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IMPLEMENTATION COMPLETION REPORT
(TF-21162 TF-20417 TF-50090 TF-21718 TF-20479)

ON A

GRANT

IN THE AMOUNT OF SDR 9.1 MILLION

TO THE

EXECUTIVE COMMITTEE OF THE INTERNATIONAL FUND FOR SAVING THE ARAL SEA

FOR A

WATER AND ENVIRONMENTAL MANAGEMENT PROJECT

February 25, 2004

Environmentally and Socially Sustainable Development Unit
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective)

Currency Unit =

FISCAL YEAR
January December

ABBREVIATIONS AND ACRONYMS

ASBP	Aral Sea Basin Program	POE	Panel of Experts
BVO	Basin Water Management Organizations	SDR	Standard Drawing Rights
CACs	Central Asian Countries	SIC-ICWC	Scientific Information Center of ICWC
DTF	Dutch Trust Fund	SIDA	Swedish International Development Agency
EC-IFAS	Executive Committee of IFAS	SYNAS	Syr Darya Control and Northern Aral Sea Project
EU-Tacis	European Union – Technical Assistance for Ce.States	TACIS	Technical Assistance
GEF	Global Environment Facility	TF	Trust Fund
ICR	Implementation Completion Report	TRIB	UNDP's Transboudary River Basin Initiative established with funds from US State Department
ICWC	Interstate Commission for Water Coordination	UNDP	United Nations Development Program
IFAS	International Fund for Aral Sea	USAID	United States Agency for International Development
MTR	Mid-Term Review	WARMAP	TACIS Project, Water Resources Management and Agricultural Production in the Central Asian Republics
PMCU	Project Management and Coordination Unit	WEMP	Water and Environmental Management Project

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ARAL SEA
ARAL SEA WATER AND ENVIRONMENTAL MANAGEMENT PROJECT

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Project ID: P008326	*Project Name:* ARAL SEA WATER AND ENVIRONMENTAL MANAGEMENT PROJECT
Team Leader: Masood Ahmad	*TL Unit:* ECSSD
ICR Type: Core ICR	*Report Date: February 25, 2004*

1. Project Data

Name: ARAL SEA WATER AND ENVIRONMENTAL MANAGEMENT PROJECT

L/C/TF Number: TF-21162; TF-20417; TF-50090; TF-21718; TF-20479

Country/Department: ARAL SEA

Region: Europe and Central Asia Region

Sector/subsector: Central government administration (56%); Other social services (23%); General agriculture, fishing and forestry sector (17%); Irrigation and drainage (4%)

Theme: Water resource management (P); Environmental policies and institutions (P); Conflict prevention and post-conflict reconstruction (P); Participation and civic engagement (P); Biodiversity (S)

KEY DATES			*Original*	*Revised/Actual*
PCD:	01/16/1996	*Effective:*	09/17/1998	09/17/1998
Appraisal:	05/18/1998	*MTR:*	03/15/2000	07/06/2001
Approval:	06/11/1998	*Closing:*	06/30/2003	06/30/2003

Borrower/Implementing Agency: EC/IFAS/EC/IFAS

Other Partners: Netherlands, Sweden, EU

STAFF	Current	At Appraisal
Vice President:	Shigeo Katsu	Johannes F. Linn
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2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: U

Sustainability: L

Institutional Development Impact: N

Bank Performance: U

Borrower Performance: U

	QAG (if available)	ICR
Quality at Entry:		U

Project at Risk at Any Time: Yes

An accurate rating of project outcomes would be "moderately satisfactory". However, this ICR rates the project as “unsatisfactory,” since no “moderately satisfactory” category exists in the PDS format. The "U" rating has been given for three reasons: First, overall financial management in particular, was weak. Second, the project lacked ownership by the five countries as project implementation was dominated by the leader of the project management and coordination unit (PMCU) based in Uzbekistan; line agencies in the other countries were not properly represented in decision making during project implementation. Third, the project did not achieve the stated objective of reducing withdrawals of water for irrigation by 15% over the project period. This was intended as a target of the overall Aral Sea Basin Program. However, the Water and Environment Management Project documents also show this as a project target. It was unrealistic to state this ambitious goal as the target of a US$20 million project.

It would have been impossible for the project to achieve close to 15% reduction by itself since this would have required substantial physical investments in rehabilitation of irrigation and drainage systems in addition to the strategic studies, pilot projects and public awareness programs supported under the project. Over the past six years, the amount of water extracted for irrigation has in fact been reduced by 15% in the Syr Darya Basin. This occurred primarily because of reductions in the area irrigated and increased releases of water for hydropower generation in the winter.

Despite the overall rating, several outcomes were positive. These were: (a) a clearly articulated assessment of key water management issues in the Basin; (b) a road map for addressing them; (c) restoration of key wetlands; (d) improved dam safety; and (e) improved monitoring of water flows. Details are given in Section 4. on achievements of objective and outputs.

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

The overall objective of the Water and Environment Management Project (WEMP) was to help implement the Aral Sea Basin Program (ASBP) approved by the five heads of Central Asian States in 1994. The main objectives of the program were to: (a) stabilize the environment; (b) rehabilitate the disaster zone around the Sea; (c) improve the management of international waters; and (d) build the capacity of regional institutions.

The WEMP project focused on two objectives: stabilizing the environment; and improving the management of international waters. The project was also intended to contribute to the two other ASBP objectives. These were however, to be pursued primarily by the Executive Committee of the International Fund for Aral Sea (EC-IFAS) and national governments with help from UNDP and other donors.

The WEMP project objectives were ambitious, defined very broadly, and did not fully reflect the political and economic realities of the countries participating. Project design did not fully anticipate the difficulties involved in implementing a five-country effort through a regional body. The ambitious objectives were not consistent with the modest financing provided. In addition, the project’s aims were often confused with the overall ASBP objectives, although the project was only one of several interventions under the Program. In the WEMP project document, the ASBP target of reducing the water withdrawn for irrigation by 15 percent is also described as a project target.

3.2 Revised Objective:

The project objectives were not formally revised. However, after the Mid-Term Review (MTR), revisions were made to the balance between project components, and targets were clarified. The scope of the three investment components, dam safety, water flow monitoring, and wetland restoration, under national level projects was increased, since these were successful and provided useful demonstrations for scaling up at national level. For Component A-1 (National and Regional Water and Salt Management), terms of reference for strategy development were revised to include an analysis of conflicts between irrigation in the summer and energy generation in winter. The strategy also provided the technical and analytical base for dialogue on regional water management among the Central Asian Countries (CACs). This dialogue is ongoing and will continue. The changes are described in Section 3.4, *Revised Components*.

3.3 Original Components:

The project at appraisal was packaged into one lead component (A) and five support components.

Component A-1: National and Regional Water and Salt Management (US$5.3 million, with grants of US$4.3 million)

The component supported development of regional and national water management strategies. These included development of scenarios of water demand and allocation at the regional level to help enable political decision-makers to reach agreements for improved water, salt and broader environmental management. At the national level, it supported development of water and salinity policies, strategies and action plans to provide guidance for investments in the sector. Expected outputs included: an updated Strategic Action Program for the next 5 to 10 years, an improved knowledge base on water and salinity management, reduction in withdrawals of water for irrigation by 15%, participation by water users in strategy development, and a gradual build-up of consensus and capability for reaching interstate agreements.

Component A-2: Participation in Water Conservation (US$1 million with grants of US$810,000)

The component was to be implemented for a four year period (1999-2002). Its objective was to encourage water users and providers to introduce low-cost water conservation measures by providing grants for pilot water conservation projects.

Component B: Public Awareness (US$3.1 million, with grants of US$2.79 million)

Key features included developing a public awareness campaign in the five states, development of a communications strategy on water saving, and creation of advisory committees.

Component C: Dam Safety and Reservoir Management (US$2.6 million with grants of US$1.4 million)

The component supported safety assessment of selected dams in the five countries. It also supported the upgrading of the monitoring and warning systems at nine dams and training in dam safety monitoring and assessment, preparation of detailed designs for priority rehabilitation measures, and development of a program for Lake Sarez. It was also expected that following the training, staff would evaluate the safety of other dams.

Component D: Trans-Boundary Water Flow Monitoring (US$3.5 million, with grants of US$2.22

million)

The component supported purchase and installation of water flow and water quality monitoring equipment at 25 trans-boundary water monitoring stations. It also supported training of Hydromet staff at these stations, and improvements in data management and transmission.

Component E: Wetlands Restoration (US$3.9 million, with grants of US$3.43 million)

The component supported restoration of Lake Sudoche, a Delta Lake on the border of the Southern Aral Sea, which had become desiccated due to poor water management. Restoration was expected to yield substantial biodiversity benefits, and to provide opportunities for enhanced income for the local people from fishing and livestock grazing. Component design included construction of infrastructure to raise the level of the lake and improve quality of water in the lake, an access road, and monitoring of biological and economic impacts.

Component F: Project Management Support (US$1.9 million, with grants of US$1.3 million)

A Project Management and Coordination Unit (PMCU) was to be established within EC-IFAS.

The WEMP sub-components were designed to support key programs defined in the ASBP (see Project Document Vol. 2 Part IV, Table 1), such as component A (Program 1.1) for regional water resources management strategies, Component C (Programs 1.2 and 1.3) for improving the dams' and reservoirs sustainability and efficiency, Component D (Program 2) for improving hydro-meteorological services, and Component E for restoring wetlands' deltas (Program 4). The ASBP cost was estimated at US$452 million (1996 prices) and the cost of each program was much higher than total WEMP funds. Thus, each WEMP component was to focus on limited and pilot activities that could lead to scaling-up under follow-up investments.

3.4 Revised Components:

During project implementation, various components were adjusted. The investment components (C, D and E), for which implementation went well, were scaled up, while components A-2 and B, which faced difficulties, were scaled down. Central Asian Country (CAC) Government contributions to project costs were expected to be substantial at project appraisal and this led to a major implementation problem, namely shortage of counterpart contributions in cash. Disbursement percentages in the grant agreements were set at much lower levels than is common practice for projects in the region. For example, the percentage for imported goods under Component C (for Dam Safety) was set at during appraisal, while the CACs were to provide 55% of the cost of international contracts. Amendments were made to the grant agreements after the mid-term review, which resulted in 100% financing of most components from grants (see section 5.4 for details). Due to the many small contracts and complex financing arrangements with grants from different donors, some implemented through co-financing and some through parallel financing, along with changing disbursement and exchange rates, it has proven difficult to determine accurately the total cost of each component. However, Bank estimates of the funds it disbursed from various grants are accurate and reasonably represent the cost of each (see figures in the revised component descriptions, below).

A-1. National and Regional Water and Salt Management (US$4.9 million of grant funds including funds for A-2)

During project implementation, trade-offs between water use for energy and for irrigation emerged as a major issue and caused tension between upstream countries (which use more water in winter to produce energy) and downstream countries (which need the water in summer for irrigation) of the Syr Darya Basin. To address this, the scope of the A-1 component was adjusted to include a detailed analysis of energy/water problems and development of options to address them.

A-2. Participation in Water Conservation

The component was to be implemented from 1999-2002; however, the period was cut to two years due to management and monitoring problems. As designed, it involved water use competitions among various water users (such as private farms, cooperative farms and water agencies), with awards for winning proposals to introduce low-cost water conservation measures. The component had very high overhead costs—over 45% of the total was for design, management, supervision, for monitoring operations and delivery of prizes to the winners. Technical assistance (TA) was provided from the EU Tacis-Funded WARMAP-II (Water Resources Management and Agricultural Production) project for independent monitoring of the competitions, for selection of winners and for certifications of the award of prizes. WARMAP-II was closed in October 2000. An alternative arrangement for independent monitoring was not established prior to the 2001 agriculture year and there were long delays in transferring prize moneys to the winners of 1999 and 2000 competition. As a result of these problems, implementation of the component was stopped

B. Public Awareness (US$1.4 million of grant funds)

Component implementation faced difficulties from the start. The component objectives and design were extremely ambitious and did not consider the region's political realities. In retrospect, the aim of changing water users' behavior through creating public awareness of the urgent need to conserve water (and reducing water consumption by about 5% by the end of 2002) was unrealistic. The major causes of inefficient water use were and are dilapidated infrastructure (requiring major investments to address) and poor government policies. These are quite separate issues from inadequate public awareness. The component's design, based on a modern public awareness campaign aimed at specific groups, was premature in a cultural context where such campaigns are broadly understood as government propaganda, and where governments still dominated agriculture and irrigation.

The component implementation arrangements were inappropriate. They relied excessively on the use of a single foreign consulting firm to carry out the thematic research, identify target groups, design the strategy, and train national public awareness teams. However, international consultants are not readily accepted in Central Asia, and their use needs to be very carefully targeted. The consultancy assignment was one of the first under the project, and both the PMCU and the consulting firm had little experience in implementing such activities in Central Asia. The relationship between the two was difficult from the start, as both had different expectations and little experience in resolving disputes or working as a team; therefore, in a short time, it became extremely tense, severely hampering progress. Issues emerged about the competence and performance of the consulting firm. At the same time, some were concerned that the prevailing conditions under which the firm was working were not conducive to achieving the objectives.

A second design weakness was that separate national and international public awareness teams were recruited at different times, and reported through parallel structures to the PMCU. Ideally, all teams should have worked together, and the national teams should have worked directly with the international consultants.

By the mid-term review, little progress had been achieved in implementing the component. It was restructured substantially, activities were scaled down and the unspent funds were allocated to other components. The international consultants' contract was terminated in December 2000 with partial outputs and partial payments. Expectations were lowered to more realistic levels (to fit the national teams' capacities) and work plans were modified to convey fewer and simpler messages to fewer target groups in each country. Implementation was completed in July 2002.

C. Dam Safety and Reservoir Management (US$2.2 million of donor financing)

The component was to be financed by GEF (US$500,000), EU-Tacis (US$550,000), Swedish International Development Agency (SIDA) (US$350,000) and country contributions (US$1.17 million). The EU-Tacis funding did not materialize, SIDA funding was increased to US$1.1 million (SEK9.84 million), and GEF funding was increased to US$1.1 million. A study on probable maximum floods for the Syr Darya dams and provision of bathymetric equipment to Kyrgyz Republic were added to the component. Component activities laid the basis for additional support to dam safety in the Central Asian Countries through other funding sources (e.g., Chardara Dam in Kazakhstan, and Sarez and Kayrakum in Tajikistan).

D. Trans-Boundary Water Monitoring (US$3 million)

The component's scope was increased. The project financed installation of an additional 12 monitoring stations, besides the 25 planned at appraisal, using savings from other components.

E. Wetlands Restoration (US$3.4 million of grant funds)

Feasibility studies and cost estimates were not prepared adequately at appraisal stage for this component aimed at construction of various works for rehabilitation of Lake Sudoche near the Aral Sea in Uzbekistan. Thus, the detailed engineering design was prepared during project implementation period. After preparation of detailed design, it became clear that the works included in the project would cost about three times the funds allocated. Therefore, to reduce costs, several changes were made to the design and only the essential works needed to rehabilitate the lake were included. These consisted of: (a) constructing a dike on the Akkum ridge, a temporary road from Karadjar village to Akkum ridge, and an outlet regulator to control water levels in the lake and flush when the lake is filled; (b) reconstructing a regulator at the Ravshan canal and constructing a new regulator at the head of the Ustyurt collector to divert freshwater from the canal to the lake; and (c) excavating a channel to divert water from the Left Bank Collector Drain. The channel was extended to the lake, linking different parts of it for improving water circulation and mixing to reduce the salinity levels.

The works excluded from the project were related to installing a pumping station to dispose of drainage water from the Ravshan farm. Feasibility studies showed that the higher lake levels would not have any adverse affect on the drainage of the Ravshan farm. Therefore, the pumping station and related works comprising a collector drain, a road from Ravshan village to the pump station, and a power line for the pump station, were excluded from the project.

F. Project Management Support (US$600,000 of grant funds)

The PMCU (based in Tashkent) was geographically separated from the EC-IFAS secretariat in 1999 when leadership of IFAS moved to Turkmenistan (see section 5.1). A substantial part of the costs related to managing other components, all included in Component F at appraisal, was charged to each component; thus, the final cost of Component F is lower than initial estimates. Furthermore planned EU-Tacis funds of

US$820,000, for project management were not available after the WARMAP II project closed in October 2000.

3.5 Quality at Entry:

Annex 8 describes the project's origins and preparation. The components grew out of experience from preparation of the first phase of the Aral Sea Basin Program (ASBP), except for A-2 and B4 which were added during appraisal with little prior preparation.

The preparation, appraisal and negotiation process was contentious, reflecting the differing perspectives of EC-IFAS and the Bank (and, on occasion, GEF)—less on what to do but more on how to do it. EC-IFAS wanted to control as much of the money as possible and perform the work with its own and national/regional staff. The Bank and GEF staff argued for the use of international consultants. Bank and GEF staff may also have pushed for a project design with too much focus on strategy development, and too little on support for pilot physical investments. The result was a compromise: A-1 (the strategy component) was carried out by a team of international and national consultants, with the latter's role enlarged, and A-2 and B with their high local costs, were added. However, these disputes and the Bank's focus on the detailed preparation of A-1 led to insufficient attention to the state of readiness of components B, C, D and E. Furthermore, even the design of A1 was problematic. The Terms of Reference (TOR) were complex and lengthy with too much emphasis on strategies, salt and water management, and interstate water allocations, and too little on energy-irrigation water use conflicts, links between macro-economic policies and water management, and national water policies and investment programs to address broader water management issues. Despite emphasis on A-1 during preparation, it took about two years to agree on the final TOR, due to the complex formulation.

Financing arrangements were also complex, a financing gap existed from the start, and an appropriate system was not developed for financial management on a day-to-day basis. Furthermore, procurement arrangements were complicated, and the proposed implementation schedule was unrealistic, particularly for recruiting international consultants for A-1. Early implementation experience showed that the project was not fully prepared at appraisal, and did not have full ownership of the participating countries. Quality at entry was not satisfactory.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

The project's main objective was to support the ASBP implementation, which was achieved. Most of the interventions constituting the ASBP of 1994 have now been completed.

Specifically:

(a) **Stabilization of the environment around the Aral Sea**: The Syr Darya Northern Aral Sea Control Program, part of the ASBP and implemented by the Kazakh Government with Bank financing, is supporting restoration of the Northern Aral Sea and delta wetlands, and improved management of the lower Syr Darya basin. Restoration of Lake Sudoche, supported by WEMP, has led to additional investments in wetland restoration by the Uzbek Government in the Amu Darya delta and the water strategy supported under component A1 has confirmed that with improved management there is sufficient water for restoration of the delta ecosystems. The next priority is further investment in irrigation and drainage rehabilitation and policy reform in Uzbekistan and Turkmenistan to permit large-scale implementation of this strategy.

(b) **Rehabilitation of the disaster zone around the Sea**: This objective overlaps the first. ASBP supported investments in improved drinking water and sanitation for the population living in and around the Aral Sea in Turkmenistan, Uzbekistan and Kazakhstan. There is more to be done, in both this area and in restoration of vegetation to reduce wind erosion.

(c) **Improve the management of international waters**: the strategic studies supported under WEMP demonstrated that the principal water management problems of the basin are not due to management and allocation tensions at regional level. They are due to deteriorating irrigation and drainage infrastructure and poor water management at national level, principally within the two countries which comprise 75% of water use within the basin, Uzbekistan and Turkmenistan. Furthermore, when there have been transboundary difficulties, these have generally been at a bilateral or sub-basin level. The Central Asian Countries' focus during the project period shifted from the Sea to the upper river basins and from regional to national issues. In the Syr Darya basin, the energy-irrigation uses emerged as major issues and the countries made several agreements to address them. In the Amu Darya basin, energy-irrigation issues were less severe.

While bilateral disputes over water have continued between some of the basin states, they have not erupted into actual conflicts. Cooperation among these states is comparable to that in other river basins in the world. The IFAS/ICWC (International Fund for Aral Sea/Interstate Commission for Water Coordination) mechanism and the project activities, which encouraged information sharing and common solutions, can take some credit for this.

A bilateral agreement between Uzbekistan and Turkmenistan in 1996 clarified the sharing arrangements of Amu Darya waters downstream of Kerki, and has mostly worked without major dispute, although water shortages during the drought years have severely affected Karakalpakstan. The primary purpose of the 1996 agreement was to specify conditions for management of the irrigation and drainage facilities crossing the territories of the two countries and to define mechanisms for resolving problems. Issues related to major investments for rehabilitating the Karshi Pumping Cascade, crossing the two countries, remained unresolved.

The project provided the technical and analytical bases for improving water resources management and allocations among riparian states and sectors. Awareness of dam safety was introduced, which led to new investments to improve overall water management in the basin. Better records of water flows will be available for planning water resources, as well monitoring and management. Wetlands restoration provided a practical model for addressing the environmental degradation problems around the Aral Sea. These physical models of improved water management are being widely replicated in the basin. Thus in terms of physical outcomes and their sustainability, this project may be rated satisfactory.

(d) Build the capacity of regional institutions: The WEMP, and the ASBP more broadly, have not been successful in achieving this objective. At the time of appraisal both EC-IFAS the regional body for coordinating the ASBP, and the project management unit of the WEMP, were in Tashkent. Senior Uzbek experts played a key role in both, and experts from other countries played a lesser role; but, EC-IFAS was designed with a rotating presidency. In 1999 this was moved to Ashgabat while the PMU and most expertise remained in Tashkent. EC-IFAS was greatly weakened. Furthermore, support to EC-IFAS by UNDP and EU-TACIS ceased in 2000. In 2002 the presidency was moved to Dushanbe and under Tajik leadership, EC-IFAS has revived its coordination and advocacy role. However, Uzbek and Turkmen support has been limited, and the donor support to EC-IFAS is much more limited than in the late 90s.

4.2 Outputs by components:

A-1. The component was divided into several phases with the idea of systematically preparing national and regional plans, and then finding ways to make priorities consistent. Startup of the A-1 component was delayed by 12 months, mainly because of procurement disputes caused by the recipients' skeptical view of the value of foreign consultants and desire to perform most of the work with their own staff. Also, the TOR prepared at appraisal was highly complex and finalization proved contentious. Once procurement issues were resolved, the PMCU did apply due diligence to ensure the work's progress and first drafts of the reports were prepared more or less on time. The panel of experts (POE) appointed at the suggestion of the Bank supervision team made valuable comments. The compromise solution for recruiting local consultants into regional and national working groups reporting to the international consultanting team seems to have worked quite well, although the need for clearing various documents by the five governments slowed the effort. Stakeholders generally have a positive view of consultant's performance, one of the few times this happened with an international consulting firm in Central Asia.

Several reports were prepared under the A-1 studies: (a) two regional reports; (b) five national reports (one for each country); (c) a joint regional and national report; (d) a report on water losses and development strategies; and (e) a report on the Action Plan. In addition, a database and a set of models were developed to improve analytical capacity in the region.

The A-1 studies provided a few key messages that will be of great value in future water resource management programs in the region. Specifically, the studies concluded that:

(a) With a reasonable standard of management, water resources in the Aral Sea Basin are adequate to meet current irrigation needs and provide an appropriate volume for environmental purposes in the delta areas.

(b) Irrigation is the main user of water (more than 90%) and losses are extremely high. About 70% of water diverted from the rivers is lost and only 30% is beneficially used to grow crops. The low efficiency is due to the deteriorated irrigation infrastructure, inadequate drainage, water-logging and soil salinity requiring large water applications for leaching. Furthermore, farmers lack incentives to improve production, and water use, especially in Uzbekistan and Turkmenistan, because of continued public sector domination of the agriculture sector.

(c) Shallow water tables and the resulting salinization and water logging are estimated to cost the national economies about US$1.7 billion annually or about 30% of the economic value of crop production in the Aral Sea Basin.

(d) Restoration of the Aral Sea to its 1960 levels is not economically or socially feasible, given the fact that 22 million people depend on irrigated agriculture for their livelihood. However, in addition to the Delta areas and the Northern Aral Sea, with water conservation and rehabilitation measures, restoration of the Western Aral Sea is a long term possibility.

The A-1 studies also proposed ways to resolve the energy-irrigation issues, particularly in the Syr Darya basin. These helped promote dialogue among the riparian states. Furthermore, the studies showed that benefits from improving water use at the national level are extremely high, even under a scenario of sub-optimal water allocations among the riparian states. This is primarily because water losses in the irrigated areas within countries are much higher than those resulting from inefficiencies in water allocations among countries. Thus, the short to medium-term focus should be on national projects that can improve

water use efficiency, while pursing inter-country water allocations. However, discussions for improving inter-country allocations take decades, as evidenced in other river basins around the world.

EC-IFAS, with assistance from the UNDP (and US$250,000 provided by the US Government under the Trans-Boundary River Basin Initiative), is holding discussions with the Central Asian Countries on the results of the strategy. Several workshops and seminars have been arranged and consultations are taking place between key stakeholders to move the dialogue on improving national water management and inter-country water allocations forward. The discussions are also strengthening IFAS's role in facilitating the regional dialogue.

A-2. The sub-component was curtailed two years early, ostensibly because of the PMCU's unwillingness to engage a suitable monitoring consultant (after EU support was terminated) but also because of concerns about loose financial management, including major delays in paying award money. However, the sub-component illustrated that farmers will conserve water if given a financial incentive and showed the effectiveness of a number of low-cost techniques for doing so.

B. This component was based on the questionable premise that public awareness alone could affect water use. A large and diverse media campaign was mounted and surveys showed that policy makers, farmers, students and other groups were increasingly aware of wasted water, the Aral Sea problem and the ASBP. No attempt was made to measure any impact on water use, specifically the project component's 5% target, (out of the overall 15% target), and the component's effect is doubtful. However, several working papers were prepared that may be useful in the future in improving irrigation planning.

C. Support for the safety assessment of 10 dams helped to create awareness among the governments about the urgency of problems related to dam infrastructure, and led to several follow-up investments. With the support of pilot projects, the safety of at least nine dams has been improved. Several professionals have been trained in dam safety assessment and are serving on the panels of experts for dam safety. Initially, governments gave only limited support for the component, since decision makers across the basin were not aware of the dangers posed by the unsafe dams. However, by the end of the project the activity enjoyed the countries' full support. Kazakhstan, Kyrgyzstan and Tajikistan have now developed their own plans for rehabilitating dams and introduced modern technologies to monitor dam safety. Further, work under the component directly led to a separate IDA and Swiss-financed project for Lake Sarez in Tajikistan. In Kazakhstan, rehabilitation of Chardara Dam was included in the Syr Darya Control and Northern Aral Sea (SYNAS) project and Kayrakum Dam was included in the proposed Tajikistan Ferghana Valley Water Management Project. Priority works for Tuyamayun Dam in Uzbekistan were included in the Uzbekistan Rural Water Supply and Sanitation Project. Rehabilitation of these dams is also helping to resolve the water and energy conflicts between upstream and downstream users by increasing re-regulating capacity below the Naryn Cascade on the Syr Darya and increasing the supply of water to generate energy in winter and irrigate crops in summer.

D. About 25 trans-boundary water-monitoring stations were installed. Equipment was procured under the project for an additional 12 stations; it has been delivered and stored in Tashkent and will be transported to the four countries and installed. Once all remaining equipment is installed, the component will have exceeded its physical targets. Questions remain about the cost-effectiveness of some of the equipment purchased. Still, data from the completed stations is already being used by the basin water management organizations (BVOs) and national water agencies to improve the timing and scheduling of irrigation releases.

E. The restoration of Lake Sudoche (a 40,000 ha. delta wetland that lost its regular source of replenishment) appears to have fully met its biodiversity and social/economic targets. Comprehensive ecological and socio-economic monitoring was well managed. The wetland attracts various birds, some of which are classified as endangered species from the International Red Book. The littoral area and area regularly flooded are highly productive (5 to 10 times higher than the dry land) and used as pasture for livestock. Further, the local population sees the lake as a main source of fish, which meet about 40% of the local population's protein requirements. The component was successful in restoring biodiversity, managing natural resources, and protecting the contiguous area from dust and salt storms. Economic benefits were also gained as the local population is able to use the restored area for fishing, hunting and grazing.

The component provided a model for improving the environment and biodiversity in the deltas by mixing drainage water with high salinity content with fresh water (when rivers have a surplus); further monitoring of the lake over several years is necessary to fully assess the project's impact. The Government of Uzbekistan decided to continue the program of wetland restoration in the Amu Darya delta and has three new projects underway (others are also being planned), reportedly following Lake Sudoche standards. Restoring more wetlands in the Amu Darya delta is included in the Uzbekistan Drainage, Irrigation and Wetlands Project. In Kazakhstan, restoration of the Northern Aral Sea and Syr Darya delta lakes is now proceeding under the SYNAS Project.

F. The PMCU became competent in project management, although some key staff were ineffective. Management of procurement was generally satisfactory, once policy disputes with the Bank were resolved. Project financial management was extremely cumbersome, rarely timely and not transparent (see section 5.4).

4.3 Net Present Value/Economic rate of return:

As a GEF project, investments were not subject to a conventional ERR analysis. Component E was an exception, where a 12% rate of return was forecast, based on benefits from increased fish, reed and livestock production from enhanced productivity of grazing land in the vicinity of the lake. Monitoring reports and information from the field indicate that benefits from the lake are likely to be higher than the appraisal estimates. Full benefits from the lake in terms of biodiversity, fish and muskrat, livestock and reed production will be realized in 2005 with continued flushing and the mixing of water (to reduce salinity levels in all parts of the lakes).

The qualitative benefits expected for other components were largely achieved. Decision makers are using data from the trans-boundary stations to manage water resources in the region. The dam safety component resulted in additional investments that will lead to improving water management in both river basins. And the water strategy is increasingly being used by the five countries. Benefits are described in more detail in Annex 3.

4.4 Financial rate of return:

Not applicable, as this is not a revenue generating project.

4.5 Institutional development impact:

PMCU did a marginally satisfactory job overall of managing the project (though perhaps not in the last two years). The physical separation of PMCU from the EC-IFAS secretariat meant that the larger objective of strengthening EC-IFAS was not achieved (see section 5.1 below). In fact, EC-IFAS may have been weaker

at the end of the project than at the beginning. During the long preparation phase of ASBP, prior to WEMP, substantial donor assistance (about US$32 million) was provided to the EC-IFAS, mainly in the form of technical assistance for various studies. At that time, PMCU and EC-IFAS were almost "one and the same," due to the close link between EC-IFAS and PMCU, and the location of EC-IFAS and PMCU in Tashkent. Further, various personnel were carrying out dual functions. After the start-up of WEMP, when EC-IFAS was separated from PMCU and moved to Ashgabat, all resources remained with the PMCU. Another issue was that the PMCU was both helped and hindered by a director with a strong personality, who could make things happen, but could also alienate people, especially those outside Uzbekistan. His attitude towards the Bank and the EC-IFAS chairman was often confrontational. Within the PMCU, some ineffective component managers (one from each country, picked partly on political grounds) were balanced by competent regional experts on international consultant's team. The project had several components spread in five countries with meager resources; this inevitably weakened the depth of impact in each country.

PMCU had a large number of local contracted staff as well as directors for each component and several national coordinators. Civil servants of the line ministries, who are very poorly paid in most Central Asian Countries, did not play a major role and were insufficiently involved in or supported by the project. Most staff left the PMCU after project completion. Some who were trained under WEMP, now work on other development projects in the region. Thus, the project had some capacity-building effects.

Many project activities were implemented at the national level. But, systematic activities designed to strengthen national institutions were not included in the project, and this was a design weakness. While the Ministries of Water played some role in the project implementation because their staff were involved in project activities, though under the leadership of PMCU and its Component Directors, the Ministries of Environment and Energy had a much weaker role. Similarly, the strategic work of water resources planning/investments lacked involvement of the core economics and financial ministries. EC-IFAS has tried to address this since the secretariat moved to Dushanbe in early 2002. Generally, capacity-building without substantial accompanying investment programs often has limited impact. However, some national institutions were strengthened, due to involvement of their staff in various components, such as preparation of national and regional plans, installation of water- measuring stations, assessments of dam safety and rehabilitation of wetlands.

The project was also intended to strengthen EC-IFAS, but this was to be achieved through a UNDP project (with US$1 million from the Dutch government). The UNDP project became inactive and was later cancelled after EC-IFAS moved to Ashgabat (UNDP staff working on the project were reluctant to move there and establish another office). However, the WEMP succeeded in providing assistance (about US$100,000) to establish the EC-IFAS in Dushanbe. Also, with project assistance, EC-IFAS was able to arrange several donor coordination meetings, workshops and seminars. With help from USAID, it prepared a follow up to the ASBP involving discussions between the Central Asian Countries and potential donors. With continued assistance, EC-IFAS it may be able to realize its goal, which is to help coordinate water use and promote international support for improved water management in the five countries.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

The EC-IFAS is defined as the "government" and the PMCU as the "implementing agency." While EC-IFAS was created in 1994 with a broad mandate and impressive powers (on paper), it was relatively weak because the five countries, despite declarations from their heads of state, were unwilling to

compromise their sovereignty by delegating decision-making powers to IFAS or its secretariat, EC-IFAS. To enhance ownership, a decision was made to rotate the chairmanship of IFAS from state to state every two years, which appeared judicious at the time. However, this course was coupled with the physical transfer of EC-IFAS offices from state to state, which proved unworkable and damaged its effectiveness. Further, the separation of the PMCU from the EC-IFAS when it moved to Asghabat in 1999 made it impossible for the project to strengthen EC-IFAS (which was an implicit objective of the WEMP).

The SARS outbreak, which delayed a visit by Chinese experts to supervise the installation of equipment and staff training under Component C, and delayed completion of that activity, was also outside EC-IFAS control.

Cost overruns on the original design of Component E were the result of an inadequate design at appraisal and the lack of any comparable cost data, possibly coupled with inadequate oversight by the Bank, also at appraisal. The design was revised during implementation without compromising the functioning of the wetlands/lakes.

5.2 Factors generally subject to government control:

Three periods should be distinguished. First, when PMCU and EC-IFAS was chaired by Uzbekistan during the project preparation phase; second, when the EC-IFAS was separated from PMCU and moved to Turkmenistan just after the project start-up, and when EC-IFAS moved to Dushanbe.

During 1998-1999 when Uzbekistan chaired the EC-IFAS, the PMCU was fully integrated with EC-IFAS and the project preparation was undertaken during this time. The EC-IFAS was supported by donors providing large amounts of Technical Assistance. During 1999-2002, EC-IFAS moved to Ashgabat and became largely ineffective. Turkmenistan appear to have little interest and was not in a strong position to promote regional cooperation and the only time it called a meeting of the IFAS was to decide where to rotate the chairmanship after its term was up, with about one year delay. During this period, all momentum and capacity built during the preparation phase of ASBP for addressing regional issues in a cooperative way was lost. In 2002 when EC-IFAS moved to Dushanbe, and has tried to reassert control over the project. This created a conflict between EC-IFAS and PMCU that brought costly delays to Components A-1, C and D. The conflict resulted in the EC-IFAS being unable to ask the Bank to extend the closing date or to complete the outstanding work since EC-IFAS depended on the PMCU for project implementation. The PMCU remained in Tashkent for the duration of the project.

The Bank agreed at project start-up to en-bloc staffing of the PMCU, without a "no objection" to individual project personnel (though it appears a "no objection" letter to key project staff was sent at the start of the project) It therefore, had little leverage when faced with inadequate performances. The appointment of the former EC-IFAS chairman as director/leader of the PMCU immediately after he completed the chairmanship rotation, and had signed the Grant Agreements with the Bank, led to conflict of interest issues, and did not allow EC-IFAS the independence to assert itself to improve project management or make a multi-country project concept a reality.

5.3 Factors generally subject to implementing agency control:

Procurement delays, especially on the key component (A-1), were partly due to the inexperience of PMCU but mainly the result of policy differences with the Bank that spilled over from the appraisal/ negotiations process. However, once these were resolved, PMCU was reasonably business-like in steering implementation.

Concerns from the other countries regarding Uzbek domination of the PMCU were not adequately addressed. The curtailment of Component A-2 after two years because of the lack of an independent consultant to ensure transparency (and Bank concerns about the potential for corruption), might have been avoided if PMCU had a more flexible attitude.

Financial management and auditing remained a problem throughout the project period (see Section 5.4 below). The ability to monitor the project's progress and financial disbursements on a day-to-day basis was never established. Reports were infrequent and inadequate, making it difficult to update work plans and fully utilize the grant funds.

5.4 Costs and financing:

Annex 2 provides details on costs and financing by components and expenditure categories at the project appraisal and completion. Estimation of total project/component costs at completion is extremely challenging for several reasons, including inadequate information about CACs contributions, changing disbursement percentages for various expenditure categories, and changes in exchange rates during the project implementation. As mentioned earlier, the amounts disbursed from various grants are accurate and have been used to estimate the project/component costs.

The total project cost at the appraisal stage was estimated at US$21.20 million with US$4.96 million to be financed by the CACs and US$16.24 million by the donors (Annex 2 Table 1). The Project Documents indicated that an additional US$0.9 million of CACs contribution would be financed by the donors. Thus the net contribution expected from the CACs was US$4.06 million. In addition, the countries were to provide in kind contributions such as civil works for Component C and D for installation of dams monitoring and water measuring equipment respectively.

The donors were to fund US$17.14 million also covering US$0.9 million from CACs contribution. At the project start, total commitments from the donors were US$16.24 million (GEF Grant US$12.22 million equivalent, US$2.3 million equivalent by the Dutch Government, US$1.37 million equivalent by EU-TACIS from in kind contributions WARMAP II Project, and US$0.35 by SIDA) leaving a financing gap of US$0.9 million. The donor financing shown in the procurement tables was US$15.4 million, including GEF and Dutch financing (Annex 2). Soon after the project start, the Dutch Government provided another US$0.5 million raising the total Donor commitment to US$16.74 or US$15.4 million net of the EU-TACIS in-kind contribution. It is not clear how much funding was actually provided by EU-TACIS as it was in the form of TA from the WARMAP II project that ended in October 2000. During project implementation, additional funds were provided by the Dutch Government (US$1.0 million) for completing the Lake Sudoche rehabilitation, and the Swiss Development Corporation (SDC) provided US$1.1 million equivalent.

The total disbursements at the project closing from all Grants were US$15.5 million equivalent (Annex 2, Table 2) compared to original commitment of US$15.4 million (excluding EU-Tacis funding). Disbursements from the GEF trust fund were US$11.3 million, Dutch trust funds US$3.1 million and SIDA TF US$1.1 million (a significant increase from original commitment). The total undisbursed funds from all grants were US$1.2 million equivalent (GEF TF US$0.7 M, Dutch TF US$0.5 million).

<u>Major Financial Management Issues.</u>

Project financing and financial management remained the biggest issue and cause of tension between the

EC-IFAS, PMCU and the Bank. The main problems were:

(i) financing was not fully secured from the beginning and EC-IFAS had no financial resources of its own to make up for any deficit in donor financing as Governments normally do under a Bank project. In addition to uncertain financing from CACs, there was a financing gap of about US$2.27 million (considering uncertain and difficult financing arrangements from EU-Tacis) that was a cause of concern and a stumbling block at the project start-up;

(ii) CACs did not provide cash contributions for the project, although the disbursement percentages for various categories were set up assuming cash contribution from CACs. This created problems in payments for various contracts. This was particularly a problem in cases where the disbursement percentage was set very low (45% for component C and F) and where goods were procured under ICB contracts. While the countries carried out civil works for installation of equipment under component C and D, there is no credible evidence of significant cash contribution by any of the five countries;

(iii) the financial management system and disbursement process for the project was very complex because of several special accounts, with each payment being funded from more than one Trust Fund. Transactions were extremely difficult to trace. There were three special accounts under the project -- for GEF, the Dutch and the SIDA Trust Fund. In addition, there was a CAC US$ Special Account, a US$ Current Account and a local currency account. Often the US$ denominated payments to suppliers originated from the CAC US$ Special Account and were routed through the US$ current account. The funds were then transferred from Grant TF Special Accounts according to their shares to the CAC US$ Special Account. Sometimes payments were made from one TF Special Account and the funds were then transferred from other TFs to charge each TF according to the eligible shares. The better approach would have been to disburse the TF sequentially, one after another, at the same disbursement rates. After mid-term, this approach was used for the new Dutch TF-50090 under which the Component E costs were disbursed 100% (instead of sharing between GEF and with other Dutch Trust funds);

(iv) the PMCU was responsible for other Government of Uzbekistan related ASBP activities not included under the project. The financial records and transactions of WEMP were often mixed with these non-WEMP related activities;

(v) during 1999, the funds from the SA of the GEF, Dutch and Swedish Special Accounts were placed in separate deposit accounts at the National Bank of Uzbekistan (NBU). Subsequently, the PMCU was asked to use interest received from the funds placed on deposit at the NBU as EC-IFAS contributions;

(vi) added complications arose due to restrictive foreign exchange transactions in Uzbekistan where the PMCU was based and through which all funding was passed; and

(vii) the project audits were often late and queries from the Bank about the audit issues rarely received a satisfactory reply.

There were great difficulties with financial management under this project, partly because of the original design, with low disbursement rates, a financing gap, a large number of special accounts and activities funded from many TFs, and partly because of financial management by PMCU during the project implementation. Expenditure statements were not kept current, making day-to-day financial management as well as future planning extremely difficult. During all supervision missions, the financing issues remained a main focus of discussion. Disputes over financial issues often distracted time and energy from focusing on technical and institutional outcomes.

After the MTR, efforts were made to streamline financial management. Several amendments were made to increase disbursement percentages. Some Special Accounts were closed, and only the GEF Special Account was used for transferring TF funds. Payments for several large contracts were made directly by the Bank and the balances of the Special Accounts were reduced. However, difficulties with financial management remained a problem until project closing, and caused tension with the implementing agency. They contributed to the underachievement of some of the project targets, and played a large part in the decision of the task team to rate the overall achievement of the project unsatisfactory.

6. Sustainability

6.1 Rationale for sustainability rating:

Overall, sustainability of the activities supported by WEMP appears likely, although a number of risks remain. Works constructed under components C, D and E have been transferred to the national governments and their sustainability is likely. The results of A1 are being disseminated and despite all the difficulties, overall cooperation among countries in handling regional water issues is better than in many other river basins in the world. Particularly on the Syr Darya Basin there have been a series of agreements between the riparian states since 1995 to address the energy-irrigation operational conflicts. The Prime Ministers and even the Presidents of the countries meet to resolve urgent issues at short notice.

Furthermore, the studies supported under WEMP illustrate that regional water management can best be addressed by improving water management at national level, through investments and improved policies. Notes on specific components follow:

A-1. Water and Salt Management. The analytical and strategic work has provided a solid framework for improving water management with regard to regional cooperation. The report recommended that a working arrangement is needed to ensure the deltas (including the Sudoche wetland restored under this project) receive guarantees of water for dry years. The component analysis has modestly contributed to solving the Naryn Cascade issue, which is being discussed by bilateral international financial institutions in dialogue with the Syr Darya Basin states and in-country assistance strategies. Databases and models have been shared and should have continuing value.

A-2. Participation in Water Conservation. Sustainability is questionable, and depends on whether data on potential savings in water use with low-cost investments and financial incentives will be incorporated in national programs with donor support.

B. Public Awareness. Sustainability is questionable, if the audiovisual materials generated under this component can be well archived and made available to future users (for example, through an IFAS information system), they could have continuing value for future programs.

C. Dam Safety. Sustainability is likely. The greatly heightened awareness of the risks of dam failure generated by the project make it likely that states will find the modest funds needed to operate and maintain the new equipment. This component has already led to additional investments in dam safety and improved operation of dams in all CACs. (Lake Sarez, Chardara, Kayrakum).

D. Trans-Boundary Water Monitoring. Sustainability is likely. Further assistance is being provided by SDC and USAID to improve water monitoring and creating regional centers in Dushanbe and Almaty, with links to the international hydromet agencies. Pressure from institutions that use data, such as

the Ministry of Irrigation and Water Resources and the World Meteorological Organization (WMO), will most likely ensure that key transboundary stations are properly operated and maintained, even in the poorer countries, where hydromet funding continues to be a critical problem.

E. Wetlands Restoration. Overall, the restored wetlands should be sustainable. Uzbekistan has decided to expand the restoration program with its own resources, and it is creating a permanent body to manage the restored group of wetlands. Because the local population of Karakalpakstan benefits greatly from the restored wetlands (hunting and fishing are their main source of income), the Government is likely to ensure that water supplies to the lakes will be maintained. The drainage water supply is more or less guaranteed for Lake Sudoch due to the farmers' irrigation activities; however water quality in the Lake will depend on fresh water flows from the Amu Darya River. This can be achieved with the annual, expected average flow of fresh water, which will also enhance the Lake's biodiversity.

F. Institutional Development. Sustainability is questionable. As mentioned above, the PMCU's role ended at project completion/closing. However, EC-IFAS, which will remain intact, is a regional body established by the countries, which have a strong motivation to maintain it. The IFAS branches in each country receive substantial financial contributions from their governments for implementing national projects. The issue is financing for the EC-IFAS regional office, for which a mechanism must be found where national contributions can help sustain it.

The decision by EC-IFAS to manage further dissemination of A-1 studies, with UNDP help, should provide it with an opportunity to develop the technical capacity it needs. However, maintaining the agency will also depend critically on a permanent funding mechanism from the five states.

6.2 Transition arrangement to regular operations:

The process of defining EC-IFAS' "regular" operations, through the discussion of an ASBP-II, is ongoing, and includes lessons from WEMP. It is recognized that several WEMP components are likely to continue as national, rather than regional, programs (for example, C, D and E), and that ASBP II will consist mainly of investments and policy changes at the national levels.

7. Bank and Borrower Performance

Bank

7.1 Lending:

As described earlier, the project design was a compromise, and it might be argued that the Bank went too far in accommodating the views of EC-IFAS, especially with respect to including Components A-2 and B, overall project management arrangements, and the high number of PMCU staff. However, the alternative may have been no project at all. The Bank's later decisions to curtail these two components were strongly resisted and resented by the PMCU. The elaborate design for Component A-1 was effective in bridging the Bank and PMCU objectives, although its implementation proved quite challenging.

The 1996 ASBP Review, largely produced by the Bank, made various recommendations, including (a) merging two inter-state organizations, the Interstate Council of the Aral Sea (ICAS) and the International Fund of the Aral Sea into one IFAS; and (b) transferring responsibility for ASBP/WEMP management from headquarters to the Resident Mission in Tashkent (RMT), effective July 1997. The Bank did not object strongly or use its full leverage when EC-IFAS was effectively split in two (EC Secretariat and PMCU) in April 1999, with near fatal consequences for its capacity. Also, the Bank from Headquarters did little to support the Country Office Resident Mission in Tashkent (RMT) in handling a complex and

politically difficult project. Overall lending is rated *unsatisfactory*.

7.2 Supervision:

Bank Management in the early years of implementation did not sufficiently recognize the strategic importance of the project, perhaps due to the 1997 reorganization and broad-sweeping management changes in Washington.

In late 2000, supervision responsibility was shifted back to Headquarters. The Country Office staff continued to participate in technical, procurement and financial management aspects, in overall project management, and importantly, in facilitating collaboration between countries on key issues.

The project was regularly supervised, twice a year, with a Mid-Term Review in July 2001. Supervision budgets were adequate and missions were frequently large, generally with appropriate skills. However, no specialist in hydrologic equipment and communications was used either at appraisal or supervision and visits by financial management specialists were infrequent in the early years, with consequences for project quality.

The project had four task managers between preparation and completion. However, this was not as problematic as it might seem at first glance, since there was good overlap between them and close support, including participation in the appraisal and supervision missions, by sector and country managers.

Early supervision was concerned mainly with resolving procurement disputes, which the Bank handled with patience and persistence. The minor compromises that were made (for example, in selecting local consultants for A-1) were appropriate. Supervision teams were diligent in resolving issues, such as the successful request to the Netherlands to provide an additional US$1 million to allow completion of Component E, and the 6-month extension to Phase VI, to allow additional analysis of key questions.

As a result of the Mid-Term Review, more emphasis was given under A1 to water-energy trade-offs and the appointment of the independent panel of experts (POE), as well as curtailing Components A-2, and B. It also led to greater focus on adequately completing the three physical components—C, D and E. An earlier Bank recommendation to replace the national project coordinators for the Kyrgyz Republic and Tajikistan with officials from the energy sector was not adopted, although deputy team leaders from energy were added. Although it was clear at MTR that the project objective of reducing water use by 15% was unrealistic, this was not formally revised. Such a revision would have required lengthy discussion with the PMCU and member countries. The project supervision team judged that it was better to focus on addressing implementation issues and restructuring poorly performed components, rather than spend time and political capital on such a debate. Despite the resulting "disconnect", their judgement was the right one.

The project was rated B on environmental safeguards (no social safeguard issues were identified) at appraisal, mainly because of construction issues related to Component E and their potential impact on salinity and dissolved oxygen. These were to be mitigated by clauses in construction contracts and the monitoring system, respectively. Environmental/safeguard management performance was rated *satisfactory* by PSRs throughout project implementation. The ICR mission saw no evidence of environmental problems at Lake Sudoche (and much environmental benefit).

7.3 Overall Bank performance:

Although the picture is somewhat mixed, overall Bank performance can be considered *moderately satisfactory*, in particular given the difficult operating environment in Central Asia in the mid 1990s. The "unsatisfactory" rating has been given in this ICR for Bank performance since no "moderartely satifactory" category exists in the PDS format.

Borrower

7.4 Preparation:

Since EC-IFAS did not accept the Bank's view that the modest results of the preparation phase were due to national working groups being supplemented with only short-term international specialists, it greatly resisted the Bank's preference for giving overall responsibility for A-1 implementation to an international consulting firm. This greatly increased the time and cost of the preparation/appraisal process. The agency also felt that salt management was of secondary importance, whereas the Bank insisted it be given equal importance to water quantity issues. EC-IFAS's priority for A-2 and B has already been discussed. Preparation documentation, including cost estimates, on all components except possibly A-1 was thin, at best. As for the CACs, they had limited involvement in project preparation activities; they were only consulted by EC-IFAS on a limited basis on project design and preparation activities. Overall, recipient performance during preparation is rated *unsatisfactory.*

7.5 Government implementation performance:

Before 1999, when EC-IFAS was located in Tashkent, it was synonymous with PMCU (see below). From 1999-2002, EC-IFAS lost all its effectiveness and thus is rated *highly unsatisfactory*. From 2002 to the present, EC-IFAS has tried to re-build its capacity and rein in the autonomous PMCU. However, this did not resolve project issues, but rather created a stalemate, especially in Phase VII of Components A-1, and for Component D there were long delays in transport of equipment to the five countries. The overal rating is *unsatisfactory* —though future prospects are more promising.

The Panel of Experts for A-1 met twice (in June 2001 and January 2002). Its second report noted a concern that its earlier recommendations were not fully considered. Further, it recommended greater attention to: (a) consistency between national and regional strategies, water use and the environment in the deltas; (b) clear rules for water management; (c) allocation of O&M costs; (d) the role of BVOs; (e) a River Basin Authority; (f) salt balances; and (g) a 12-month extension of A-1 studies. Also, there is little evidence that EC-IFAS vigorously followed-up on the issues raised. Predictably, PMCU and the network of Soviet-era water specialists argued for the status quo and resisted any suggestions for radical change.

Compared to the preparation phase of the project, CACs had a rather active role in implementation of some components. In particular, they have constructed facilities for installation of dams monitoring equipment (under component C) and water measuring equipment (under component D) from their own funds. They were also involved in carrying out dam safety assessments and restoration of wetlands. Their participation in the A1 studies was in coordinating data collection activities, analysis and discussions primarily through the National Teams for A1 component and National Coordinators drawn from various Government agencies and reporting to the A1 Consultants and PMCU. The CACs should have had more involvement in developing the strategy and national and regional plans instead of leaving these tasks to national teams and coordinators. The CACs provided funds for project activities that were implemented by their own governments on their territory, for example, construction works for hydromet stations. However, they did not provide cash contributions for the activities managed at the regional level by PMCU, except Uzbekistan that contributed some since PMCU was located in Tashkent.

7.6 Implementing Agency:

The PMCU's performance throughout the project is rated *unsatisfactory*. Although it did develop competence in daily project management functions, such as procurement and accounting, it continued with the disputes raised at appraisal, it did not handle financial management well, and in the last year of the project, it held Components A-1 and D hostage in its ongoing battles with the Bank and EC-IFAS. As a result, project accounts did not offer timely information on expected project costs, trained staff were demoralized and left and the Bank and POE technical advice on A-1 issues was ignored.

7.7 Overall Borrower performance:

Overall recipient performance is rated *unsatisfactory*.

8. Lessons Learned

The most significant lessons are listed below:

1. Developing a detailed operational strategy among five countries is a daunting effort under any circumstances, but even more so when there are assymetrics in power, wealth and political systems between countries. Thus, spending substantial resources to develop a detailed strategy may be wasteful. Also large-scale TA projects or stand-alone components with broad objectives like A-1 studies are difficult to implement due to often divergent opinions about how they should be undertaken.

2. Multi-donor projects are extremely difficult to implement. This is a lesson in particular for GEF operations, where GEF policy places great emphasis on the need for substantial co-financing.

3. Inadequate preparation of some components before appraisal adds greatly to the burden of the project agency and Bank supervision staff during implementation.

4. GEF support can have a catalytic role, as evidenced by the impressive number of parallel and spin-off projects generated, at least partly from WEMP. Among these was a decision by Uzbekistan to expand wetlands restoration with its own funds, investments under the Bank-supported Uzbekistan Drainage, Irrigation and Wetlands Improvement project, and the Kazakhstan SYNAS projects.

5. PMCU was given responsibility for implementing activities which would have more appropriately been implemented by country-level line agencies. The project activities and components, such as component C, D and E could have been implemented by the countries' Ministries of Agriculture/Environment or National Hydromet. This would have enhanced country ownership, and resulted in strengthening national institutions, improving sustainability.

6. Regarding strategic analysis, allocating substantial resources to ambitious regional studies may not be a good use of resources. A better alternative is likely to be to agreed on broad principles, and then to concentrate on more narrowly focused follow-up work in areas like energy-irrigation trade-offs and the impact of glacier melting, and above all, in improved irrigation and drainage management at the country level. It is clear that poor national water management and degraded infrastructure cause many of the environmental problems in the Aral Sea Basin. WEMP activities in dam safety, trans-boundary monitoring and wetlands restoration will be best followed up through national programs, now that the project has put

the spotlight on these issues and they are seen as priorities on the countries' agendas.

7. The project validated an underlying assumption of the ASBP: While restoring the Aral Sea to its former size and productivity will not be possible, it is feasible to recreate much of the lost value by restoring wetlands in the deltas of the Amu and Syr Darya Rivers. This was determined by the successful restoration of Lake Sudoche under Component E and by the analyses of Component A-1, which conclude that additional water of suitable quality can be made available to the deltas by improving water management throughout the basin. These lessons have been incorporated in the Bank's Syr Darya and Northern Aral Sea Project in Kazakhstan and the Uzbekistan Drainage, Irrigation and Wetlands Improvement Project.

8. Regional projects are generally complex and difficult to implement. Also, providing counterpart funds for regional projects is even more difficult than for the national projects. This is especially true in Central Asia where much of the existing infrastructure now crosses borders and the governments are cash strapped. However, programs conceptualized at the regional level can be successfully implemented when specific activities are defined and implemented nationally. This was confirmed by WEMP experience with the relatively trouble-free implementation of Components C, D and E, and national projects such as the Syr Darya Northern Aral Sea Control project in Kazakhstan, and the Water Supply and Sanitation projects in Kazakhstan and Uzbekistan. A better approach would be to design programs for the regional level but divide projects and activities into efforts at the national level; this will make them consistent with regional goals and coordination, but place implementation under national governments. This lesson is reflected in the design of the proposed Ferghana Valley Water Resources Management Program and should be a principle of ASBP II.

9. Instead of the whole Aral Sea Basin, a river basin approach which deals with the Syr Darya and Amu Darya basins separately is increasingly being used in dealing with regional water management issues. The Aral Sea itself has been separated into two parts. The Northern Aral Sea and delta depend upon the flows of Syr Darya, and the Large Aral Sea and delta depend on the Amu Darya waters. The number of countries involved in each basin is reduced to about three, making discussions and cooperation more practical. Also, the issues of water management in Syr Darya Basin are more severe and the implementation of solutions more advanced than the Amu Darya.

10. Another difficulty with regional projects is that country ownership at the line ministry level is a challenge. For example, because the project was prepared largely by EC-IFAS, ICWC, and other regional water experts, along with the donors, the line ministries had only limited participation in preparing the operation and there was relatively little focus on country specific results. Ministries of Economy and Finance have had even less involvement. The lesson is that it may be unrealistic to expect full country ownership from all major line and core ministries for a US$20 million regional project. A less ambitious approach may be more likely to succeed.

11. A further lesson well documented in projects from other countries is that entrusting project management to a PMCU of relatively well paid contracted staff, while it may ensure that Bank procedures are followed, does not build ownership at country level. On the contrary, it may lead to resentment from technical ministries.

9. Partner Comments

(a) Borrower/implementing agency:

The Borrower's (EC-IFAS's) full comments are given in Annex 10 and the main points are summarized here. EC-IFAS endorses the contents and conclusions of the ICR. However, in its view overall the project objectives were achieved and the project implementation should be rated satisfactory. It indicates that difficulties in implementation were mostly due to inexperience of regional/national organizations in implementation of such a complex regional project involving five countries under a transitional environment at the national and regional levels. Contrary to the ICR mission's finding, it suggests the EC-IFAS performance in preparation, supervision and overall was satisfactory. EC-IFAS agrees that: (a) the project lacked ownership by the five countries as the project implementation was dominated by the PMCU leadership based in Uzbekistan and this was main impediment in resolving implementation problems; (b) the 15% savings in water use should have been the goal of the ASBP and not the project, and it would be only achieved through increased irrigation system efficiency; (c) water allocations in the Aral Sea Basin should allow for the necessary quantities of water for revitalization and sustaining the environment around the sea, in particular the wetlands in the delta area, in addition to water for irrigation; and (c) the financial management and project financing remained the major problem during the project implementation.

In addition, the comments include a number of disagreements/suggestions with statements made in the ICR including: (i) EC-IFAS disagrees with the suggestions that international consultants are not readily accepted in Central Asia. It indicates that competent international consultants are acceptable; rather, the region has a problem with excessive payments to international consultants as opposed to local consultants that may equally be competent; (ii) EC-IFAS also disagree that "the network of Soviet era water specialists" has resisted any radical suggestions and has argued in preserving the status quo, as indicated in the ICR. It points out that all of the specialists were chosen with the participation and endorsement of the World Bank; and (iii) on the financial management misconduct, EC-IFAS notes that the World Bank should have had better control over the financial management issues of the project and should share the blame for this mismanagement.

Many of the comments are on potential role of EC-IFAS in the future in overall regional water management issues, including carrying out the last phase of the A1 studies, conducting further consultations with the CACs, resolving interstate water management issues, and developing new water sharing agreements. Upon completing the A1 studies, EC-IFAS notes that the final A1 report must be considered by the IFAS Board, and it points out that the report falls short of proposing variants for a new regional water sharing agreement. The borrower report notes that the present timing is not suitable for discussions between upstream and downstream countries on trade between energy and irrigation. New agreements should be considered only when the all parties are ready. The report suggests that additional donor support is necessary for sustaining the institution, and that it should have the status of an international organization that would prevent domination by any State.

(b) Cofinanciers:

The ICR was sent to SIDA, EU-Tacis and the Dutch Government, the cofinanciers of the project, in November 2003. No comments have been received from the cofinanciers. A short email received from the EU-Tacis staff saying that full comments would be sent at a later date, indicated also that EU-Tacis has not been able to confirm in its record any commitments for funding this project.

(c) Other partners (NGOs/private sector):

Not applicable.

10. Additional Information

The following section deals with issues of project implementation and impacts of particular interest to GEF, following the GEF Secretariat's draft Guidelines of May 2003.

Implementation Approach. The project had no logical framework at appraisal but the Trans-Boundary Diagnostic Analysis (Table 7 in the Project Document) serves much the same purpose. Its analysis of root causes of problems and project activities was generally sound; however, the expectation that public awareness alone would lead to water conservation was unrealistic, as was the anticipated 15% reduction in water use by 2002.

As is true of most projects, after grant signing, the recipient and the Bank's attention turned from strategic vision to day-to-day details of procurement and other implementation issues. However, the Mid-Term Review did address broader questions of project objectives and methodology in a limited way and made adjustments to the extent possible.

Given the Soviet legacy of centralized control and the authoritarian tendencies of project decision-makers, there was little genuine partnership with other stakeholders, especially those outside the water-engineering network. Also, environmental and energy agencies had limited involvement. Generally, the difficulties of five countries working together were underestimated and the risk of Uzbekistan domination, though well known from the preparation phase, was inadequately addressed.

Project M&E arrangements were weakly developed (there is no section in the Project Document) and results were not disseminated in a timely or permanent form. Therefore, there was little feedback of M&E results into implementation. There was also little coordination and interaction between components with similar objectives, such as A-1, A-2 and B.

Regional Ownership. While the project objectives were and are highly relevant to the cause(s) of the Aral Sea crisis and were acknowledged by the five countries, details of project design and implementation methodology were, in many cases, a compromise between EC-IFAS and the Bank; they were never fully owned by the former (e.g., the procurement process for A-1) or, in other cases (A-2 and B), by the Bank. Nevertheless, there is reason to hope that A-1 outcomes will influence the policies, programs and projects of the five states.

GEF support had a catalytic role, as evidenced by the impressive number of parallel and spin-off projects generated at least partly from WEMP (Annex 9). Among these was a decision by Uzbekistan to continue and expand wetlands restoration with its own funds, using standards developed under WEMP. Co-financier support was strong and the "associated investments" projected at WEMP approval (mostly World Bank projects) were realized in a larger total amount. Some additional projects are being prepared by the World Bank, Asian Development Bank and others, which draw directly from WEMP findings.

Public Involvement. Table 6 of the Project Document (Sustainability and Participation in the Project) is mainly concerned with sustainability, but it seems little attention was paid to participation, except in Component A-2, which made awards for water savings to innovative farmers and farm groups. For example, the limited dissemination was planned for the A1 reports at appraisal, and multi-stakeholder involvement has been a challenge.

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
Five national policies, one regional policy, strategy and action programs accepted by the five Aral Sea basin countries and IFAS Board.	Plans accepted by the five countries.	Plans prepared, with limited dissemination. Elaborate consultation and stakeholder participation conducted by EC-IFAS with UNDP assistance.
At least five replicable and sustainable practices for saving water are confirmed.	Five models in practice.	At least five practices confirmed and being introduced.
Awareness among population about saving water, national and regional policies, strategies, and programs.	60% of the population is reached.	Water-saving target was not achieved.
A program to monitor and maintain the dams, sustainably.	10 dam safety assessments completed, and dams monitored.	Assessments completed, monitoring ongoing, additional investments to rehabilitate dams identified and some introduced.
Trans-boundary water flows (quality and quantity) are measured and data available for basin-wide water management.	100%, 25 stations.	25 stations operating, but not yet the additional 12.
Improved salinity and oxygen levels in Lake Sudoche.	About 10 g/liter; 6 mg/l.	Field information shows numbers achieved.

Output Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
Five national water and salt management policies, strategies and action plans.	Final plans.	Draft plans prepared, but not all consistent with regional plan.
Timely monitoring reports with substantive lessons on low-cost water conservation measures.	20 reports prepared. The component was curtailed in 2000. The target was left in the PSR by mistake.	Only 1 comprehensive report available to ICR mission. The component was curtailed well before the last PSR.
Large numbers are reached by the public awareness campaign.	60% of public is reached	Achieved.
Dams are inspected.	10 dams inspected.	Achieved.
Water measuring stations operating and providing reliable data.	25 stations operating.	25 stations operating, with minor deficiencies; the 12 additional stations are not yet installed.
Construction of Lake Sudoche is completed.	100% completed.	Construction completed, with some items deleted.

[1] End of project

Note: Key indicators were not included in the project document but added by the supervision mission in November 1999; these were narrower in scope than the document would suggest (for example, they contained no quantitative targets on water savings) and had somewhat arbitrary baseline data.

Annex 2. Project Costs and Financing

Project Costs and Financing

Total project costs at appraisal were estimated at US$21.2 million, of which US$4.96 million was to be from country contributions (Table 1 below) and US$16.24 by the Donors. The Project documents indicated that US$0.9 million of CACs contribution is to be financed by a donor not yet identified at the time of appraisal; thus, net country contributions expected were US$4.06 million. Disbursement rates in the grant agreement were set quite low, assuming high levels of country contributions in cash. In addition, countries were to provide in-kind contributions such as for civil works for Components C and D, for installing dams and monitoring/water measuring equipment. The high level of country contribution was unrealistic in retrospect.

The donors were to fund US$17.14 million also covering US$0.9 million of CACs share. At the appraisal/approval stage, total donor commitments were US$16.24: US$12.22 million from a GEF fund, US$2.3 million from the Netherlands, US$1.37 million from EU-Tacis, and US$350,000 from SIDA, which totaled US$16.24—leaving a gap of US$0.9 million. Project documents show a Netherlands contribution of US$3.2 million, although only US$2.3 million was allocated to project components under the grant agreement (perhaps assuming that Dutch Government would fund CACs share of US$0.9 million). The procurement tables in the appraisal report were prepared only for US$15.4 million, covering GEF and Dutch funds (noting US$12.2 million and US$2.3 million, respectively, but assuming Dutch Funding of US$3.2 million).

Soon after the start of project implementation, an additional US$500,000 Netherlands grant was obtained (TF21718, signed in June 1999) to partially fill the financing gap, thus raising donor commitments to US$16.74 million. EU-Tacis funds were originally envisaged for Component C (dam safety) and Component F (project management); instead, it provided in-kind TA for design and independent monitoring of the A-2 competition through its ongoing WARAP II project, as well as some help in project management. However, this assistance ended in October 2000 when WARMAP II was completed. It is difficult to estimate the organization's equivalent monetary contribution to the project. Thus, donor commitments net of the EU-TACIS contribution were US$15.4 million soon after the project startup.

SIDA provided more funding than originally expected. At project closing, total SIDA funds totaled about US$1.1 million (Swedish Kronor 9.84 million), including supplemental funds for the Syr Darya Cascade Study and Bathymetric equipment to the Kyrgyz Republic, and 100% of the costs of consulting services under Component C.

Netherlands funding (TF20479) was US$2.3 million (NLG4.5 million) for two components. For Lake Sudoche works, NLG2.25 million were allocated at a disbursement rate of 40% (44% of the cost of these works was to be covered by the GEF; the remaining 16% by CAC). For Component A, NLG2.25 million were for consulting services at a disbursement rate of 21%; 65% was to be covered by the GEF TF and remaining 14% by the CAC. By the mid-term review, losses due to exchange rate fluctuations in NLG and to some extent in the SDR rates were over US$800,000. After this time, the balance of the Dutch grant was converted to EUROs whose value since last year increased in US$ equivalents. Contributions since then were mainly used to fund the A-1 consultant contract. At the Bank's request, the Netherlands provided another US$1 million grant (TF 50090) of which 100% was applied to completing the Lake Sudoche works. Total Netherlands funding was about US$3.6 million (under TF20479, 21718 and

050090--US$2.3 million, US$500,000 and US$1 million, respectively) against commitments of US$4.2 million. At project closing, US$3.1 million was disbursed from these grants (US$1.3 million for Component A and US$1.8 million for Component E), while US$500,000 were undisbursed.

Under the GEF TF20417, SDR9.1 million (US$12.2 million at the time of negotiations) was to fund all components, 100% financing for goods under Components D, E and F, and for consulting services and incremental operating expenditures for Components D and E. Other components were partially funded from the Dutch TF and CAC or only from the CAC. At closing, the total amount disbursed from GEF TF20417 was US$11.3 million and the undisbursed amount was US$700,000.

Total disbursements at project closing from all grants were US$15.5 million, compared to the original commitment of US$15.4 million (excluding EU-Tacis financing). The total undisbursed balance from all grants was US$1.2 million. Without an additional US$1 million from the Netherlands, along with a reduction in the components' scope and favorable exchange rates (EURO and SDR to US dollars), available funds would not have been adequate to meet the project's obligations. The apparent inconsistencies in these numbers are due to exchange rate fluctuations during the project implementation period.

Major Issues in Financial Management

Project financing and financial management remained the biggest issues and causes of tension between the PMCU and the Bank. The main problems were:

(i) Financing was not fully secured from the beginning and EC-IFAS (the main counterpart source for the project) had no financial resources of its own to compensate for any deficit in donor funds. This was particularly important when EC-IFAS chairmanship was moved from Uzbekistan to Turkmenistan. PMCU performed the EC-IFAS functions after this time and took decisions related to finances on the other's behalf. Immediately after the project began, serious concerns arose about securing the US$900,000 (the source of which was still unidentified). Also, EU-Tacis financing was uncertain; foreign experts operating under WARMAP II provides technical assistance but this was terminated in 2000. Thus, arrangements for financing of US$2.27 million were uncertain, a cause of concern and a stumbling block at start-up.

(ii) The Central Asian Countries did not provide cash contributions for the project (although the disbursement percentages were calculated assuming they would) which created financial problems for various contracts. This was particularly true where the disbursement percentage was set at a very low rate (45% for Components C and F) and goods were procured under ICB contracts. While the countries carried out civil works for installing equipment under Components C and D, no credible evidence exists of significant cash contributions by any of the five countries.

(iii) The financial management system and disbursement process were quite complex because three special accounts were created and each payment was funded from more than one TF. Thus, transactions were hard to trace. The three accounts were used for GEF TF20417, for the Dutch TF20479 and for SIDA TF 21162 grants. In addition, a CAC US dollar special account and current account were established, as well as a local currency account. Often, the US dollar-denominated payments to suppliers originated from the CAC special account and were routed through the current account. Funds from Grant TF special accounts were then transferred to the CAC US-dollar special account. Sometimes, payments were made from one TF special account and funds then transferred from other TFs to charge each TF according to the eligible shares. A better approach would have been to spend all of the funds in one grant account, and then move to another account, rather than making one payment from several accounts. Also,

this would have eliminated the added costs of transaction fees for moving funds from one account to another. After mid-term, this latter approach was used for the new Dutch TF-50090 under which Component E costs were 100% disbursed (instead of sharing between GEF TF20417, DTF20479 and TF50090). Thus, all TF funds were disbursed smoothly within a few months.

(iv) The PMCU was responsible for other Uzbekistan-related ASBP activities not included in the project. Thus, WEMP financial records and transactions were often mixed with these non-WEMP efforts. After the mid-term review, parts of the accounting system were streamlined by reducing the number of special accounts as well as their funding levels. Disbursements were extremely slow in the first 18 months after the project started: The GEF TF 20417 SA had a balance of US$1 million, DTF 20479 US$200,000, and SIDA TF 21162 US$200,000—a total advance of US$1.4 million, substantially higher than the project's quarterly expenditures.

(v) In 1999, funds from the SA of the GEF, Dutch and Swedish special accounts were placed in separate deposit accounts at the National Bank of Uzbekistan (NBU). Subsequently, the PMCU was asked to use interest from these funds for EC-IFAS contributions, which they did.

(vi) Added complications arose due to restrictive foreign exchange transactions in Uzbekistan, where PMCU was based, and through which all funds passed.

(vii) Project audits were often late and Bank queries about audit issues were rarely answered satisfactorily.

The above summarizes the difficulties in the project's financial management. Some issues were due to the original design, including low disbursement rates, a financing gap, and various special accounts and activities funded from many TFs. Others emerged in implementation. During all supervision missions, financing issues remained the main focus of discussion. Disputes over finances always overshadowed and affected the substantive technical discussions. Because expenditure statements were not current, day-to-day financial management and future planning were extremely difficult. After the mid-term review, efforts were made to streamline financial management. Several amendments were made to increase disbursement percentages, and most of the project activities were 100% financed from the grant. Contributions from the client were in-kind (personnel and civil works). Some special accounts were closed, and only the GEF special account was used to transfer TF funds. The Bank paid for several large contracts directly, and the special accounts' balances were reduced. However, financial management remained a problem until project closing, producing tension between the Bank and the implementing agency and causing several project targets to under-achieve.

Table 1: Project Costs/Financing by Component : Appraisal Estimates (in US$ millions)

Component	Total	Central Asian Countries	Grant Financing by Donors				
			GEF	Netherlands	EU-Tacis	SIDA	Total
A. Water and Salt Management	6.27	1.16	4.11	1.0			5.11
B. Public Awareness	3.10	0.31	2.79				2.79
C. Dam Safety and Reservoir Mgmt	2.57	1.17	0.50		0.55	0.35	1.40
D. Trans-Boundary Water Monitoring	3.45	1.23	2.22				2.22
E. Wetlands Restoration	3.88	0.45	2.13	1.3			3.43
Project Mgmt Support	1.93	0.64	0.47		0.82		1.29
Total	**21.2**	**4.96 (4.06) 1/**	**12.22**	**2.3 (3.2) 2/**	**1.37**	**0.35**	**16.24 4/**

1/ The countries' contribution adds up to US$4.96 million. While the total shown in the Project Document was US$4.06 million with a note that US$0.9 of the countries contributions were to be financed by an unidentified donor contribution.

2/ Dutch funding was NLG4.5 million or US$2.3 million equivalent (allocated to Components A and E) while the total was shown in the Project Document as US$3.2 million, possibly showing the Netherlands would provide an additional US$0.9 million from the CACs share. In any event, there was gap in financing of US$0.9 million. After project start, US$500,000 was provided under Dutch TF 21718, thus leaving a US$400,0000 gap in donor financing.

3/ EU-Tacis funds were provided in-kind through WARMAP II for component A-2, and possibly for Component F. WARMAP II stopped in October 2002. It is difficult to estimate how much funding EU-Tacis provided.

4/ Donor financing totaled US$16.74 million (including the additional US$500,000 from the Netherlands) against the US$17.14 million identified as the donor portion including U$0.9 million for countries share financed by the donors. The donors' cash contribution totaled US$15.37 million, excluding in-kind funding by the EU-Tacis.

Table 2: Project Costs/Financing by Component: Latest/Actual (US$ Millions)

Component	GEF	The Netherlands	SIDA	Total	Original Commitments
A. Water and Salt Management	3.6	1.3		4.9	5.11
B. Public Awareness	1.4			1.4	2.79
C. Dam Safety and Reservoir Management	1.1		1.1	2.2	1.40
D. Trans-Boundary Water Monitoring	3.0			3.0	2.22
E. Wetlands Restoration	1.6	1.8		3.4	3.43
F. Project Management and Support	0.6			0.6	1.29
Total	**11.3**	**3.1**	**1.1**	**15.5**	**16.24**

Note: As the report states, it is impossible to estimate the total cost and no credible evidence exists of significant country cash contributions though there were contributions in-kind (for staff, office space, logistics and civil works). Disbursement percentages were increased to 100% just after the mid-term review and prior to major grant disbursements. Estimates of grant funds disbursed are accurate and reasonably reflect project costs.

Project Costs by Procurement Arrangements (Appraisal Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	2.88 (2.88)	0.00 (0.00)	0.00 (0.00)	0.83 (0.00)	3.71 (2.88)
2. Goods	2.53 (2.53)	0.00 (0.00)	0.64 (0.61)	0.68 (0.00)	3.85 (3.14)
3. Services Consultant Services and Training	0.00 (0.00)	0.00 (0.00)	10.00 (8.40)	1.36 (0.00)	11.36 (8.40)
4. Incremental Operating Costs	0.00 (0.00)	0.00 (0.00)	1.10 (0.98)	0.91 (0.00)	2.01 (0.98)
5. Recurrent Costs	0.00 (0.00)	0.00 (0.00)	 ()	0.27 (0.00)	0.27 (0.00)
Total	5.41 (5.41)	0.00 (0.00)	11.74 (9.99)	4.05 (0.00)	21.20 (15.40)

The project document notes that the amounts in parentheses are to be financed by the GEF (US$12.2 million and Dutch grants of US$2.3 million). It appears Dutch funding of US$3.2 million was assumed in the detailed table instead of US$2.3 m.

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	2.70 (2.70)	0.00 (0.00)	0.00 (0.00)	 ()	2.70 (2.70)
2. Goods	2.30 (2.30)	1.00 (1.00)	0.80 (0.80)	 ()	4.10 (4.10)
3. Services Consultant Services and Training	0.00 (0.00)	0.00 (0.00)	8.30 (8.30)	 ()	8.30 (8.30)
4. Incremental Operating Costs	0.00 (0.00)	0.00 (0.00)	0.40 (0.40)	0.00 (0.00)	0.40 (0.40)
5. Recurrent Costs	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	5.00 (5.00)	1.00 (1.00)	9.50 (9.50)	0.00 (0.00)	15.50 (15.50)

Notes: All figures are Grant Funds disbursed by the Bank (GEF, Dutch and SIDA)

[1/] Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

[2/] Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Annex 3. Economic Costs and Benefits

Given the largely strategic nature of the project objectives, it is not surprising the discussion in the project document of benefits and justification is largely qualitative. Benefits are summarized in the matrix below:

The table below compares appraisal projections and probable outcomes in both quantitative and qualitative expected benefits. However, it should be noted the project's full impact has yet to be felt and another evaluation three to five years from now could be quite useful.

Benefit	**Appraisal Expectation** Section K of the Project Document	**ICR Expectation**
National and regional policies, strategies and action programs for managing water and salt.	An integrated, transparent and agreed framework would be created, in the form of a regional and five national water and salt management plans.	A-1 studies provide good technical and analytical information to improve water management in the region. Regional and national plans are prepared.
Interstate agreements on water sharing for water quality, seasonal management and cost-sharing.	"Enhancing the capability" of such agreements, through joint decision-making under Component A.	Some progress on seasonal management. This statement refers to the water-energy trade-off issue, where an agreement was reached in 1998. However, allocation of water in the drought years 2000 and 2001 was notably inequitable**.** Various initiatives to improve water management in the Syr Darya Basin were conducted.
Reform measures such as water pricing and cost recovery. Water conservation by creating regulations. Water conservation through inter-state agreements that would allow for more sustainable water and land management.	Improving acceptance in the region for such measures.	Some progress re: water charges in Kyrgyz Republic, Tajikistan and Kazakhstan, though not due to the project. Regulatory measures were inadequate during the droughts in 2000 and 2001, at least in Uzbekistan. Based on the draft regional strategy under A-1, if water conservation measures were adopted by the five states, sufficient water would be released to meet the needs of the "sixth user," the Aral Sea (or rather its deltas), without explicit interstate agreements to this effect.
Water sector investment to make water use more efficient and to address the maintenance backlog.	Investment (from private, public and donor sources) will accelerate through (a) transparent and stable policies; (b) component A reforms and (c) demonstration effects of other components.	Too early to tell. Private investment remains negligible. Public sector investment is severely constrained by budget and economic conditions. An important exception is wetlands development, since Uzbekistan embarked on a significant program based on Component E success. However, Uzbekistan's current investments in rehabilitating irrigation and drainage systems remain far below the rate of deterioration. Donor support increased, with some long-gestation projects coming on stream; but, future plans are cautious, due to slow progress on economic reforms in Uzbekistan and

		Turkmenistan and limited absorptive capacity in the Kyrgyz Republic and Tajikistan
Reducing water consumption and thereby improving river salinity and flow to the deltas and Aral Sea.	"IFAS target" of 15% water conservation, with 5% from Component B. Other impacts from deepening and effectiveness of reforms, incentives and interstate agreements.	The 15% target was achieved in one basin. however, this was not due to the project. Thus there was no evidence of systematic water savings yet. There was no significant impact from Component B (5% savings). Impacts from reforms and incentives (e.g. WUAs and pricing) will take time to develop.
Capacity to monitor water flow and quality between states.	Create physical capacity.	Appraisal targets exceeded; problems with delivery of equipment for additional 12 stations to the four countries and installation are being resolved.
Dam safety.	Increase in dam safety by installing equipment and training staff on early warning systems for nine dams and Lake Sarez action plan.	Spin-off dam safety projects for Lake Sarez, Chardara and Kayrakum were identified. (Lake Sarez is almost completed, Chardara is being carried under a project in Kazakhstan, and Kayrakum is being prepared.
Biodiversity.	Increase as a result of Component E.	Strong visual evidence of substantial impact; monitoring under way.
Institutional impacts.	Strengthening: .ASBP ·EC-IFAS ·National agencies	While the project strengthened some elements of the ASBP, it may have diverted attention from other needs (such as watershed management). Strengthening EC-IFAS was not achieved and it is weaker than at appraisal. Little impact on national agencies.
Incremental cost analysis.	Incremental cost of $17.8 million estimated.	Not relevant at ICR stage.
Component E rate of return.	At least 12%, based on economic benefits of US$800,000 a year and biodiversity benefits of at least that much.	Full benefits will be realized in a few years. Available monitoring shows benefits are likely to be higher than original estimates.
Damages from salinity would be reduced.	20% rate of return could be achieved if benefits from reducing salinity are about $4 million a year.	No evidence of systematic changes in soil salinity levels to date.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
Month/Year	Count	Specialty	Implementation Progress	Development Objective
Identification/Preparation				
06/01/1994	*14*	Sector Leader, Water Resources Specialist (2), Water Advisor, Irrigation and Drainage Engineer (2), Economist (2), Agriculturist, Pocurement Specialist, Financial Management Specialist, Drainage Engineer, Dams Engineer, Public Relations Specialist (The count is approximate as accurate record is not available.		
Appraisal/Negotiation				
04/13/1998	*12*	Sector Leader, Water Resources Specialist, Agriculturist, Ecologist, Drainage Engineer, Economist, Dams Engineer Procurement Specialist, Financial Specialist, Public Relations Specialist, Lawyer, Loan Office (count is approximate).		
04/13/1998				
Supervision				
12/04/1998	*5*	SECTOR LEADER (1); FIN. MGMT. SPECIALIST (1); SR. OPERATIONS OFFICER (1); OPERATIONS OFFICER (1); IRRIGATION ENGINEER (1).	S	S
05/21/1999	*7*	COMMUNICATIONS ASS. (1); EXTERNAL AFFAIRS OFF. (1); FIN. MGMT. SPECIALIST (1); PROCUREMENT ANALYST (1); OPERATIONS OFFICER (1); IRRIGATION ENGINEER (1); SR. OPERATIONS OFFICER (1).	S	S
11/26/1999	*9*	PROJECT MANAGEMENT (1); PROJECT MANAGEMENT/POL (1); WATER RESOURCES/ENVIRO (1); IRRIGATION/DRAINAGE	S	S

		(1); WATER RESOURCES (1); ECOLOGY (1); DAMS SPECIALIST (1); PROCUREMENT (1); SOCIAL/ENVIRONMENAL (1).		
06/23/2000	*11*	WATER RESOURCES/ENVIRO (1); PROJECT MANAGEMENT/POL (1); DAMS SPECIALIST (1); COMMUNICATIONS SPECIAL (1); COMMUNICATION SPECIALI (1); FINANCIAL MANAGEMENT (1); PROCUREMENT (1); WATER RESOURCES (1); WATER RESOURCES/ENV (1); PROJECT MANAGEMENT/PO (1); PROJECT MANAGEMENT (1).	S	S
12/21/2000	*10*	TEAM LEADER (1); OPERATIONS OFFICER (1); SR. IRRIGATION ENGINEE (1); RESIDENT REP. TASHKENT (1); SECTOR MANAGER (1); IRRIGATION ENGINEER (1); ENERGY SECTOR SPECIALI (1); RESIDENT RE. KYRDYZ (1); FINANCIAL MANAGAMENT (1); GEF REPRESENTATIVE (1).	U	S
07/06/2001	*9*	WATER RESOURCES (1); SECTOR MANAGER (1); COUNTRY MANAGER (1); OPERATIONS OFFICER (1); ENERGY SPECI. (1); PUBLIC RELATIONS (1); PROCUREMET (1); PROCUREMENT (1); ECONOMIST (1).	U	S
02/25/2002	*4*	TEAM LEADER/WATER RESO (1); ECONOMIST (1); OPERATIONS OFFICER (1); WATER RESOURCES (1).	S	S
08/06/2002	*5*	WATER RESOURCES (1); ECONOMIST (1); WATER MANAGEMENT (1); COUNTRY MANAGER/ECONOM (1); COUNTRY MANAGER/ECON (1).	S	S
03/03/2003	*2*	TEAM LEADER (1); ECONOMIST (1).	S	S

ICR 06/02/03	*3*	TEAM LEADER (1); WATER RESOURCES (1); COUNTRY MANAGER (1).		

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US$ ('000)
Identification/Preparation		incl. below
Appraisal/Negotiation		1,055
Supervision		1,307
ICR		35
Total		2,394

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating
☐ *Macro policies*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Sector Policies*	○ *H* ○ *SU* ● *M* ○ *N* ○ *NA*
☐ *Physical*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
☐ *Financial*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Institutional Development*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☐ *Environmental*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
Social	
☐ *Poverty Reduction*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Gender*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Other (Please specify)*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Private sector development*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Public sector management*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☐ *Other (Please specify)*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance	*Rating*			
☐ *Lending*	○ *HS*	○ *S*	● *U*	○ *HU*
☐ *Supervision*	○ *HS*	● *S*	○ *U*	○ *HU*
☐ *Overall*	○ *HS*	○ *S*	● *U*	○ *HU*

6.2 Borrower performance	*Rating*			
☐ *Preparation*	○ *HS*	○ *S*	● *U*	○ *HU*
☐ *Government implementation performance*	○ *HS*	○ *S*	● *U*	○ *HU*
☐ *Implementation agency performance*	○ *HS*	○ *S*	● *U*	○ *HU*
☐ *Overall*	○ *HS*	○ *S*	● *U*	○ *HU*

Annex 7. List of Supporting Documents

List of Supporting Documents

RER/98/005: Aral Sea Basin Capacity Development Project – Terminal Report Form, UNDP, October 2001.

EC-IFAS, "Aral Sea Basin Program: Draft Progress Report No. 4", February 2002.

World Bank, "Aral Sea Basin Program Review: Proposed Tentative Conclusions and Recommendations", unpublished draft, June 1996.

European Commission, EuropeAid Cooperation Office, Program 2003-2005, Terms of Reference, "Strengthening the Capacity of Basin Water Organizations (BVOs) for Improved Resource Planning", Brussels, October 2002.

World Bank, ASBP/ WEMP/ Sub-Component A.1,"Report of Independent Panel of Experts, January-February 2002."

EC-IFAS, ASBP/ WEMP. Sub-Component A.1, Regional Report No. 3, "Draft Regional Policy, Strategy, and Action Program for Water and Salt Management", Royal Haskoning, 30 April, 2003."

EC-IFAS, ASBP/ WEMP, Sub-Component A.1, National Report No. 2 by National Working Group of Kazakhstan, "National Policy, Strategy and Action Plan for Water and Salt Management Project", __ 2002.

EC-IFAS, ASBP/ WEMP, Sub-Component A.1, National Report No. 2 by National Working Group of Kyrgyz Republic, "National Policy, Strategy and Action Plan for Water and Salt Management Project", __ 2002.

EC-IFAS, ASBP/ WEMP, Sub-Component A.1, National Report No. 2 by National Working Group of Tajikistan, "National Policy, Strategy and Action Plan for Water and Salt Management Project", __ 2002.

EC-IFAS, ASBP/ WEMP, Sub-Component A.1, National Report No. 2 by National Working Group of Turkmenistan, "National Policy, Strategy and Action Plan for Water and Salt Management Project", August 2002.

EC-IFAS, ASBP/ WEMP, Sub-Component A.1, National Report No. 2 by National Working Group of Uzbekistan, "National Policy, Strategy and Action Plan for Water and Salt Management Project", September 2002.

SIC-ICWC/IWMI, "Ways of Water Conservation" (results of WUFMAS Sub-Project,

WARMAP-2 Project (TACIS) and Sub-Component A.2 of GEF Project), Tashkent, 2002.

IFAS, "WEMP - Component B: Public Awareness, March 1999 - July 2002," (unpublished draft), Tashkent, 2002.

Additional Annex 8. Project Design and Implementation

Project Origin

The nature and extent of the Aral Sea crisis were fully described in Section I.B of the project document. In 1994, with Bank assistance, the five countries developed the Aral Sea Basin Program (ASBP) as a comprehensive attempt to deepen understanding of the problems and propose solutions. The ASBP had eight themes (programs) and 19 projects, including strategies, pilots and feasibility studies for investment projects (see Project Document, Vol. 2, Part IV, Table 1 for a full listing). Donor support was obtained for most of the 19 projects, which were carried out from 1995-1997.

A GEF Preparatory Assistance Grant of $500,000 was obtained for studies in two of the projects: "Regional Water Resources Management Strategy," (1.1) and "Water Quality Assessment and Management" (3.1a). The studies were intended to cover water quantity and quality issues in a complementary way, with leadership from the water and environmental sectors, respectively. In practice, despite some joint meetings, the two working groups tended to operate independently and there was no provision for a joint product. Each study was carried out by regional and national working groups of senior specialists, on a part-time basis, with most of the activity occurring at workshops. The resulting reports were somewhat disappointing: The 1.1 group produced a voluminous regional and five national reports that mostly reproduced previous material with few new concepts and a tendency to avoid controversial issues. The 3.1a reports (also regional and national) stated that salinity was the principal trans-boundary water quality problem, though other pollutants were important in specific locales and at the national level. However, they did not analyze the mechanisms of salt transfer in any detail.

Project Design

As work began on the project design, it was clear the focus would be on strategies for managing regional water quantity and quality. However, all stakeholders felt it would be desirable to supplement this focus with components that would meet GEF's concern with addressing the causes of the Aral Sea crisis and simultaneously show some "results on the ground." At this stage, the main participants were: EC-IFAS management; the Director of SIC-ICWC; Aral Sea Basin units at Bank headquarters and in the Resident Mission in Tashkent; the ECA region GEF coordinator; and the GEF Secretariat. Officials of national ministries of agriculture, water and environment and their design institutes were relatively uninvolved. Several suggestions for additional components were evaluated. The Bank proposed a regional program of pilot projects to test methods of water conservation and salt management, but it was rejected by EC-IFAS—although Component A-2 eventually contained many of the same characteristics. Several donors subsequently financed various pilot projects, though no systematic review of their results has been made. A Bank proposal to continue the work of Program 6 (Land Degradation) through pilot projects on watershed management and/or rehabilitation of the Aral Sea bed under the then-new GEF theme of Desertification was rejected by GEF. However, the Bank itself is now lending in both areas, the latter (in Kazakhstan) with GEF support.

During project design, components building on ASBP projects 1.3 (*Sustainability of Dams and Reservoirs*) (C); 2.1 (*Hydrometoerological Services*)(D); and, 4.1 (*Wetlands Restoration*)(E) were agreed upon without controversy. While Component E was a direct outgrowth of Project 4.2, which developed a strategy for wetland restoration and proposed some priority sites, the others shifted focus somewhat: Component C focused on one aspect of the sustainability of dams and reservoirs that was of particular interest to the Bank, since dam safety assessments under its first round of projects in the former Soviet

Union uncovered an alarming number of problems. Other aspects, like sedimentation, were set aside (although provision of hydrographic equipment was later added). Component D expanded the work of Project 2.1, which emphasized institutional strengthening and forecasting of snow volume, into the emerging priority of trans-boundary monitoring stations to support present and future water agreements.

Component B was proposed by EC-IFAS during appraisal and was a controversial addition. The priority of improving water use efficiency was not in doubt; however, with hindsight, Component B was based on an erroneous premise – that public awareness alone could lead to significant changes in water use behavior. Indeed, it should have been understood by EC-IFAS and the Bank (as recently endorsed in the A-1 Regional Report No. 3), that many factors are involved. These include improved agricultural practices, improved conveyance and distribution facilities, water charges and extension services. Perhaps the most unfortunate aspect was adopting a target of "at least a 15% reduction of water use by the end of the next phase" – an imprecise ending point but taken by many to mean the end of the project. However, para. 2.13 is more explicit, presenting a Component B objective as to "induce behavioral changes among water users, thus reducing their water consumption by about 5% at the end of the awareness campaign in 2002."

With the inclusion of the public awareness program (Component B), the Bank team sought assistance from External Affairs staff to ensure it was designed in a professional way. However, the latter were not comfortable with the EC-IFAS plan to hold a competition between water user groups with cash prizes. Thus, this activity was moved from Component B to Component A-2.

The final project design was essentially a compromise between (a) those who gave priority to longer-term strategy development versus those who stressed "results on the ground;" (b) the recipient (EC-IFAS), who wanted to control as much of the money as possible (by continuing the Working Group concept from Phase 1, and emphasizing activities having a high proportion of local costs) and the Bank, which felt the ASBP experience already demonstrated the value of consulting firms working to precise TOR and strict deadlines; (c) an "equal shares for each country" approach to a more needs-based philosophy; and most of all (d) differing views as to the value of foreign consultants. These issues were described (in somewhat veiled language) in para 1.48 of the project document. Because of these differing perspectives and objectives, the appraisal process was greatly extended and, at times, heated.

The time needed to reach a compromise on these issues and on the design of Component A-1 tended to distract attention from the lack of readiness of several components (B, D and E). As B was added at appraisal, there was no prior experience to draw upon. Also, no analysis existed of site-specific needs for the hydrologic stations under Component D—especially the appropriate level of automation—so a "one size fits all" approach was adopted that detracted from the component's quality. For Component E, the inadequacy of preliminary designs and cost estimates was not apparent until after project launch.

Additional Annex 9. Parallel and Spin-off Projects

Donor	Project Title
Component A1	
USAID	Natural Resources Management Project
	CAR Environmental Policy and Technology Program
	Institutional Strengthening Project
	CAR Trans-Boundary Water and Energy Program
	Integrated Water Management in Zerafshan River Basin
EU/UN	Water Management Strategy (SPECA)
Component A2	
Swiss/IWMI	Integrated Water Resource Management Project
Component C	
WB	Syr Darya Control and Northern Aral Sea Project (SYNAS)
	Lake Sarez Risk Mitigation Project
Kyrgyzstan	Monitoring Equipment Installation at Togtogul and Shamaldysay Dams
Turkmenistan	Monitoring Equipment Installation at Khauzkhan Dam
Swiss	Monitoring and Early Warning System at Sarez Lake
Tajikistan	Proposed Ferghana Valley Water Resources Management Project
Component D	
USAID	CAR Improvement of Regional Hydro-meteorological Data Collection, Transmission, and Sharing
	Meteor Burst Communication System
	Installation of Meteorological Stations at Fedchenko and Abramov Glaciers
	Uzbekistan Hydromet Information Technology Assistance
Swiss	Regional Center for Hydrology
	Installation of Hydrological Stations in Tajikistan and Uzbekistan
	Meteorological Stations
	Hydrological Forecasting Project
Kazakhstan	Trans-Boundary Monitoring Stations
Component E	
WB	Drainage, Irrigation, and Wetland Improvement Project (DIWIP)
Uzbekistan	Delta Management Project (Biodiversity Restoration of Muinak, Rybache, and Djiltyrbas Lakes)
WB	Syr Darya Control and Northern Aral Sea Phase-I Project

Additional Annex 10. EC-IFAS Comments

Aral Sea, Water and Environmental Management Project
Comments by EC-IFAS

Examining the WB Implementation Completion Report for the Aral Sea, Water and Environmental Management Project, including the official conclusions and comments, the EC-IFAS notes, that in general, the World Bank gives quite a correct assessment of the work done.

It is necessary to note that such a large project was implemented in the region practically for the first time and analysis of its positive and negative aspects would be very useful for future work of both EC-IFAS and works related to the UN declaration of the years 2005-2015 to be ten years of fresh water (Water for life). One can see that many difficulties in project implementation were as a result of its regional characteristics, and the that fact that not only issues are to be considered regionally/comprehensively but also comprehensive solutions acceptable to all would have be found. Though this is an attractive approach, but not a very realistic one, especially taking into consideration the differences in national interests on many issues and the transitional nature of the Central Asian States economies. The more correct approach could be the exposure in the project of the whole complex of existing problems both on the national and on the regional levels and the development of their solution variants. The concrete solutions can be reached only by the states themselves and by their entities as a result of future work. In this regard. we consider it necessary to mention as one of the project imperfections, the lack in of serious world experience analysis of which the CA specialists are not well aware, but which should be well known by the consultants of the World Bank.

In examining the ICR Report, the EC-IFAS has the following comments:

1. The agreement system of the worked materials with the Governments of the CA States, the revision of these materials and their legitimacy were not organized by the GEF Agency and by the Consulting Company – "Haskoning". (Though the report on Phase VI was once discussed at a ICWC meeting). The only agreed document is the initial report on the Component A I, but the Governments notes were not taken into account.

2. The created institute, PMCU under the influence of the GEF Agency Leadership, factually replaced the parties participated in the Project.

3. The final reports of the GEF Projects were neither considered by the Board of IFAS nor at the general meeting of legally authorized representatives of the States. The considerations at ICWC level have the relation of its members to this project and do not have any legitimate basis.

4. The project hasn't come up to the consideration at least to the approaches to the new water division. This is a basic question, it was mentioned in ASBP-1 and at the beginning stage of the GEF Project by Mr. Gert Slummer and Mr. Ginyatullin R.A. at the first workshop in Tashkent (September, 2000). As a result, the national consultants were requested to submit the legitimate documents in future. But subsequently, the global issues were "successfully" put by the GEF Agency Leadership to the inner economic level. Additionally, the problem of water division wasn't solved, "the money was spent", there is a lack of the mechanism for undoubted water provision to the Aral Sea deltas and even for example, the water not fully used by Tajikistan because of the crisis, doesn't reach the Aral Sea.

5. The main contradictions such as “the upper watersheds and the downstreams”; “irrigation and power engineering” will be saved until the time when the countries establish economic mechanism of water use thereby smoothing out these contradictions. This most important question wasn’t considered in the GEF Project as well and because of the lack of coincidence in the interests of water loss, underproduction of electric power and other damages connected with flooding of territories, worsening of ecological situation and technical state of water-engineering system having interstate importance are evident in the region.

6. International competent consultants are readily received in Central Asia (p.37), the contradictions on the issue concern as a rule their quantity and big difference in the salary compared with local specialists who are sometimes more qualified.

7. The statements on 15% - shortening of water use norms it is necessary to connect with the measures on rehabilitation of irrigation systems and increasing their efficiency factor.

8. The statement (p. 10) on the reasonable way of water resources management in the Aral Sea Basin and their sufficiency for the purposes of the existing irrigation and deltas and the information on these issues should be considered in the context of correct water division in the region with regard for ecological needs. That’s why we support (p. 11) the discussions, workshops, symposiums and consultations in this direction.

9. The point that about 70% of water for rivers are lost raises big doubts. At least in Tajikistan, this is not the case.

10. We do not fully agree with some ideas in the point 5.1. No state has the intent to compromise. But transmission, delegation of some rights, authorities to jointly created organizations are questions which can be solved and progress on them can be reached at the round table. The functioning of IFAS, EC-IFAS, ICWC should be full, like the functioning of the international organizations, without any domination from any country. There will not be any confidence and fruitful cooperation without it.

11. In point 5.2 there are some inaccuracies. EC-IFAS, was located in Dushanbe City for the first time and not again as was stated. And it is not a conflict but a simple request of EC-IFAS Leadership to follow the regulation approved by the Heads of CA States.

12. In the point 5.3. The Bank must not only give a true appraisal but also as a financing organization, it must take timely measures to prevent domination by anyone which will lead to financial violations, injustice and different difficulties. This circumstance confirms once again the necessity to establish the functioning international control by giving IFAS the status of an UN organization, proposed by the President of IFAS, Rahmonov and reflected in the Dushanbe Water Appeal at the International Fresh Water Forum on August 29 – September 1, 2003. This will assist in practical realization of ASBP-2, approved on August 28, 2003 at the IFAS Board Meeting.

13. Page 18 (A.I). Here there is the substantiation of new water division and it is envisaged in the agreement of the Heads of States. It will take years and it should not be put off. In future it would be easier and simpler to make decisions on water division with regards to economic and environmental fields. At the same time, it is necessary to work at the economic mechanism of water use, or the principle of transmission from water division to sharing of profits coming from the joint use of water resources.

14. The suggestion of the World Bank concerning the achievement of potential economy in water use in the national programs under the support of donors deserves all supports. As these issues are mentioned in ASBP-2 it is necessary to support them as well.

15. The support is needed in the creation of the Regional Center of Hydrology (RCH), an agreement which is already made by Kazakhstan, Kyrgyzstan and Tajikistan.

16. On page 18 (E) the question is evidently on the rehabilitation of wetland areas. But there are land – reclamation defective lands (salinity, swamp land) and that is why it is necessary to rehabilitate these lands in the region – about 5 mln. ha from which more than 80 thous. ha belong to Tajikistan.

17. We are grateful to the World Bank understanding of the necessity to define the constant location of EC-IFAS. It is also mentioned in Dushanbe Declaration of the Heads of CA States dated October 6, 2002. The location in Dushanbe more suitable as Tajikistan has 55,4% of water resources forming in the Aral Sea Basin and uses only 11% of regional waters that is a natural guarantee to the other countries interests.

18. Point 7.4. To make it clear, it is necessary to indicate that EC-IFAS was located in Tashkent and in accordance with the order, the Republic of Uzbekistan chaired it.

19. Point 7.5. p. 20. From 2002 EC IFAS was located in Dushanbe and is providing the same function as the EC on the basis of its regulation approved by the Heads of States. We strongly object the common statement that "the network of Soviet-era water specialists predictably argued for the status quo and resisted any radical suggestions". This doesn't concern the specialists of the Republic of Tajikistan. And all specialists were chosen with the participation of the project parties and the representatives of the World Bank.

20. Point 7.6 (p 21). It would be useful to name the persons "who held components A.I and D hostage in its ongoing battles with the Bank and EC-IFAS respectively", who dispersed the trained personnel, who broke Phase VII, their countries and why they didn't implement the decisions of the Heads of CA States.

21. Point 8 (p.21). There are no underlying "bilateral tensions and disputes between the countries" as the decisions of the Heads of CA States are aimed at cooperation and development of appropriate documents. But there are people tearing away the implementation of the decisions.

Summary

We cannot avoid the large regional projects in transboundary basins such as the basin of the Aral Sea. This is why we need to do the following:

· the Center for the project management which must have its own balance (financial means), consisting of the parties representatives and should coordinate the project implementation such as EC-IFAS;

· joint organization (by the countries) of the term of references and its approval;

· the financing must be separate by each country but the control over the implementation must be carried out by the Governments and by the Center for the project coordination;

· there must be a strong mechanism of the agreement of project decisions, taking into account the

views and approvals at the official Governmental level.

Regarding the fact that the equipment for 12 additional hydrological stations and other techniques and equipment (transmitters, cars) are still in Tashkent which was artificially organized by the GEF Project Leadership and at present the Executive Committee of IFAS tries to transmit them to their destination. Regarding the results of the Components B, C, D and E, the Executive Committee of IFAS within the framework of the new ASBP-2, envisages the new projects in which these results would be used and the implemented works would be prolonged. We consider it necessary to realize the projects within the framework of ASBP-2 in which the results of these Components are realized.

In general, the EC-IFAS proposes to consider the results of the project "Water and environmental management in the Aral Sea Basin" as satisfactory and hopes for future fruitful cooperation with the World Bank.

S. Aslov,
EC-IFAS Chairman