identifying the country partners and coordinating points in the 3 countries. The inception phase activities will mainly be carried out in partnership with the ministries of agriculture and water management, scientific research institutes of hydromelioration of the three states, oblovodkhozoes, and raivodkhozoes of the three states. A list of proposed country partners that form the SIC's regional and national groups is annexed at Annex 3.
3. **Introductory Working Meeting:** In order to arrive at the similar wavelength and level of understanding about the project concepts, objectives, activities, and working, a kick-off meeting had been planned and was conducted on September 4, 2001 in Osh, Kyrgyzstan. The staff responsible for various activities was invited to the meeting together with the project management and the partners and coordinating points in the 3 countries. Inception phase activities and arrangements were discussed, reviewed and agreed. The list of participants is annexed at Annex 4 and the minutes of the meeting are annexed at Annex 5. The work plan for the inception phase activities was revised and agreed, which is presented at table 3.
4. **Preparation, finalization, and endorsement of Inception Report:** The draft version of this report was jointly prepared by IWMI and SIC during September 10-24 and then was presented to the first PSC for review and endorsement on 28 September, in Tashkent. The Steering Committee endorsed the document in general. The minutes of the PSC meeting are annexed at Annex 6.
5. **Situation Analysis with regard to earlier experiences:** The SIC's regional and national groups (Annex 3) will analyze the situation with regard to earlier experiences, methodologies and systems developed by other donors, regional and state organizations in the republics of Tajikistan, Kyrgyzstan, and Uzbekistan and prepare an action plan for adoption of recommendations during the project. Special attention will be given to evaluation of methodologies deployed in parts of Kyrgyzstan for creation of Water Users Associations (WUAs). Likewise, the experiences and methodologies of WUFMAS and GEF Project on water conservation initiatives will be evaluated for incorporation into the project's third objective. The Project will make use of experiences and adopt systems and methodologies developed and introduced under various projects, such as:

- The EU-TACIS WARMAP Project (water resources management system, water use and farm management survey information database)
- EU-TACIS On-Farm Irrigation Management Project (creation and management of WUA's, remote sensing for water productivity and cropping patterns)
- EU Copernicus Program
- GEF "Water and Environmental Management Project", in particular components A1 (National and Regional Water and Salt Management Study) and A2 (Participation in Water Conservation, with emphasis on water management on farm and Oblast/Rayon level)
- World Bank "Cotton sub-sector improvement Project", with a subcomponent on irrigation management
- CIDA Water Resources Management Training Project (ICWC).

This list is incomplete and will be further detailed and structured, including the development of concrete cooperation arrangements with defined partners, during the Inception Phase.

**6. Inventory of possible project partners and arrange concrete agreements for cooperation:** SIC's regional group (Component Coordinators) will identify the potential partners for all the three components so that the possibilities of cooperation with the potential collaborators are discussed and materialized during the inception phase. The list of potential partners includes:

- USAID with their "Natural Resources Management Project", in particular the water management component in Ferghana valley
- CIDA, in particular the planned Ferghana Valley Water Management Project
- World Bank and Asian Development Bank with their water management and institution building activities including support to WUA's.
- The International Secretariat for Water ISW with their Project "Community Water Management in Ferghana Valley" (co-financed by SDC).

This list will further be elaborated during the inception phase.

**7. Situation Analysis with regard to legal, institutional, economic, and managerial issues and problems** fostering or prohibiting creation of WUAs and reorganization of water management along hydrological boundaries will be carried out in two ways. The SIC's regional and local groups

will carry out the analysis at the local level looking at the local experiences of countries, oblasts, rayons and farmers by expert consultations and information collection and analysis at various levels. IWMI will bring experienced consultants from within or outside the region to look at the situation from a more global view and analyze the situation. The consultant's work is expected to be completed during mid-October to early January. The situation analysis will lead to the preparation of an action plan for adoption of the recommendations during the project implementation.

SIC has already identified and engaged the staff at the national and regional level who will work on this activity. IWMI is in the process of commissioning 3 consultancy inputs. The terms of reference have been developed. The consultants are expected to provide their inputs from the end of October 2001 to early January 2002. The detailed terms of reference for the regional and national working groups as well as those of the research partners have been formulated and agreed with the partners and staff.

8. **Project document preparation, consultation, and finalization:** The analysis and recommendations of the analytical work will form the basis of the project document, which will be prepared in early January. The draft project document will be discussed with the stakeholders in a project preparation workshop, to be held on 15-17 January 2002. SDC has kindly agreed to provide a very experienced moderator for the workshop. The formulated project document will be sent to the members of the Steering Committee before 10<sup>th</sup> February 2002. The Second Steering Committee will be convened on 20<sup>th</sup> February 2002 to approve the project document and announce launching of the implementation. The approved project document will be submitted to the SDC before the end of February 2002.

During project preparation the following aspects will be considered and determined:

- General approach and level of intervention: Emphasis will be given to local level activities, to the facilitation of water users associations and the reorganization of the water management following hydraulic boundaries. Interventions on political level will be guided by requirements determined on local level and through evaluation of experienced made by other organizations. The optimum mix of bottom up and top down approach will thereby be determined and a related action plan and time schedule be developed.
- Selection of the countries of intervention and of the pilot canal system(s) and pilot farmer groups during the planning process. Thereby it will be carefully assessed if a simultaneous project start in three counties with different political and economic systems is feasible, or if it is more realistic to start the project in one or two countries depending upon the selection of the pilot canal system(s), and to extend the activities at a later stage.

- Assessment, prioritizing and budgeting of the required physical rehabilitation works within the pilot areas.
- Selection of cooperation partners (i.e. donors with similar projects) and definition of modes and methods of cooperation and coordination.
- Determination of all project inputs and of the project budget for the first three years of operation. This shall include the provision of a permanent expatriate project manager and all specialists (local and international) as required to carry out the Project successfully.
- Final selection of contractor(s): It has to be determined if the association IWMI-SIC will execute the Project as a single contractor or if additional inputs are required from other sources, mainly in the area of grass root level activities on farm and inter-farm level.
- Identification of opportunities for establishing appropriate support system for WUAs and the Water Management Organizations in the ICWC Training Centre in Osh.

The Project **Implementation Phase** will last three years which is considered as minimum time frame for this complex Project and which will allow sufficient time to achieve results, for project evaluation and for the preparation of a successive project phase.

## 5. INPUTS, OUTPUTS AND REPORTING

IWMI will provide one man month of international staff time, 90 man days of local and international consultants, 6 man months of project management, and 13 man months of local junior research staff. 14 man months of support staff will also be required. The SIC will provide 86 man months of specialists, 22.5 man months of support staff and 30 man days of project manager.

Table 1 shows the summarized inputs and allocated budget for the inception phase.

The intermediate outputs of the inception phase activities will be various analytical reports prepared by SIC and IWMI. The final output of the inception phase activities will be the project document, which will be prepared during the project preparation workshop, concretely defining the objectives, activities and expected outcomes, together with associated inputs and costs. Table 2 presents the outputs and the reporting schedule of various outputs. The detailed work plan is presented in table 3.

**Table 1**  
**Inputs and allocated costs for the inception phase**

Serial	Line Item	Units	Unit Cost US\$	Total Units	Total Cost US\$
<b>TA1: 35000000 Program Cost IWMI</b>					
1	Staff costs				<b>43300</b>
	Mehmood UI Hassan, Project Manager	Days	150	110	16500
	Vilma Horinkova, Regional Director IWMI	Days	725	22	15950
	Iskandar Abdullaev, Water Management Specialist	Months	1000	4	4000
		Months	400	6	2400
	Nargiza Nizamedinkhodejeva, Junior Researcher	Months	400	3	1200
	Bakhtiar Matyakubov, J. Water Management Specialist	Months	200	6	1200
	Dilbar Azahunova, Secretary-cum-accountant	Months	350	5	1750
	Interpreter (to be recruited)	Months	100	3	300
	Secretary for field office (to be recruited)				
2	Consultants				<b>26500</b>
	Legal	Days	250	30	7500
	Institutional/ Management/ Finance	Days	300	40	12000
	WUAs	Days	350	20	7000
3	Office Supplies	Per month	950	6	<b>6250</b>
4	Equipment (Computers and Assessories)	Lumpsum			<b>2600</b>
5	Travel				<b>12000</b>
	International	Lumpsum			8000
	Local	Lumpsum			3000
	Visa Fees etc	Lumpsum			1000
6	Subtotal Direct Costs				90650
	Indirect costs (32%)				29008
	Total IWMI Costs				119650
	Say				120,000
<b>TA2: 35000000 Program Cost SIC</b>					
1	Staff Costs				<b>42800</b>
	Regional Manager	Days	100	30	3000
	Operation Officer	Months	300	6	1800
	Book Keeper	Days	20	30	600
	Logistic Specialist	Months	250	6	1500

	Secretary-Translator	Months	150	6	900
	Driver	Months	200	3	600
	Local Specialists	Months	400	86	34400
2	Operational Costs				<b>10320</b>
	Office Expenses	Monthly	150	6	900
	Communication	Monthly	120	6	720
	National Travel	Lump sum			1200
	Local Travel	Lump sum			7500
3	Subtotal Direct Costs				53120
	Indirect Costs (10%)				5312
	Project Steering Committee Meetings	Event	2	2000	4000
	Project Preparation Workshop	Event	1	3000	3000
	Grand Total				<b>65432</b>
	Say				<b>66,000</b>
1	TA 3: 35000000: Moderation and other costs	Event	1		14000
<b>Grand Total</b>					<b>200000</b>

**Table 2: Inception Phase Outputs and Schedule of Reporting**

Serial #	Indicative Title	Tentative Deadline
1	Draft Inception Report	September 25, 2001
	Final Inception Report	October 10, 2001
2	Monthly Activity Report	10 <sup>th</sup> day of the following month
3	Quarterly Progress Report	Before end of 4 <sup>th</sup> month
4	Analytical report on experiences, methodologies, and systems developed by other donors, regional and state organizations in water management sector in Uzbekistan, Kyrgyzstan, and Tadjikistan (draft)	30 November 2001
	Final	15 December 2001
5	Analytical reports on legal, institutional, economic and financial constraints and opportunities for re-organizing water management and establishing effective WUAs in Uzbekistan, Kyrgyzstan and Tajikistan (draft)	January 10, 2002
	Final	31 Jan 2002
6	Project Preparation Workshop	15-17 January, 2002
7	Second Project Steering Committee Meeting	20 February, 2002
	Submission of Final Project Document	25 February, 2002

## 6. PROJECT MANAGEMENT AND FINANCIAL ARRANGEMENTS

As outlined in the project document, IWMI is the lead firm in the association responsible for signing the agreement and output delivery. IWMI's regional office for Pakistan, Central Asia and Middle East is responsible for the overall supervision, which has opened its Central Asia and Caucasus sub office in Tashkent and has based a full time expatriate project manager. Mr. Mehmood UI Hassan, Water Institutions Specialist, will be the project manager from IWMI and Professor Victor A. Dukhovny, the Director of SIC will be the project manager from SIC's side. IWMI and SIC will be equal partners responsible for implementation of various activities.

The project contract between IWMI and SDC postulates the detailed financial arrangements. IWMI will transfer funds to SIC in the same fashion. The first installment of 35% of SIC's budget has already been transferred to SIC. SIC and IWMI have already agreed on financial arrangements through the contract of association. Accounting instructions have been provided to SIC for day-to-day financial arrangements.

## 7. MONITORING AND EVALUATION

**Internal monitoring:** IWMI-SIC as the contractor of SDC will monitor the project progress on a daily basis.

**External monitoring by COOF:** The Swiss Coordination Office in Bishkek supervises the water projects in the Ferghana valley. During the Inception Phase of the Project, a close follow-up of the project activities will be required. This will include monthly review meetings with the project staff to evaluate progress, to discuss findings and strategies developed, and to adopt planning and schedules as required.

During project implementation the responsible Program Manager for the water sector will pay four review and monitoring visits per year to the Project.

**External monitoring by SDC:** The SDC water sector consultant will monitor the progress of all aspects of the Project. Furthermore, he will provide advice wherever necessary. For this purpose two missions are to be undertaken during the Inception Phase, one midterm review mission 3 to 4 months after the start of the Project and a second mission to participate in the project preparation workshop.

These missions will be combined with monitoring missions to other water related projects financed by SDC in the region.

During project implementation the SDC water sector consultant will undertake two project review and monitoring missions per year, combined with monitoring missions to other SDC water sector projects. He will regularly participate in the Project Steering Committee meetings.

**Evaluation:**

An external evaluation followed by an internal review is to be undertaken within the third year of implementation. The process of project preparation for the second project phase will follow the evaluation. The timing of the evaluation has to allow finalization of the Project Document for the second project phase before the end of the first phase. SDC will nominate one expert for the evaluation and the water sector consultant will participate in the internal review and in the planning process for the second project phase. The contractors IWMI-SIC will also nominate each one expert for the evaluation. The evaluation team will comprise maximum four experts.

**8. WORK PLAN**

The activities during the project inception phase and the respective time frames are summarized in table 3.

**Table 3: Activity chart for the Inception Phase**

Serial #	Activities	2001				2002	
		S	O	N	D	J	F
1	Confirm Project Steering Committee membership and propose ToR						
2	Identify country partners						
3	Conduct introductory working meeting						
4	Prepare Terms of Reference for partners and consultants						
5	Prepare Inception Report						
6	Convene first steering committee meeting						
7	Analyze situation with regard to earlier experiences and prepare action plan						
8	Inventory possible partners and develop arrangements for cooperation						
9	Analyze situation with regard to legal, institutional, financial, economic and managerial issues in reorganizing water management along hydrologic boundaries						
10	Prepare draft project document						
11	Conduct project preparation workshop and refine detailed project document						
12	Convene second Project Steering Committee meeting and seek project approval						
13	Finalize and submit project proposal						



The SIC has distributed the tasks among the national partners, research institutes, and the regional groups as detailed out in Table 4. The SIC concepts and terms of reference are annexed at Annex 7.

**Table 4. Allocation of SIC's Professional Staff Time Inputs During the Inception Phase**

<b>Components of the Project</b>	<b>National Work Group</b>	<b>Oblast Work Group</b>	<b>Scientific Research Institutes</b>	<b>Regional Work Group</b>	<b>GIS</b>	<b>Total</b>
Component 1	4.5	16	4.5	10	-	35
Component 2	2	14	-	8	-	24
Component 3	-	-	9	7	11	27
<b>Total</b>	<b>6.5</b>	<b>30</b>	<b>13.5</b>	<b>25</b>	<b>11</b>	<b>86</b>

## 9. RISKS AND ASSUMPTIONS

The project activities are being carried out in the 3 republics of the Former Soviet Union, neighboring Afghanistan. The planning is based on the assumptions that the security situation of the countries is alright and the staff and consultants will have access to visas and traveling arrangements as planned. However, the security situation is becoming increasingly ambiguous due to the risks of war in Afghanistan. The uncertain security situation in the three states could affect the timing of some of the activities, especially the consultancy inputs.

**Project Steering Committee Members for the project  
“Integrated Water Management in the Ferghana Valley”**

<b>N</b>	<b>Name</b>	<b>Position/ Organization</b>	<b>Country</b>
1	E. Joroev	Deputy Director, Water Management, Ministry of Agriculture and Water Resources	Kyrgyzstan
2	N.K. Kipshakbaev	Director of SIC branch, Committee of Water Resources of Republic	Kazakhstan
3	T. Abduzabarov	Deputy Minister of the Ministry of Water Resources	Tajikistan
4		Ministry of Water Resources	Turkmenistan
5	M. Agzamov	Head of Economic Division of the Ministry of Agriculture and Water Resources	Uzbekistan
6	R.Kamchibekov	Oblvodkhoz	Djalalabad oblast, Kyrgyzstan
7	A.Satiboldiev	Oblvodkhoz	Osh oblast, Kyrgyzstan
8	A.T. Yuldashev	Oblvodkhoz	Batken oblast, Kyrgyzstan
9	Kh. Mukhitdinov	Oblvodkhoz	Sugd oblast, Tajikistan
10	A.Rakhmatillaev	Oblvodkhoz	Fergana oblast, Uzbekistan
11	E. Vokhidov	Oblvodkhoz	Andijan oblast, Uzbekistan
12	Kh. Khoshimov	Oblvodkhoz	Namangan oblast, Uzbekistan
13	G.Nigmatov	Secretary, ICWC	Uzbekistan
14	N. Rakhmatov	BWO “Syrdarya”	Uzbekistan
15	Jeurg Krahenbuel	SDC Berne	Switzerland
16	Markus Muller	SDC Bishkek	Kyrgyzstan
17	Vilma Horinkova	Regional Director, IWMI Regional Office for Pakistan, Central Asia and Middle East	Pakistan
18	Pulat D. Umarov	Deputy Director, SIC-ICWC	Uzbekistan

**(Draft) Terms of Reference for the Project Steering Committee**

1. Conceptual guidance for the project
2. Consultation, endorsement, and approval of site selection, mechanisms, approaches, partnerships, arrangements
3. Liaison and facilitation in exchange of views and information between Project & Ministries
4. Ambassadors of the project
5. Facilitate project implementation
6. Inter-state problem solution
7. Conflict resolution among project partners
8. Arrangements for project replication

**COUNTRY PARTNERS AND COORDINATION POINTS of SIC****Kyrgyzstan:**

**Scientific Research Institute for Hydromelioration** (Mr. K. M. Kulov)

**Ministry of Agriculture and Water Resources** Deputy Minister General and Director  
Department of Water Management, Kyrgyzstan Djusumatov)

**Oblovodkhozes** (Mr. A. Kadirbekov from Osh, Mr. K. Kamchibekov from Djalabad, and  
Mr. Igamberdiev from Batken )

**Tajikistan:**

**Ministry of Water Resources**, (Department Head Mr. Akhrorov)

**Scientific Research Institute for Hydromelioration** (Mr. Y. Pulatov)

**Oblovodkhozes** (Mr. Sultanov, Sugd Oblovodkhoz)

**Uzbekistan:**

**Ministry of Agriculture and Water Resources** (Mr. U. Azimov, Head of the WM  
Department, Uzbekistan)

**NGGP SANIIRI:** Sh. Mukhamedjanov (Director of the laboratory)

F. Rasulov (Chief of the WM Department, the Ferghana Oblast, Uzbekistan)

N. Satilbaev (Chief of the WM Department, Namangan Oblast, Uzbekistan)

O. Dusmatov (Chief of the WM Department, Andijan Oblast, Uzbekistan).

**Component Leaders:**

**Component 1: WUAs** :M. Pinkhasov

**Component 2: Water Managing Organizations:** K. Belotserkovsky

**Component 3: Water Productivity:** Sh. Mukhamedjanov

**List of participants of the Introductory Working Meeting of the project  
"Integrated Water Management in the Ferghana Valley"**

**Osh, September 4, 2001**

1.	Representatives of the Ministry of A&WR	B. T. Koshmatov, the Deputy Minister of Agriculture and Water Resources of Kyrgyzstan Djusumataov (Kyrgyzstan) Akhrorov (Tadjikistan) U. Azimov (Manager of the WM Department, Uzbekistan)
2.	Representatives of the scientific research institutes	K.M. Kulov (Candidate of Sc., KyrgyzNIIGM <sup>1</sup> ). Ya. Pulatov (Director of TadjNIIGM <sup>2</sup> ). Sh. Mukhamedjanov (Director of the laboratory NGGP, SANIIRI, Uzbekistan)
3.	Responsible for activities	A. Kadirbekov (representative of the Osh oblast, Kyrgyzstan) Ye. Mosalbekov (representative of the Djalalobod Oblast, Kyrgyzstan) Igamberdiev (representative of the Batken Oblast, Kyrgyzstan). Kh. Sultanov (Tadjikistan) F. Rasulov (Chief of the WM Department, the Ferghana Oblast, Uzbekistan) N. Satilbaev (Chief of the WM Department, Namangan Oblast, Uzbekistan) O. Dusmatov (Chief of the WM Department, Andijan Oblast, Uzbekistan).
4.	Representatives from Oblvodkhoz	R.K. Kamchibekov (Djalalobod Oblvodkhoz, Kyrgyzstan). A. Satiboldiev (Osh Oblvodkhoz, Kyrgyzstan) Yuldoshev (Batken Oblvodkhoz, Kyrgyzstan). Kh. Mukhitdinov (Tadjikistan) A.R.Rakhmatullaev (Fergana Oblvodkhoz, Uzbekistan) A. Vokhidov (Andijan Oblvodkhoz, Uzbekistan) Ernazarov (Namangan Oblvodkhoz, Uzbekistan)
5.	SIC-ICWC Representatives	Dr. Dukhovny, Director of SIC-ICWC P.D. Umarov, Deputy Director K.I. Belotzerkovski M.A.Pinkhasov T.I. Palvanov
6	IWMI representatives	Vilma Khorinkova, Regional Director Mehmood ul Hassan, PM Nargiza Nizamedinkhodjaeva, Research Assistant
7	BWO "Syr-Darya"	N. Rakhmatov, Deputy Chief
8	ICWC	G.A.Nigmatov, secretary Sh. G. Nigmatov

<sup>1</sup> Scientific Research Institute for Hydro-Melioration in Kyrgyzstan

<sup>2</sup> Scientific Research Institute for Hydro-Melioration in Tadjikistan.

**Minutes  
Of the meeting of participants of the project "Integrated Water Resources Management in  
Ferghana valley"**

**September 4, 2001**

**Place: Osh city**

Chairman: General Director B.Koshmatov

In accordance with agenda participants discussed the following questions:

1. Project content and general strategy of its fulfillment
2. Specific tasks of Inception phase within the project's components
3. Work plan and cost distribution among the project participants
4. Information about Steering Council composition.

In result of discussion participants have come to following conclusion:

1. Project objective determined by SDC reflect topical issues and needs not only Ferghana valley, but all Central-Asian countries as well.

ICWC members and all water specialists of the region express their gratitude for SDC aspiration to assist the region in these issues solution and IWMI willing to head this work.

2. Project content and Inception phase plan are recognized with understanding and accepted for implementation. Though countries of the region are at different level of transition to the market, especially in agriculture and water sector, nevertheless, joint work of the countries located in Ferghana valley is very useful as well as experience and opinions exchange, various approaches demonstration in order to minimize risk during reforming in all countries. Particularly valuable is analysis of privatization in the Kyrgyz Republic, which intensively supports its progress by legal and institutional transformations.
3. Work distribution between regional and national working groups has been agreed. National groups will be completed by oblast representatives and scientific-research institutes under leadership of MAWR representatives appointed by ICWC members. Simultaneously, horizontal coordination each component will be performed by coordinators appointed by SIC ICW coordinated with IWMI.
4. Taking into account time shortage and necessity to involve immediately all project participants in activity, regional group members until 10.09.01 shall present ToR for each block. With all necessary information and submit it to IWMI for revision and coordination in order until 20.09.01 agreed ToR would be passed to executors.
5. SIC ICWC immediately after advance payment receiving will organized payment to each national group in agreed amount (35%).
6. Taking into consideration outstripping reforming process in the Kyrgyz Republic, meeting participants emphasized their will to establish headquarter in Osh bearing in mind possible location here of the Training Center branch allowing to provide broad demonstration of agriculture and water sector reforming methods and, simultaneously to establish extension service here, because there is demand for such service in the region. Take into account statement of MAWR of Kyrgyzstan and Osh oblvodhoz about their readiness to provide this decision fulfillment: to repair office, provide communication and services.

7. Is taken into account, that all ICWC members and other organizations participating in the project have determined their representatives in the Steering Council except Turkmenistan, BWO "SyrDarya" and SDC Bern. SIC ICWC and IWMI are charged to contact these organizations for Steering Council completion.
8. To consider expedient that IWMI and SIC ICWC would prepare the Inception Report by 24.09.01 and submit it to Steering Council members of which will gather in Tashkent on September workshop in the training Center on September 24-29.

Signatures;

Meeting Chairman

B.Koshmatov

For IWMI

V.Horinkova

For SIC ICWC

V.Dukhovny

**Minutes of the  
First Project Steering Committee meeting for the Project  
“Integrated Water Management in the Ferghana Valley”**

September 28, 2001

Tashkent

18 members of the Project Steering Committee (PSC) participated on the meeting (Annex 1).

The inception report of the project “Integrated Water Management in the Ferghana Valley”, prepared by IWMI Tashkent Office and SIC-ICWC, was submitted for PSC endorsement. The inception report includes the introduction and 7 main sections, reflecting the project objectives, activities, organizational aspects, and the inception phase budget.

After listening to the presentation of Dr. Mehmood ul Hassan, IWMI Project Manager, and the comments of Mr. Johan Gelly, SDC TASK Manager, the participants of the meeting exchanged their views and came to the following decisions:

1. The submitted Inception Report was generally approved.
2. Project staff should finalize and distribute the project document of IWMI and SIC-ICWC to PSC members by February 10, 2002 and the next PSC meeting will be held on February 20, 2002 in order to endorse the document.
3. The appropriate PSC members supervise the activities of the project oblast and national groups. Therefore, the oblast and national group members will keep the relevant PSC members informed on their activities, principal proposals, and recommended decisions.

**Signatures:**

N	Name	Position/ Organization	Attendant/Proxy
1	E. Joroev	Deputy Director, Water Management, Ministry of Agriculture and Water Resources	A. Djailoobaev
2	N.K. Kipshakbaev	Director of SIC branch, Committee of Water Resources of Republic	
3	T. Abduzabarov	Deputy Minister of the Ministry of Water Resources	N. Nasirov
4	M. Agzamov	Head of Economic Division of the Ministry of Agriculture and Water Resources	P. Bekniyazov
5	R. Kamchibekov	Oblvodkhoz	A. Baratov
6	A. Satiboldiev	Oblvodkhoz	K. Omurzakov
7	A. T. Yuldashev	Oblvodkhoz	
8	Kh. Mukhitdinov	Oblvodkhoz	A. Khomidov
9	A. Rakhmatullaev	Oblvodkhoz	I. Otokhonov
10	E. Vokhidov	Oblvodkhoz	M. Dusmatov
11	Kh. Khoshimov	Oblvodkhoz	N. Ernazarov
12	G. Nigmatov	Secretary, ICWC	
13	N. Rakhmatov	BWO “Syrdarya”	
14	Jeurg Krahenbuel	SDC Berne	M. Mirzaev
15	Markus Muller	SDC Bishkek	Johan Gelly
16	Vilma Horinkova	Regional Director, IWMI Regional Office for Pakistan, Central Asia and Middle East	Mehmood ul Hassan
17	Pulat D. Umarov	Deputy Director, SIC-ICWC	V. Dukhovny



## SIC ICWC Concepts and Terms of Reference

### (A) On component 1 – “Water users Associations (WUA) establishing and functioning”

The necessity of structural transformation in water use and management is caused by the fact that in agriculture management has changed from traditional large collective farms to a multitude of small farmers and dehkan farms. Since the large farms collective and state farms had their own structures for on-farm irrigation network and its operation and maintenance, the subdivision of large farms to private and peasant farms has created issues of water distribution, and irrigation-drainage network O&M. Many developing countries face similar problems. Different forms of on-farm water use organization were tested in these conditions: through state structures, local administration, joint-stock and cooperative companies, etc. WUA was found the most vital from listed above. WUA is a group of water users which, uniting its financial and technical resources, organizes operation of its irrigation-drainage network.

Problems appeared from existing state of irrigated agriculture in the countries, covered by the project, are caused by;

- In all countries state ownership on land exists and its transfer to land users is performed on base of lease or shares. Degree, land use area, lease duration differ significantly over the countries.
- Different degree of agrarian sector privatization state regulation.
- Former farms present state. Analysis of the farms in Uzbek part of Ferghana valley by 1999 showed that former kolhozs and sovhos are fully replaced by farmers and dehkan farms and shirkats.

*Because of that WUA establishing is possible on the territory of former kolhoz or sovhoz with placing here shirkat and farmer and dehkan farms.*

- Necessity of water supply improvement and even scarce water resources distribution between water users located on different distance from irrigation source.
- Need for repair-rehabilitation works on on-farm irrigation and drainage systems, where last years attention was substantially reduced due to difficult economic situation during transition to the market.

Solution of these problems in conditions of WUA establishing and functioning which will help to solve these issues and will be mighty factor of land and water fund use productivity increase in irrigation farming of Ferghana valley.

Reform package realization is supposed to perform on the pilot areas with consequent dissemination of results preliminary agreeing new strategy with decision-makers.

Finally, the main objectives of the activity are as follow:

- In selected farms of Ferghana valley is necessary to organize or improve organization of existing WUA, improve irrigation and drainage systems operation and management at on-farm and inter-farm level;
- Promote reform package introduction by means of relevant legal, economic and managerial base development as well as at expense of water users involvement in water management at on-farm level.

Choice of WUA object must be relevant to criteria, which will be developed during inception phase of the project.

For selection of pilot object on WUA block collection of necessary database in chain "system-WUA-field" is required.

Database inventory must cover external environment – irrigation network (Rayon water administration) management and agricultural and water characteristics of the farms linked with the system. Gathered and systematized information will allow assessing the present state of water users. Important condition of the component 1 success is summarizing of WUA establishing and functioning experience in Kyrgyzstan as well as project realization with participation of foreign donors (in part of WUA establishing and functioning).

Based on information analysis it is necessary to determine success incentives and negative aspects. In particular, whether it was state support to WUA establishing and functioning in form of subsidies, soft crediting and taxation. What are economic and financial possibilities of farms-water users in WUA formation and support as well as in on-farm systems maintenance. What can be considered as indicator of WUA activity? What are consequences of irrigation water conservation as result of WUA and water users efforts?

In result of research during inception phase proposals on pilot object selection and the project main phase's first year program should be prepared.

### **(B) On the component 2 "Improve regional institutional structure of management"**

Major principles placed in concept:

- Transition from administrative-territorial structure to basin hydrographic or integrated irrigation system management principle through inter-oblast, oblast and rayon water structures restructuring;
- Main goal of restructuring is creation of conditions for irrigated lands water supply improvement, organizational and other water losses reduction at all hierarchic levels, even water supply delivery and distribution from the source to the field and, finally, land-water resources productivity increase;
- At the national level 4-tier hierarchy of management is recommended: basin (sub-basin) administrations, irrigation system managerial bodies, WUA, water users of various categories;
- Management of new system structures (basin in future) is executed by the board, based on representatives of local authorities, water users, water organizations and executive direction;
- In legal aspect new structure is transformed into independent non-profit organization (consortium, joint-stock company, association) founders of which are water users (WUA), local authorities, government;
- Financial base of organization is statutory fees, water and services charges, governmental subsidies, bank and other loans;
- Water users (WUA) interact with basin or system bodies for all issues. WUA irrigation network O&M is performed by WUA itself by own expense or on contractual base with water organizations.

### **(C) On the component 3 "Improvement of irrigation water use productivity monitoring in Ferghana valley"**

#### **1. Activity objectives**

Main goal of the project is definition of water productivity using space images and field experiments, define possibilities of real water conservation, train in water demand planning and create extension services on water productivity improvement in Ferghana valley including areas of 3 countries: Kyrgyzstan, Tajikistan and Uzbekistan.

## **2. Activity provisions**

- Crop pattern planning taking into account canal capacity;
- Water use planning with respect to principle of equitable water allocation between water consumers;
- Follow principles of water conservation at different levels of agricultural organizations;
- Search alternative agricultural crops distribution not exceeding canal capacity;
- Irrigation planning, crops selection and their location agreed with WUA and Basin administration;
- Extension service establishing in irrigated farming.

## **3. Tasks**

- Organize water conservation and water productivity increase using GIS and demonstrative plots;
- Using models and methodologies developed by other projects in area of water productivity and water use;
- Extension service establishing in irrigation and agricultural production at rayon and oblast level;
- Analysis of situation, assessment of experience and summarizing research over all existing projects in water productivity.

## **4. Inception phase tasks**

- Situation analysis, WUFMAS and GEF (sub-component A-2) experience and methodology developed by other donors, regional and national organizations in water management and use assessment. Recommendations on their adaptation within the project.
- Based on criteria assess proposals and select relevant demonstrative plots within main canal, WUA and farms.
- Situation analysis and initial information collection.
- Working out proposals on pilot plots selection in each republic according to offered criteria.