

## **Programme**

# **"Sustainable Management of Water Resources in rural areas in Uzbekistan"**

## **Description of the Action**

### **Component 2 Technical Capacity Building**



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## 1.1 LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AFA	Administrative and Finance Assistant
AWP	Annual Work Plan
BISA	Basin Irrigation System Authority
DRR	Deputy Resident Representative
ERC	Evaluation Resource Center
EU	European Union
FAFA	Financial and Administrative Framework Agreement
FAO	Food and Agricultural Organization of UN
FAO-AquaStat	FAO's global water information system
GIZ	Gesellschaft für Internationale Zusammenarbeit (German International Cooperation Agency)
I&D	Irrigation and Drainage
ISA	Irrigation System Authority
IAWG	Inter-Agency Working Group
IWRM	Integrated Water Resources Management
M&E	Monitoring and Evaluation
MAWR	Ministry of Agriculture and Water Resources
MoE	Ministry of Economy
MoF	Ministry of Finance
NGO	Non-governmental Organization
NIM	National Implementation Modality
NPC	National Project Coordinator
NTA	National Technical Advisor
PAC	Project Appraisal Committee
PB	Project Board
PIU	Project Implementation Unit
PM	Project Manager
PMO	Project Management Office
PSC	Programme Steering Committee
QPR	Quarterly Progress Report
RR	Resident Representative
SDC	Swiss Development Cooperation
SRIIWP	Scientific Research Institute of Irrigation and Water Problems
TAPs	Technical and Administrative Provisions
TIIM	Tashkent Institute of Irrigation and Melioration
ToR	Terms of Reference
ToT	Training of Trainers
TSAU	Tashkent State Agrarian University
UARPC	Uzbek Agricultural Research and Production Center
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNESCO-IHE	UNESCO Institute for Water Education
USD	United States Dollars
WB	World Bank
WG	Working Group
WUA	Water Users Association



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## 1.2 THE ACTION

### 1.3 OBJECTIVE OF THE ACTION

The "Sustainable Management of Water Resources in rural areas in Uzbekistan" Programme focuses on water efficiency in rural areas with special emphasis on water use in agriculture. Throughout different components and levels, it aims at strengthening legal, institutional frameworks and technical capacities for water management at basin, water user association and farm levels while increasing the awareness on rational water use. Hence, the Specific Objective of the Programme is to improve the water supply and the efficiency of water resource management at national, basin and farm levels.

Within the broader framework of the Programme, the objective of the Capacity Building Component (Component 2) is to strengthen the technical capacities of the Basin Irrigation System Authorities (BISAs), the Irrigation System Authorities (ISAs), Water Users Associations (WUAs), and farmers as well as provincial and local administrations in water resources management.

Within Component 2, activities will address capacity building needs of entities in charge of training provision<sup>1</sup> at levels of river basin organizations, irrigation systems, water user associations and farmers. Along with enhancing capacities of national entities in charge of training in the water sector<sup>2</sup>, the capacity building component will develop a unified capacity building programme for water management organizations and professionals thereby strengthening their organizational set-up as well as improvement of advisory mechanisms and the efficiency of water supply services.

The capacity building should serve to enable further development of a national water resources management strategy by strengthening legal, institutional, organisational and financial base and regulatory instruments of water users thereby contributing to Component 1 of the Action<sup>3</sup>. The capacity building will be delivered through trainings, workshops, courses, pilot demonstrations and a scholarship programme. Training of trainers (ToT) method will be implemented in order to reach broader range of target groups, i.e. specialists and farmers.

Since, Component 2 bears technical character therefore pilot projects will be implemented to show the benefits of improved methods of water control, supply, uses and savings. The experience and lessons learned from pilot interventions will feed into design and delivery of the unified capacity building programme.

Over and above, training and pilot elements of the Component 2 shall extensively benefit from relevant EU experience and facilitate the enhancement of links and networking of Uzbek and EU water practitioners, transfer of best practices, knowledge and technology. Since EU is strongly involved in Uzbekistan in the area of rural development, agriculture, local development, the design of the activities undertaken under Component 2 will aim at ensuring synergies with other EU funded projects to build upon previous experiences and maximise the impact of the past, on-going and future projects.

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<sup>1</sup> TAPs (p-4).

<sup>2</sup> TAPs (p-4).

<sup>3</sup> TAPs (p-4).



## 1.4 EXECUTIVE SUMMARY

In the context of prevailing environmental issues such as land degradation and erosion, climate change and shortage of water resources, Uzbekistan faces dynamic challenges to sustainable growth. The EU funded Programme on Sustainable Management of Water resources in Rural Areas in Uzbekistan will focus on water resources management issues through a multi-disciplinary approach to tackle institutional, legal and capacity challenges of country's water sector.

Component 2 of the Programme aims at assisting training providers for improved technical capacity building of irrigation basin authorities, WUAs and farmers for sustainable water resources management in a changing environment. The planning and implementation of capacity building measures largely depends on the baseline and capacity needs assessment of BISAs, ISAs, WUAs, farmers and practitioners, as it will reveal the baseline information and identify further training needs to be introduced. Improved training provision by paramount in-house training providers will enhance institutional and technical capacities of basin authorities on water-use planning, delivery, effective on-farm water use as well as on operation of drainage systems.

Fundamental pillars of Component 2 will be the development and implementation of a unified capacity development programme for training providers and practitioners. A set of targeted activities and pilot demonstrations within Component 2 will be embedded into the comprehensive capacity development programme designed for training entities and practitioners of the water sector. The training sessions will provide the theoretical knowledge, while pilot projects will strengthen the learning process by showing tangible evidence of energy and water saving measures.

As part of Component 2, an innovative scholarship programme for training providers and practitioners will be implemented, which will enable them to enhance their knowledge and skills by studying at European Universities. EU expertise will also be sought through study visits and involvement of short-term technical experts for input into substantive dialogue, design and implementation of Component 2 activities and training provision.

Similarly, enriching long-existing community development planning exercise with issues of water management as a cross-cutting subject, should demonstrate practical water saving measures at the lowest tier of the water management hierarchy. Attention will also be paid to transparency and improved participation of vulnerable groups of the society in the water allocation process. These set of activities, in turn will enhance sustainability of proposed interventions under Component 2.

Component 2 will seek opportunities through Government investment programmes (in close coordination with Component 1) for potential replication and scale-up of successful interventions already during the life of the project. All project outputs, such as the unified/systemized capacity building programme and training modules, community development plans embedding water management as a cross-cutting issues, technical reports and recommendations on technological know-how will be channelled to the Government of Uzbekistan, as they become available.



## 1.5 SITUATION ANALYSIS

### Context

Uzbekistan is classified as a lower middle-income country, with per capita gross domestic product estimated at \$2,038 in 2014<sup>4</sup>. Country population is around 30 million people, with approximately half of which live in rural areas. Since gaining independence in 1991, Uzbekistan has implemented reforms aimed at creating a modern, diversified economy able to compete in world markets, distribute income fairly, and improve education, health, and other socially significant services.

Uzbekistan is a semi-arid country that receives 85% of its total water supply from neighbouring upstream countries. Downstream Uzbekistan uses the water from two main transboundary rivers (Syrdarya and Amudarya) for its agriculture. An average annual total (long-term) renewable water resource to which Uzbekistan has access under current transboundary agreements is 48.87 km<sup>3</sup> (FAO-AquaStat). The current water imbalance between supply and demand is estimated to be about 2 km<sup>3</sup> in 'good' water years and much more in poor water years. It is predicted that water shortages will become increasingly severe in the future<sup>5</sup>.

The country is heavily dependent upon irrigated agriculture, which accounts for some 25% of GDP. Agriculture employs directly or indirectly about 40% of the total population of Uzbekistan and depends almost entirely on irrigation of all major crops. The two main crops, cotton and wheat are irrigated by furrow methods. The agricultural sector contributes relatively low portion to national GDP, while around 90% of the water resources are used for irrigation.

The irrigation systems were developed under the Soviet time and now are operated with a fraction of the former budget. Because of budgetary constraints, the system heavily deteriorated and functions ineffectively in terms of water use efficiency and energy consumptions. Water is conveyed to farmers through an extensive network of primary and secondary canals. The system components are over-dimensioned because the earlier targeted large collective (kolkhoz) and state (sovkhoz) farms do not exist anymore.

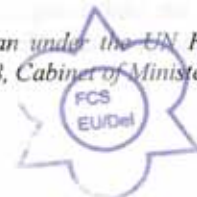
During the soviet time, the maintenance and operational costs amounted to 70% of the total yearly expenses and 30% of the finances covered the costs of energy consumption. These proportions are just the opposite today. There is little incentive to save on power through modernization of pumping systems that would progressively reduce power consumption. Infrastructure investments are taken almost exclusively within the supply side, i.e. increased pumping and conveyance capacities instead of promoting reduced (more efficient) water uses at farm levels. This current "supply" approach in agriculture is followed by further needs for increased drainage pumping capacities, which causes more salinization and contributes to extending the waterlogged areas.

### Water management hierarchy

Ministry of Agriculture and Water Resources has overall responsibility for water resources, i.e. for the development, operation and maintenance of irrigation and drainage infrastructure. A reorganisation in 2003 resulted in a transfer from a provincial and district administrative scheme to a water basin set-up in which irrigation and drainage systems are managed by basin

<sup>4</sup> World Bank

<sup>5</sup> Second National Communication of the Republic of Uzbekistan under the UN Framework Convention on Climate Change, Centre for Hydrometeorological Services, 2008, Cabinet of Ministers.



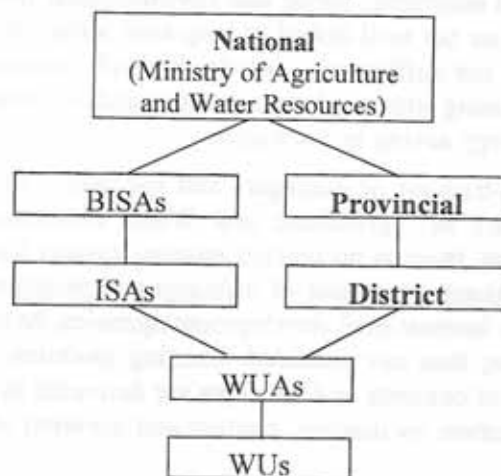
## FUNCTIONS OF BISA/ISA

- Forecasts of water use and water allocation quotas and its observance, including in sectors of the national economy, main canals and irrigation systems, objects of high significance, provinces and districts, and determining optimal operational modes of various pumping stations;
- Managing surface water resources in the basin and in irrigation systems, and organizing their purposeful use;
- Defining measures and proposals on introducing water saving technologies, market principles and mechanisms of water use, and organizing their implementation;
- Developing balance of water resources and conducting water cadastre surveys/analyses;
- Provision of irrigation systems with water measuring devices, application of modern communication facilities, automation and tele-mechanics in management of water resources, and their metrological setup;
- Proposals on increasing water supply in certain irrigation systems;
- Proposals on development of the water industry, modernization, reconstruction, technical re-equipment of irrigation systems and structures.

irrigation system administrations (BISAs), where each BISA (10 in total) is structured according to main irrigation canals and divided into irrigation system authorities (ISAs).

BISAs operate the water infrastructure in the river basins such as water reservoirs, dams, water intakes (gravitational and pumps), and riverbed protections. ISAs operate at canal levels and drainage networks in the irrigation systems, operate the pumps and deliver water to the WUAs. WUAs comprise the farmers as members of the associations and should take care of the canals and other water infrastructures distributing water amongst the farms. The supplied water volume is recorded and fees for water delivery services is collected.

**Figure 1.** Water management hierarchy in Uzbekistan



The **Basin Irrigation System Authorities (BISAs)**<sup>6</sup> are responsible for allocation of available water resources to the **Irrigation System Authorities (ISAs)**. This allocation is planned on an annual basis, depending on water availability and on introduced quota system defining the demands for sub-regions. This operational water allocation practice is based on outdated guidelines and standards and it does not fit to current situation. Therefore, it frequently happens that the water is delivered at the wrong time and in wrong volumes. The consequence of all these shortcomings is a failing decision process causing in turn water shortage, poor shape of hydraulic infrastructures. Substantial quantities of water are misdirected in the canal systems because of weak flow control mechanism, and incorrect or missing data.

Although the reorganization of BISAs was an improvement for water resources and irrigation management, BISAs still need further improved irrigation and water management procedures and practices to manage water more effectively. Despite the shift from administrative to basin management principle, planning methods, water bookkeeping and allocation still need modernization. As a result, there is a significant water loss in delivery and allocation system. Absence of water

<sup>6</sup> Resolution of the Cabinet of Ministers dated July 21, 2003, #320



bookkeeping is causing inequitable allocation of water for various types of water users, which is negatively affecting the farmers' productivity.

BISAs and ISAs are financially supported by the state budget while the WUAs should operate on fees collected from farmers. WUAs' financial sustainability is problematic since the fee collection rate from farmers is low in spite of the fact that fee levels are nominal. The WUAs have limited means to improve the fee collections due to lack of capacity to provide quality services to farmers and other water users. In general, it can be noted for all these organisations that the operational and maintenance resources are insufficient or missing and this fact is resulting in inadequate operation and deteriorating water infrastructure.

### **Existing capacity building system and needs**

As can be derived from the analysis above, the operating practice of water management organizations is that the entire irrigation system should be maintained and its water demands should be satisfied. This is a costly exercise, but consequences of a reduced irrigation system should be examined taking into account all economic, social and environmental implications. However costly, water sector investments are not well linked to long-term sustainability: they are focused on 'hard' investments and do not sufficiently include the 'soft' investments, i.e. training and capacity development, facilitating improved management and innovation, cost-recovery and introduction of water and energy saving technologies.

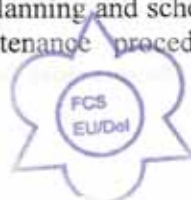
Primary responsibility for training and re-training of managers and specialists of the water management sector lies with the Ministry of Agriculture and Water Resources and its territorial departments. However, at present, there is no unified training system for technical specialists of water management organizations. A number of trainings and programmes have been developed and introduced by various international development agencies, have not been adopted by the Government of Uzbekistan, thus not practiced. Existing modules, which are often contradictory to each other in terms of contents and concepts are delivered in an ad-hoc manner, hence there is no reliable information on number, content and duration of trainings conducted.

Meanwhile, there are degree programmes at the Tashkent Institute for Irrigation and Melioration (TIIM), which is a prime institution for training water sector professionals in hydro-melioration, hydraulic engineering, land management and cadastre, water economics, automation and mechanization and others. TIIM also trains water experts and practitioners working at various water management organizations. These training modules are however, also of ad-hoc nature and contents are not systemized. There are similar programmes at the Tashkent State Agrarian University, Tashkent State Economics University and their branches in provinces.

Therefore, there is a need to develop a unified and a systemized training programme for water practitioners embraced with good international practices. Further details of the technical capacity-building programme will be elaborated based on a comprehensive *Capacity Needs Assessment*, which will be carried out during the inception phase of the programme. Below are preliminary technical capacity building needs for BISAs, ISAs, WUAs and farmers.

### **BISAs and ISAs**

Investment pattern in the water sector, which prioritized investments into hardware and technology, has over the years led to weakened technical capacities of water management organizations (BISAs, ISAs, WUAs). This is particularly evident in such strategic areas as assessment of current and future water availability, planning and scheduling of water delivery and use, improvement of operational and maintenance procedures, management and

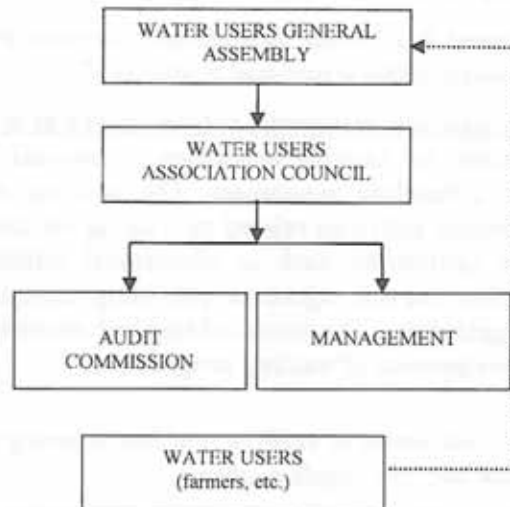




monitoring of irrigation systems, and introduction of water and energy saving technologies. Thus there is a vital need for enhancement of knowledge and capacities of BISA personnel in water planning and water accounting (see Appendices 4 and 5 for a visual overview of the organization structure of BISAs and framework for water information flow, respectively).

### WUAs

WUAs were created as a result of reforms in the irrigation and drainage sector, as the lowest tier of the water management system (See Figure 4 for WUAs structure). Since WUAs have become the new players in the water management system, their infrastructure and capacity needs were not always considered.



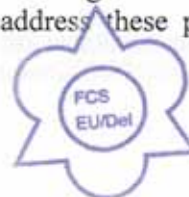
**Figure 4.** Structure of WUAs.

The volume of water supplied to farmers is usually not measured neither recorded. In turn, it is difficult to charge farmers for water use since there is no correct statistics for it. All this leads to uncounted, in turn, to inefficient water uses and to lack of financial sustainability of WUAs. Therefore, one significant area for training and pilot demonstration projects is related to water accounting.

The water delivery and distribution between the farms encounters numerous problems because the pumps, sluices, hydraulic structures and canals are not properly maintained and handled. Therefore, capacity building of field personnel in operation and maintenance of pumps, sluices, small hydraulic structures and canals is urgently needed.

The water is not spread evenly over the field. Some areas receive more water than needed while others do not receive any water. Ground preparations can provide a uniform water spreading and that significantly improves on-farm water economy. This type of works should be implemented along with training of farmers. It often happens that water is available in the distribution canal while the inflow to the farm system is limited. The correctly formed water intakes can improve the access of water to the head farm ditches while the properly maintained ditches convey the waters to the furrows.

A major issue that threatens the productivity and sustainability of irrigated agriculture is shallow groundwater levels, soil salinization and lack or inefficiency of drainage systems because of the deteriorating infrastructure. Inadequate drainage contributes to waterlogging and soil salinity. Large investments are required to address these problems and capacity development should accompany these measures.



The financial sustainability of WUA directly depends on farm income. Thus, capacity development activities will include training for farmers on crop productivity, diversification (higher value crops), salinity control, water application techniques and water saving technologies.

## 1.6 OBJECTIVES, RESULTS AND ACTIVITIES

The **Overall Objective** of the Programme is *"to contribute to sustainable and inclusive growth in the rural sector in Uzbekistan in the context of a changing climate"*.

The **Specific Objective** of the Programme is *"to improve the water supply and the efficiency of water resource management at national, basin and farm levels"*.

**Expected Result of Component 2** is *"Water management services, practices and techniques are strengthened and harmonised within a national framework"*.

### Activity Result 1. Enhanced capacities of national entities in charge of training provision

The Component 2 will analyse the existing capacities of national entities responsible for training provision based on a baseline assessment. The baseline assessment will involve detailed research and fact-finding activities related to training on irrigation, melioration and agriculture. The entities are institutions such as educational establishments, research and training centres and extension service agencies providing technical trainings on water resources management and agriculture. The results of baseline assessment will be mapped and compiled for analysis and development of training programmes.

#### *Activity 1.1. Baseline assessment of existing and past training modules and tools, fine-tuning and compilation into one single package*

The national institutions have developed a series of training materials, modules and curriculum during the recent decenniums. As a first step, it is necessary to collect the plethora of available training modules, tools and curriculum, documents and training evaluation materials, which should be processed in order to define the scope of subjects, structures, schedules, methodologies and achieved results. The study will be conducted based on primary data collection through bilateral and multiparty meetings, focus group discussions and roundtables with entities providing technical trainings and potential trainees, as well as desk review of secondary data.

#### *Activity 1.2. Capacity and needs assessment of institutions responsible for training provision<sup>7</sup>*

Within the activity all entities in charge of training provision will be identified, their capacity will be studied and assessed to define further needs. Following institutions have been preliminarily identified for a comprehensive review of their existing capacities on training provision: TIIM, Tashkent Agrarian University, SRIIWP (former SANIRI) under TIIM, and professional colleges. Other national organizations such as Council of Farmers, Agricultural Service Centers, BISAs and WUAs will be also considered for capacity and needs assessment as potential training providers who

<sup>7</sup> Reference will be made to UNDP Capacity Assessment Methodology, as well as any similar EU-based methodologies

<http://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/undp-capacity-assessment-methodology/UNDP%20Capacity%20Assessment%20Users%20Guide.pdf>



may provide technical trainings. The capacity and needs assessment will help identify prospective partners for further experience sharing and transfer of knowledge, to develop locally adopted and most appropriate capacity building programme.

*Activity 1.3. Strengthening material-technical base of training providers*

Capacity and needs assessment will help identify methodological, technology and equipment needs of training providers, which could include software, office equipment and furniture, communication and multimedia devices and establishment of training facilities.

*Activity Result 2. Strengthened organizational set-up of the water management players and improved advisory mechanisms for improved water supply services*

Organizational set-up of water management players at sub-national level (BISAs, ISAs, WUAs) will be strengthened primarily in terms of their existing and further technical capacity building needs, including to provide technical training and advisory/extension services.

*Activity 2.1. Capacity and needs assessment of BISAs, ISAs, local authorities, and WUAs/farmers.*

This activity will carry out assessment and analysis of existing water management processes such as operations and maintenance of water resources. It will identify gaps between the existing competence levels and future training needs to meet challenges caused by climate change, shrinking water resources, and rising population as BISAs, ISAs, local authorities and WUAs play a key role in this field.

*Activity 2.2. Strengthening material-technical base of water management players*

Capacity and needs assessment will help identify technology and equipment needs of water management players, which could include modern water information management and monitoring systems, rehabilitation of water diversion points, water measuring and regulation structures, agro-ameliorative equipment and machinery, automated weather stations, communications equipment and others.

*Activity 2.3. Piloting establishment of advisory/extension service centers at BISA, ISA and WUA levels*

Existing advisory and consultative services are not systematic throughout the water management hierarchy, applying outdated approaches, methods and knowledge. Therefore, this activity will include review of existing extension strategies and approaches and establishment of pilot extension service centers at BISA, ISA at WUA levels, which can be replicated elsewhere.

*Activity Result 3. Development and implementation of a unified model and approach of capacity building for water management players*

Baseline and capacity assessment of training providers and water management players will reveal technical training needs and will help in defining the unified model and approach of capacity building of water management players. The output of this activity will be an integrated Capacity Building Programme. Exact topics of the training courses for training



providers, practitioners and water experts will be discussed and finalized during the implementation phase. UNDP will be responsible for putting together a full set of training material, for presenting the new curricula, or part of it, to the Government of Uzbekistan who shall put into practice.

#### *Activity 3.1. Development of training modules*

Within this activity, the training modules will be developed based on the capacity needs assessment, which will be presented to all stakeholders in the validation workshop. Special attention will be paid to involving best European expertise in design of interactive training modules.

#### *Activity 3.2. Formulation of a unified/systemized capacity building programme*

Within this activity, a unified/systemized capacity building programme will be developed as the main output of the baseline and capacity needs assessment. The developed training modules will be integrated into the capacity building programme, which will target all training providers and water management players.

#### *Activity 3.3. Implementation of training modules for trainers*

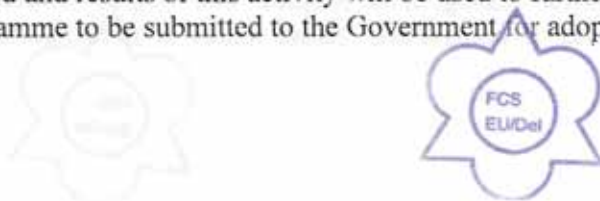
Training of Trainers is aimed at enhancing the training capacity of all entities identified for further capacity building in training provision in the baseline assessment. Possible beneficiaries may include specialized institutions such as TIIM, Tashkent Agrarian University, SRIWP (former SANIRI) under TIIM, vocational colleges, extension services, BISAs, ISAs, WUAs and other training providers.

#### *Activity 3.4. Selection of pilot BISA, ISA, WUAs and farms for water efficiency trainings and implementation of pilot projects*

In consultation with national partners during the inception phase, in close coordination with GIZ and EU delegation and based on joint methodology and distinct climatic, economic and social features important for demonstrating improved water management practices, pilot regions will be identified. The selection of pilot regions will be done in a way to ensure maximum synergies with previous, on-going or upcoming EU and UNDP funded projects in order to maximize their impact. Priority will be given to Fergana, Namangan, Andijan, Kashkadarya, Syrdarya and Surkhandarya regions. From the very beginning of the inception phase and based on a joint methodology, the pilot projects will be selected in close collaboration with GIZ and will be submitted to the EU Delegation for approval. The purpose of implementing *pilot projects* is to demonstrate enhanced training delivery and better water management and use practices, as well as technologies at BISA, ISA, WUAs and farmer levels, and local authorities (see Appendix 3, with a brief description of the rationale for pilot projects).

#### *Activity 3.5. Implementation of the capacity building programme for water managers and users*

Within this activity, developed training modules and capacity building programme will be implemented in pilot areas (at basin, WUA, farm levels) in order to test and demonstrate the capacity building methodology developed within Component 2. The lessons learned and results of this activity will be used to further elaborate the modules and the programme to be submitted to the Government for adoption and upscaling.



Activity Result 4. Enhanced links and networking with EU institutions and practitioners.

In order to ensure sustainability and transfer of EU know-how to beneficiaries in Uzbekistan and make the most of the EU Framework Directive and the experience gained from its implementation since its adoption in 2000, it is critical that Component 2 is accompanied by partners and expertise from the EU. The Component 2 will facilitate the establishment of cooperation and networking with governmental, educational and public organizations in the EU. Particular attention will be paid to working with institutions and practitioners working in comparable institutional, socio-economic and climate conditions.

*Activity 4.1. Organization and implementation of a scholarship programme for trainers and practitioners*

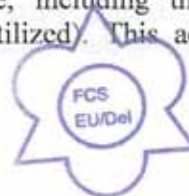
Within this activity, a scholarship programme will be arranged for water trainers and practitioners to allow them to study Master's degree at leading European universities in water resources management, such as UNESCO-IHE and Wageningen universities. More options for destinations will be reviewed during the inception phase of Component 2. Specific subjects of study will be identified based on the needs of practitioners and trainers. Scholarship programme guidelines will be developed during the inception phase. Candidates (two in total) who successfully participate in the scholarship programme are expected to return to their home institutions upon completion of the Master's programme and be actively involved in implementation of the Programme (studies to commence during Year 2 and end during Year 3 of implementation of the Programme).

*Activity 4.2. Study tours and experts*

Exchange visits between Uzbek and EU practitioners will be organized, which is expected to enhance understanding of advanced concepts of water management. Tailored study visits (4 in total) to EU countries with similar climatic conditions and applicable water management practices will be organized for training providers, water managers and local authorities, water user associations and farmers. For each Study Tour, a detailed Terms of Reference (ToR) will be prepared and agreed with national partners and the EU Delegation in Uzbekistan. The ToR would include a profile of target groups for the study tour, in order to ensure that they are organized for the right audience. Visits of experts from EU countries to Uzbekistan to provide substantive input into formulation of training modules and the capacity building programme, as well as delivery of certain technical trainings, is foreseen.

Activity Result 5. Piloting community development plans with water management as a cross cutting issue.

Existing local development planning practices do not sufficiently reflect upon issues of water management by local communities. Within this activity, Baseline assessment of pilot areas (same pilot areas identified under Activity 3.4) will be carried out to reveal the extent to which communities are being affected by insufficient water resources or water mismanagement. The study will identify economic, social and environmental implications of inefficient water resources management, particularly on household production of agricultural products, which defines the well-being of rural populations. To properly account for the impact of insufficient water resources, water mismanagement or its low quality, community development planning in pilot areas will be revisited (applicable EU experience, including through study tours in community development planning, will be utilized). This activity will seek close



coordination with a planned EU local governance programme, once it becomes operational.

*Activity 5.1. Conducting baseline assessment of communities (economic, social and environmental dimensions).*

Within this activity, communities (in pilot areas) will be assessed with a particular focus on agricultural activities, water use, and water allocation. This will help identify impacts of existing water management practices on sustainability of communities by mapping water use, agricultural crop allocation and production patterns for each community.

*Activity 5.2. Development of guidelines for community development planning*

Existing guidelines for community development planning will be reviewed and updated to current needs, where issues of sound water management at community level will be mainstreamed, as a cross-cutting issue.

*Activity 5.3. Trainings and workshops for communities and local authorities on better water planning, use, and water saving techniques*

This activity will be delivered as part of the capacity building programme implementation in pilot regions.

*Activity 5.4. Practical demonstration activities to showcase water and energy efficiency measures at the community level (in conjunction with Activity 3.4.)*

Within this activity, demonstration of small-scale water saving measures, such as drip irrigation, greenhouses, land laser levelling, solar technologies for pumping water and others will be promoted. Demonstration activity results will serve as a basis for formulation of community development plans.

*Activity 5.5. Development of community development plans*

Community development plans for pilot communities, one per pilot region to be defined after during the inception phase, will be developed and proposed to be integrated into regional/provincial development plans. As a water governance issue in broad terms, synergies will be sought with Component 1 for institutionalizing, replication and scale-up.

## 1.7 CROSS CUTTING ACTIVITIES

Under Activity 5, water management issues will be mainstreamed into community development planning process as a cross-cutting issue. However, there are two important subjects, which will be considered as a cross-cutting issue throughout all activities of Component 2, and as specific topics for trainings. Scope of activities and cost implications will be further defined based on baseline assessment during the inception phase. Special emphasis will also be on enhancing project cycle management skills of project beneficiaries, particularly at community level.

### Climate change

While experts well acknowledge that water shortages are to a certain degree a result (or will be a result) of climate change, water users at lower tiers are not necessarily aware of this. Climate studies suggest that the climate in Uzbekistan will be warmer, drier and there will be



a shift in the water regime of the rivers. After an initial increase in available waters, due to faster melting of glaciers, water run-off in the long-run is expected to decrease sharply. Growing air temperature is going to increase evapotranspiration and that influences water demands in agriculture. If agro-technologies, crop composition and irrigation practices remain unchanged, under future climate scenarios, this would bring a severe water deficit. The impacts are expected to be felt not just in agriculture, but also in the economy as a whole. Major sectors of the economy have developed mid-term plans for growth, which implies higher demands for water. Therefore, even without climate change, increased consumption due to growth projections are expected to strain limited water resources.

**Gender and water**

In rural areas, there is sizeable population movement (particularly men) into cities and outside the country. Therefore, women take on additional responsibilities, including agricultural activities on farm and household land plots. Therefore, capacity building activities should address specific needs of women with regards to water management in rural areas. Capacity building activities should make every possible effort to facilitate active and full-fledged participation of women in the training process (as trainers or trainees). Involving women in training processes in management of water will also contribute to efficient, effective and equitable management of water resources.



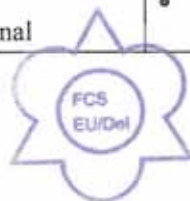
## 1.8 DURATION AND INDICATIVE ACTION PLAN AND BUDGET FOR IMPLEMENTING THE ACTION

The Project duration is four years with a start in January 2016. See Appendices 1 and 2 for the detailed indicative Workplan and Budget, respectively.

## 1.9 LOGICAL FRAMEWORK

The logical framework is subject to amendments and modifications and will be fine-tuned and baselines integrated based on the baseline assessments that will be conducted during the inception phase.

Intervention Logic	Objectively verifiable indicators of achievement	Means of Verification	Assumptions
<b>Overall Objective</b> <i>to contribute to sustainable and inclusive growth in the rural sector in Uzbekistan in the context of a changing climate</i>			
<b>Specific Objective</b> <i>to improve the water supply and the efficiency of water resource management at national, basin and farm levels</i>	<ul style="list-style-type: none"> <li># of legislative amendments related to capacity building prepared;</li> <li># of water efficiency technologies, tools and techniques demonstrated in pilot areas;</li> </ul>	<p>Proposed legislative amendments agreed with line ministries and submitted to the Government;</p> <p>Pilot projects, demonstrating water efficiency technologies, tools and techniques, successfully completed;</p>	<p>Government is supportive in making proposed changes to water legislation, as it relates to capacity building</p> <p>Applicable water efficiency technologies are available at a reasonable cost;</p>
<b>Expected Result 2: Technical Capacity Building</b> <i>Water management services, practices and techniques are strengthened and harmonised within a national framework</i>	<ul style="list-style-type: none"> <li># of public administration and basin authorities and WUAs trained in management of water resources and provision of advisory services in rural areas;</li> <li>Unified approach to capacity building in the water sector</li> </ul>	<p>Project monitoring system;</p> <p>Baseline reports, midterm and final evaluation reports;</p> <p>Government decrees and resolutions;</p> <p>National</p>	<p>Water management organizations and training providers are keen to engage in project activities;</p> <p>Applicable international expertise is readily available and agreeable to national stakeholders;</p> <p><b>Risk:</b></p> <ul style="list-style-type: none"> <li>Operational impediments (<i>delays</i>)</li> </ul>





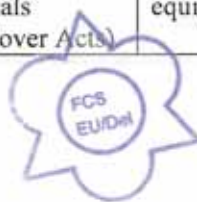
	<p>developed and regular and systematic training programmes and modules delivered at basin and farm levels;</p> <ul style="list-style-type: none"> <li>• # of best international practices in water management and training provision integrated into existing curriculum;</li> <li>• # of WUAs/dekhkan farmers (including women farmers) applying water saving methods (drip irrigation, land levelling, improved furrow watering, siphons etc.);</li> <li>• # of WUAs/dekhkan farmers (including women farmers), receiving capacity building trainings on water and energy efficiency with EU support;</li> <li>• # of WUAs/dekhkan farmers receiving advisory support services in pilot regions;</li> </ul>	<p>statistical reports and bulletins</p>	<p><i>in decision making over project issues, delays in processing visas for international experts, etc.);</i></p> <ul style="list-style-type: none"> <li>• Lack of skilled local experts, whose input is invaluable in project implementation;</li> <li>• Lack of effective coordination among various ministries/agencies, and different tiers of water management hierarchy</li> <li>• Lack of effective coordination among donors and development partners</li> </ul>
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**Activity Results**

Activity Results	Objectively verifiable indicators of achievement	Means of Verification	Assumptions and Risks
<b>Activity Result 1.</b> <u>Enhanced capacities of national entities in charge of training provision.</u>			



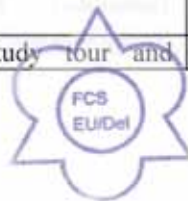
<p><i>Activity 1.1. Baseline assessment of existing and past training modules and tools, fine-tuning and compilation into one single package</i></p>	<p><b>Baseline:</b> n/a</p> <p><b>Indicator:</b> Baseline assessment conducted</p>	<p>Baseline assessment report agreed with stakeholders</p>	<p>National and international partners are forthcoming in sharing existing and past training modules;</p> <p><b>Risk:</b> there is no proper documentation of existing and past trainings delivered by national and international partners</p>
<p><i>Activity 1.2. Capacity and needs assessment of institutions responsible for training provision</i></p>	<p><b>Baseline:</b> comprehensive capacity and needs assessment of training provider has not been conducted before</p> <p><b>Indicator:</b> capacity and needs assessment conducted</p>	<p>Capacity and needs assessment reports agreed with beneficiaries</p>	<p>Capacity and needs assessment methodology proposed by UNDP is agreed with partners</p> <p><b>Risk:</b> Lack of proper and comprehensive access to potential training providers for full-fledged capacity and needs assessment</p>
<p><i>Activity 1.3. Strengthening material-technical base of training providers</i></p>	<p><b>Baseline:</b> Weak material-technical base</p> <p><b>Indicator:</b> technical-material base of training entities strengthened</p>	<p>Transfer of equipment and materials completed (Handover Acts)</p>	<p><b>Risk:</b> Delays in timely procurement of equipment</p>
<p><b><u>Activity Result 2.</u></b> <b><u>Strengthened organizational set-up of the water management players and improved advisory mechanisms for improved water supply services</u></b></p>			
<p><i>Activity 2.1. Capacity and needs assessment of BISAs, ISAs, local authorities, and WUAs/farmers.</i></p>	<p><b>Baseline:</b> n/a</p> <p><b>Indicator:</b> capacity and needs assessment of practitioners conducted</p>	<p>Capacity and needs assessment report agreed with beneficiaries</p>	<p>Capacity and needs assessment methodology proposed by UNDP is agreed by partners</p> <p><b>Risk:</b> Lack of proper and comprehensive access to potential beneficiaries for full-fledged capacity and needs assessment</p>
<p><i>Activity 2.2. Strengthening material-technical base of water</i></p>	<p><b>Baseline:</b> Weak material-technical base</p>	<p>Transfer of equipment and materials (Handover Acts)</p>	<p><b>Risk:</b> Delays in timely procurement of equipment</p>



<i>management players</i>	<b>Indicator:</b> material-technical base of water management players strengthened		
<i>Activity 2.3. Piloting establishment of advisory/extension service centers at BISA, ISA and WUA levels</i>	<b>Baseline:</b> lack of a unified approach to extension/advisory service provision  <b>Indicator:</b> pilot extension centres established for BISA, ISA and WUA levels (three in total)	Extension services recommended for adoption; Extension centres operational, activities initiated (Opening Ceremonies held)	Concept of pilot extension service centre is agreed in a timely manner by national partners  <b>Risk:</b> availability of office space for extension centres
<b>Activity Result 3.</b> <u>Development and implementation of a unified model and approach of capacity building for water management players</u>			
<i>Activity 3.1. Development of training modules</i>	<b>Baseline:</b> fragmented training modules available  <b>Indicator:</b> comprehensive training modules developed	Training Module package is agreed with national partners and beneficiaries; Training module recommended for adoption and integration into national curricula.	<b>Risk:</b> Delays in adoption of the training modules by the Government, hence by entities providing training services.
<i>Activity 3.2. Formulation of a unified/systemized capacity building programme</i>	<b>Baseline:</b> lack of a unified/systemized capacity building programme  <b>Indicator:</b> a unified capacity building programme developed	Unified capacity development programme for water sector institutions and practitioners agreed with beneficiaries; Unified capacity building programme recommended for adoption and integration into national curricula.	<b>Risk:</b> Delays in adoption of the unified capacity building programme by the Government  <b>Risk:</b> Lack of donor coordination with regards to capacity building in the water sector
<i>Activity 3.3. Implementation of training modules for trainers</i>	<b>Baseline:</b> N/A  <b>Indicator:</b> # of trainers trained	ToT training workshops and materials	National training providers have sufficient interest and skills to absorb the new training



		Monitoring and progress reports	methodology and tools
		Post-training feedback	<b>Risk:</b> difficulties in ensuring full attendance of the required audience
<i>Activity 3.4. Selection of pilot BISA, ISA, WUAs and farms for water efficiency trainings and implementation of pilot projects</i>	<b>Baseline:</b> N/A <b>Indicators:</b> pilot regions identified and concept of pilot projects approved	Project Board meeting minutes approving selection of pilot regions and concepts of pilot projects  Consultation meetings with stakeholders; validation workshop;  Monitoring and progress reports	National partners are able to agree on the range of pilot regions and projects  <b>Risks:</b> excessive number of regions and pilot projects proposed making consensus difficult or delayed
<i>Activity 3.5. Implementation of the capacity building programme for water managers and users</i>	<b>Baseline:</b> N/A <b>Indicator:</b> - # of water managers and users trained with EU expertise; - # of new and innovative water planning and management methods, techniques and approaches showcased; - volume of c/m of water saved as a result of new water management practices;	Training workshops documents and materials  Monitoring and progress reports  Post-training feedback	<b>Risk:</b> difficulties in ensuring full attendance of the required audience
<b>Activity Result 4.</b> <u>Enhanced links and networking with EU institutions and practitioners.</u>			
<i>Activity 4.1. Organization and implementation of a scholarship programme for trainers and practitioners</i>	<b>Baseline:</b> N/A <b>Indicator:</b> # of students obtaining Master's degrees in water resources management field with EU support	MSc Diplomas of graduate students	<b>Risk:</b> Lack of qualified candidates and/or limited foreign language skills of candidates
<i>Activity 4.2. Study</i>	<b>Baseline:</b> N/A	Study tour and	<b>Risk:</b> Difficulties in



<i>tours and experts</i>	<b>Indicator:</b> # of specialized study tours conducted	Back to Office Reports	obtaining approval/visas for international experts
<b>Activity Result 5. Piloting community development plans with water management as a cross cutting issue.</b>			
<i>Activity 5.1. Conducting baseline assessment of communities (economic, social and environmental dimensions).</i>	<b>Baseline:</b> no prior assessments of community development planning at its core  <b>Indicator:</b> baseline assessment of communities conducted	Baseline assessment report discussed and agreed with stakeholders	The project has sufficient access to pilot communities for conducting the assessment  <b>Risk:</b> lack of reliable data for proper assessment and analysis
<i>Activity 5.2. Development of guidelines to community development planning</i>	<b>Baseline:</b> guidelines exist, water management issues not sufficiently addressed  <b>Indicator:</b> community development planning guidelines designed	Guidelines presented and agreed with beneficiaries, posted on project website for public discussion	<b>Risk:</b> Delays in adoption of the guidelines by the Government
<i>Activity 5.3. Trainings and workshops for communities and local authorities on better water planning, use, and water saving techniques</i>	<b>Baseline:</b> N/A  <b>Indicator:</b> # of trainings and workshops conducted for communities and local authorities	Training workshops documents and materials  Monitoring and progress reports  Post-training feedback	<b>Risk:</b> difficulties in ensuring full attendance of the required audience
<i>Activity 5.4. Practical demonstration activities to showcase water and energy efficiency measures at the community level (in conjunction with Activity 3.4.)</i>	<b>Baseline:</b> N/A  <b>Indicator:</b> - # of communities and water users trained with EU expertise; - # of new and innovative water planning and management methods, techniques and approaches showcased;	Demonstration plots; monitoring reports	Water saving is an immediate priority for the well-being of the community due to water shortages or its low quality  <b>Risk:</b> water planning, techniques and approaches are not adopted by the community at large leading to limited impact of proposed interventions

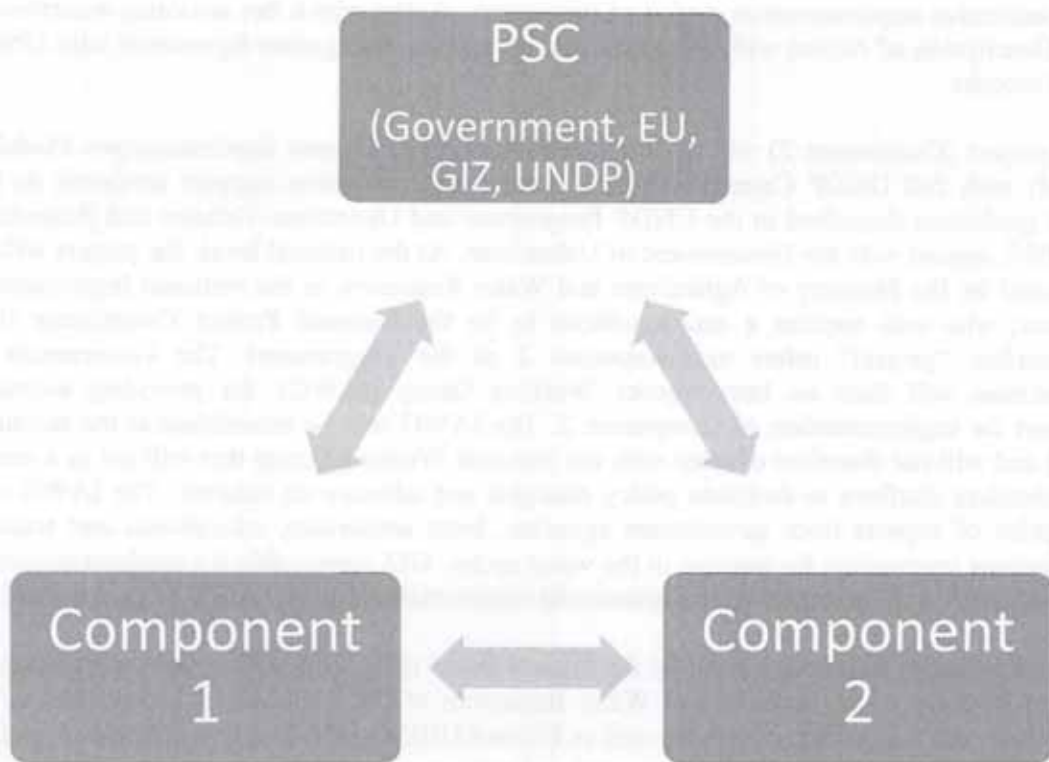


		- volume of c/m of water saved as a result of new water management practices;		
<i>Activity 5.5. Development of community development plans</i>	<b>Baseline:</b> N/A <b>Indicator:</b> # of community development plans designed in pilot regions – One per region.		Broad public and formal consultation of prepared community development plans	Community development planning is considered by all stakeholders as an important framework document for charting the needs of local communities  <b>Risk:</b> issues with compatibility of the community development plans with regional development plans designed by regional authorities;  <b>Risk:</b> Absence of financing instruments for implementation of activities identified in the community development plans

## 1.10 OVERALL COORDINATION OF THE PROGRAMME

The European Union Delegation to the Republic of Uzbekistan, assisted by GIZ and UNDP will support the policy dialogue in the water and agriculture sectors. The European Union Delegation to the Republic of Uzbekistan is going to maintain the global coherence of the Programme and ensure strong links between Components 1 and 2 and safeguard that the objectives of the project are achieved. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) manages the works of the harmonization of existing legislation to create the national policy framework for implementation of sustainable changes in water management and use (Component 1). UNDP implements the technical capacity building at national, BISA, ISA, WUA, local government and farmer levels (Component 2). Coordination between both Components of the Programme will be maintained.





UNDP will be responsible for small procurement of supplies and small works (no infrastructures) needed for the specific pilots of Component 2 from budget of its Component 2 in line with applicable procurement rules and regulations of UNDP. The GIZ will be responsible for procurement of supplies and works under Component 1 as per its applicable procurement rules and regulations, in addition GIZ will also be responsible for the administration of the supply component under the Programme for the needs of both components (7 million Euro). UNDP will assist GIZ in the development of the technical specifications for supplies to be procured from the supply component, where content and details of procurement will be agreed prior to the tender. The beneficiaries of the equipment and materials procured from the supply component will be agreed upon in close coordination with programme partners.

The Programme Steering Committee (SC) co-chaired by the EU Delegation and MAWR (on behalf of the Government of Uzbekistan) will oversee overall direction and policy of the Programme in all its components and ensure an adequate coordination between all institutions involved. The SC will consist of representatives of relevant line ministries and organizations, UNDP and GIZ..

## 1.11 MANAGEMENT ARRANGEMENTS

### Implementation arrangements for Component 2

The Delegation Agreement shall be signed between the EU and UNDP Uzbekistan. The Delegation Agreement for Indirect management will be administered by UNDP according to the Financial and Administrative Framework Agreement between the European Community and the United Nations (FAFA) and UNDP rules and procedures.



The indicative implementation period of this action, during which the activities described in this Description of Action will be carried out through the Delegation Agreement with UNDP is 48 months.

The project (Component 2) will be implemented through National Implementation Modality (NIM) with full UNDP Country Office support (implementation support services), as per NIM guidelines described in the UNDP Programme and Operations Policies and Procedures (POPP)<sup>8</sup>, agreed with the Government of Uzbekistan. At the national level, the project will be executed by the Ministry of Agriculture and Water Resources as the National Implementing Partner, who will appoint a senior official to be the National Project Coordinator (i.e., hereinafter, “project” refers to Component 2 of the Programme). The Government of Uzbekistan will form an Inter-Agency Working Group (IAWG), for providing technical support for implementation of Component 2. The IAWG will be established at the technical level and will not therefore overlap with the National Working Group that will act as a multi-stakeholders platform to facilitate policy dialogue and advance on reforms. The IAWG will comprise of experts from government agencies, local authorities, educational and training institutions responsible for training in the water sector. GIZ responsible for implementation of Component 1 will be requested to nominate its representatives to the IAWG of Component 2.

Overall guidance will be provided by the Project Board (PB). This will include representation by the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan as the Executive and Senior Beneficiary as well as EU and UNDP as the Donor and Senior Supplier, respectively, but key national governmental and non-governmental agencies, appropriate local level representatives, representatives of local governments and industry, and independent third-parties such as international or national NGOs can attend the augmented PB meetings as observers as well. The PB will be balanced in terms of gender.

The Project Board will be responsible for making management decisions for the project, in particular when guidance is required by the Project Manager (PM). It will play a critical role in project monitoring and evaluations by assuring the quality of these processes and associated products, and by using evaluations for improving performance, accountability and learning. The Project Board will ensure that required resources are committed. It will also arbitrate on any conflicts within the project and negotiate solutions to any problems with external bodies. In case a consensus cannot be reached, final decision shall rest with the UNDP.

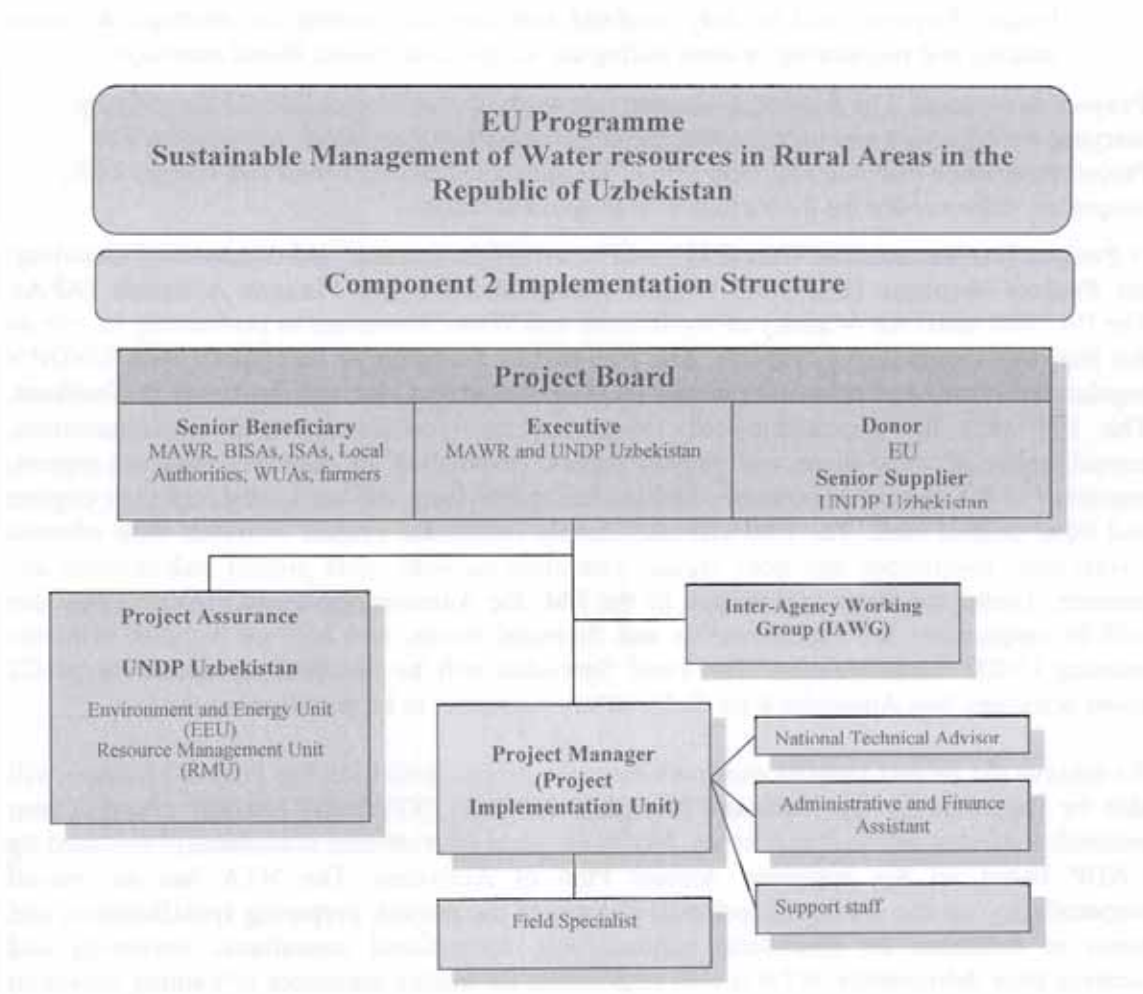
Project reviews by PB are made at designated decision points during the running of a project (at least once a year), or as necessary when raised by the PM. In addition, it will approve the appointment and responsibilities of the PM and any delegation of its Project Assurance responsibilities. Based on the approved Annual Work Plan, the Project Board can also consider and approve the annual plan and approve any essential deviations from the original plans. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance to standards that shall ensure best value to money, fairness, integrity, transparency and effective international competition. Potential members of the Project Board will be reviewed and recommended for approval during the Project Appraisal Committee (PAC) meeting. The Project Board will contain three distinct roles:

8

[http://www.undp.org/content/dam/undp/library/corporate/Programme%20and%20Operations%20Policies%20and%20Procedures/NIM\\_for\\_Government\\_english.pdf](http://www.undp.org/content/dam/undp/library/corporate/Programme%20and%20Operations%20Policies%20and%20Procedures/NIM_for_Government_english.pdf)



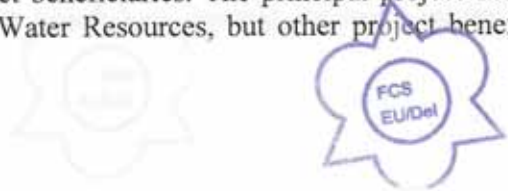




**Executive Role:** This function will represent the project “owners” and will chair the group. It is expected that the Ministry of Agriculture and Water Resources will appoint a senior official to this role who will ensure full government support of the project and serve as the National Project Coordinator (NPC) (see TORs enclosed).

**Donor and Senior Supplier Role:** This role requires the representation of the interests of the parties concerned which provide funding for specific cost sharing projects and/or technical expertise to the project. The Donor’s (EU Delegation in Uzbekistan) primary function, within the board is to provide overall guidance regarding the project implementation and it is represented by the Head of the Cooperation Section. The Senior Supplier primary function within the Board will be to provide guidance regarding the technical feasibility of the project. This role will rest with UNDP Uzbekistan represented by the UNDP RR/DRR or designated official.

**Senior Beneficiary Role:** This role requires representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary’s primary function within the Board will be to ensure the realization of project results from the perspective of project beneficiaries. The principal project beneficiary is the Ministry of Agriculture and Water Resources, but other project beneficiaries (see section on



Project Partners) will be duly involved and consulted during the strategic decision-making and monitoring process during the augmented Project Board meetings.

**Project Assurance:** The Project Assurance role supports the Project Board Executive by carrying out objective and independent project oversight and monitoring functions. The Project Assurance role will rest with UNDP Uzbekistan (Environmental and Energy Unit, supported when needed by the Resource Management Unit).

A **Project Implementation Unit (PIU)** will be established, comprised of core staff including: the **Project Manager (PM)**, and **Project Administrative and Finance Assistant (AFA)**. The PIU will assist the Ministry of Agriculture and Water Resources in performing its role as the National Implementing Partner. The PM will be recruited in accordance with UNDP's regulations to manage actual implementation of the project and will be based in Tashkent. The PM will be responsible for overall project coordination and implementation, consolidation of work plans and project papers, preparation of quarterly progress reports, reporting to the project supervisory bodies, and supervising the work of the project experts and other project staff. The PM will also closely coordinate project activities with relevant government institutions and hold regular consultations with other project stakeholders and partners. Under the direct supervision of the PM, the Administrative and Finance Specialist will be responsible for administrative and financial issues, and will get support from the existing UNDP administration. The Field Specialist will be the field representative of C2 pilots activities. See Appendix 6 for ToRs of key personnel to be recruited for the PIU.

To achieve the project outputs and implement the project activities, the Project Manager will also be supported by the **National Technical Advisor (NTA)** and national experts (from research institutes, relevant ministries, NGOs etc.) and international consultant(s) recruited by UNDP based on the approved Annual Plan of Activities. The NTA has an overall responsibility for the quality of technical outputs of the project, preparing specifications, and terms of reference for short-term national and international consultants, reviewing and clearing their deliverables. NTA is also responsible for quality assurance of training provision by external consultants and organizations.

The Ministry of Agriculture and Water Resources will provide office premises for the project team as well as telephone communication lines, and the required expertise and services of their corresponding staff. During the inception period, all the necessary arrangement will be made to ensure that the staff dedicated to the project will be able to settle as soon as possible within the structure agreed with the relevant Ministry. Therefore, the costs related to the office space will be considered as acceptable expenditures even if project staff is temporarily located in UNDP country office and will be covered as such during the inception period. Local transport to visit demo sites by international consultants to conduct periodic monitoring, support of their relevant subdivisions and staff, and ensuring required access to relevant units will also be covered. This is considered as in-kind contribution to the project implementation to be provided by the Government of Uzbekistan. Other national project partners will contribute to the project by making their personnel/staff and expertise available as and when required, as well as by participating in relevant expert, seminars, workshops or management meetings and/or providing meeting/teaching/storage venues/locales as and when required.

The office and technical equipment procured within the project will be handed over to the corresponding national organizations as grant-based technical assistance at agreement of the national Implementing Partner and the EU Delegation in Uzbekistan. Beneficiaries should grant access to all equipment procured through the project at any point during project



implementation for monitoring purposes. A List of the supplies, including purpose and use location, to be procured by UNDP for the implementation of its activities under component 2 will be submitted to the EU Delegation for approval.

### **Planning and Reporting**

A Project Inception Workshop will be held within the initial few months of project start-up and is crucial to building ownership for the project results and to plan the first year's annual work-plan. The Inception report will be a key reference document and will be prepared and shared with participants to formalize various agreements and plans decided during the meeting (will be shared with the EU Delegation within 6 months of the start of the Programme). The Inception Report will include a detailed description of the Component 2 environment, including any significant changes since signature of contract.

The Inception Workshop will address a number of key issues, including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complimentary responsibilities of project stakeholders. Discuss the roles, functions and responsibilities within the project's decision making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed
- Prepare an overall work plan and a detailed annual work plan for the first year of the project implementation and submit it for approval to the EU Delegation
- Based on the project results framework and the EU Results Framework, refine the logical framework, review and agree on indicators, baselines, targets and their means of verification, and re-check assumptions and risks
- Provide a detailed overview of reporting, M&E requirements. The M&E work plan and budget should be agreed and scheduled
- Discuss financial reporting procedures and obligations, and arrangements for audit (if required)
- Plan and schedule Project Board meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned

### **Audit**

The project shall be subject to the internal and external auditing procedures laid down in the Financial Regulations, rules and directives of UNDP.

### **Communications and Visibility**

In order to accord proper acknowledgement to EU and UNDP for providing funding, an EU and UNDP logos will appear on all relevant project publications, including, among others, project hardware purchased with EU and UNDP funding. Any citation on publications regarding this project will also accord proper acknowledgment to EU and UNDP.

UNDP will develop a Communication and Visibility Plan for Component 2, in accordance with the requirements of any jointly agreed Visibility Guidelines.



The Visibility and Communication Plan will be submitted to the EU Delegation as part of the Inception Report.

## 1.12 MONITORING & EVALUATION

In accordance with the programming policies and procedures outlined in the UNDP User Guide, the project will be monitored through the following:

Within the annual cycle:

- On a quarterly basis, a quality assessment shall record progress towards the completion of key results, based on quality criteria and methods captured in the Quality Management table (to be developed)
- An Issue Log shall be activated in Atlas (UNDP corporate project and financial management tool) and updated by the project to facilitate tracking and resolution of potential problems or requests for change
- Based on the initial risk analysis, a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation
- Based on the above information recorded in Atlas, a Quarterly Progress Reports (QPR) shall be submitted by the Project Manager to the Project Board through Project Assurance, using the standard report format
- A project Lesson-learned log shall be activated and regularly updated to ensure ongoing learning and adaptation within the organization, and to facilitate the preparation of the Lessons-learned Report at the end of the project
- A Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events
- At least one monitoring visit to the project office and pilots of the representative from UNDP and national partners

Annually:

- **Annual Review Report.** An Annual Review Report shall be prepared by the Project Manager and shared with the Project Board, covering the whole year with a summary of results achieved against pre-defined annual targets at the output level
- **Annual Project Review.** Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan (AWP) for the following year. In the last year, this review will be a final assessment. This review is driven by the Project Board and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes.

In accordance with relevant UNDP rules and regulations, the project will undergo an independent third-party evaluation during mid-point and end of project implementation using UNDP's own resources.



#### **Mid-term Project Evaluation:**

- The project will be subject to Mid-Term Evaluation at the mid-point of project implementation (December, 2017). The Mid-Term Evaluation will determine progress being made toward the achievement of project outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

#### **Terminal Evaluation:**

- An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results and contribution to capacity development. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to the UNDP Evaluation Office Evaluation Resource Center (ERC).

### **1.13 PARTNERS IN THE ACTION**

For successful implementation of Component 2, key national stakeholders include educational and research institutions, local authorities, Basin Irrigation System Authorities (BISAs) and Irrigation System Authorities (ISAs), Water Users Associations (WUAs). GIZ is the key international partner, which is responsible for implementation of the Component 1 of the Programme. A brief snapshot of key partners is provided below.

#### **Basin Irrigation System Authorities (BISAs) and Irrigation System Authorities (ISAs)**

The latest institutional reform in the water management sector of Uzbekistan in 2003 changed management principles in the water sector from administrative-territorial to hydrologic (hydrographic) basin water management. As a result, 10 Basin Irrigation System Authorities (BISAs) emerged responsible for the management of inter-farm irrigation and drainages systems. BISAs and ISAs are direct beneficiaries of the project.

#### **Water User's Associations (WUAs)**

WUAs are non-governmental organizations, responsible for water use planning and carrying out of maintenance of on-farm water supply infrastructure, rehabilitation and improvement of water infrastructure introduction of water saving technologies and irrigation techniques at farm level. According to MAWR, there are 1,510 WUAs in the country with personnel of around 10,000 people. They provide water delivery services in the irrigated territory of 3,645,000 ha. WUAs are direct beneficiaries of the project.



**Council of Farmers** is an institution established in 2013 with full government support taking into account the needs of emerging farmers. The Council is a nongovernmental, noncommercial organization and its supreme power belongs to Farmers' Assembly, executive power is responsibility of Central Council and regional councils at regional level. In addition, the institutional structure of the Council includes Farmers' Support Fund, 5 subsidiary enterprises and regional offices in Republic of Karakalpakstan and in 12 provinces including 164 offices at district level. Council of Farmers is seen as a potential training and extension service provider within the project.

#### **Uzbek Agricultural Research and Production Center**

Uzbek Agricultural Research and Production Center (UARPC) is the successor of the Uzbek Academy of Agricultural Science and Central Asian Department of the former Soviet Academy of Agricultural Sciences. In 1991, the Uzbek Academy of Agricultural Sciences was reestablished with the new Decree of the President of Uzbekistan and in 1997, it was reorganized as Uzbek Agricultural Research and Production Center (UARPC) under the Ministry of Agriculture and Water Resources. Most of the agricultural research institutions were brought together under UARPC with the objective of integration of agricultural research with agricultural producers. UARPC is seen as a potential training and extension service provider within the project.

#### **Research Institute for Irrigation and Water Problems at TIIM**

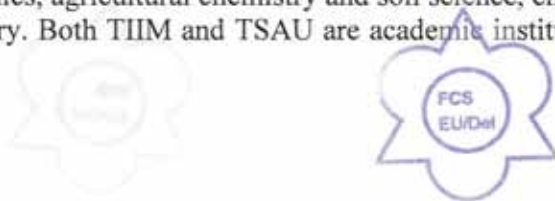
RIIWP is one of the leading scientific research and engineering facilities in the water sector of Uzbekistan. RIIWP activities include development, design, and implementation of advanced methodologies in water resources management, including basin management approach, land reclamation, and water saving technologies. RIIWP is seen as a potential training and extension service provider within the project.

#### **Tashkent Institute of Irrigation and Melioration (TIIM)**

In 1934 the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers was established with first two departments: (i) irrigation and drainage; and (i) mechanization. Later additional departments were established – land reclamation (1945), mechanization of irrigation and drainage works and hydro-energy construction (1946), organization and technology of agricultural machinery maintenance (1966), economics and organization of water sector (1974) and in 1979 general engineering faculty was organized. After Uzbekistan's independence in 1991, the institute's capacity has improved further - in 2004 through Special Decree of the Cabinet of Ministries of Uzbekistan the institute was renamed and reestablished as the Tashkent Institute of Irrigation and Melioration (TIIM). Today, there are 4,280 students that study in 5 departments with 29 majors and 358 faculty members. Faculty consists of 31 professors and doctoral degree holders, 157 associate professors (PhD). Institute has compatible academic and research-experimental facilities, that is situated on 30,000 square meters of unique academic, laboratory and lecture halls, and a large scientific library with the 613,770 items. TIIM has an experimental station, in Urta-Chirchik district of Tashkent province with total area of 296,9 ha, out of them 255,1 ha are irrigated. TIIM is seen as a potential training and extension service provider within the project.

#### **Tashkent State Agrarian University (TSAU)**

In 1991, the Tashkent Agrarian Institute was renamed into the Tashkent State Agrarian University (TSAU). TSAU is a central educational institution in Uzbekistan with approximately 5,200 students studying in 5 major departments, such as agronomy, agricultural economics, agricultural chemistry and soil science, entomology (plant protection), zoology, and forestry. Both TIIM and TSAU are academic institutions involved in educating



the specialists in Uzbekistan's agriculture and water resources management sectors. TIIM is seen as a potential training and extension service provider within the project.

#### **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**

GIZ implements projects and programmes on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the German Federal Foreign Office (AA) and the German Federal Ministry of the Interior (BMI). GIZ opened a country office in the capital Tashkent in 1992. Other offices in the Andijan, Surkhandarya and Karakalpakstan regions are responsible for activities in the country's rural areas. Within the framework of international cooperation, GIZ is supporting reforms in the economy, health and education, and the protection of natural resources. Sustainable economic development and health are priority areas of Germany's cooperation with Uzbekistan. GIZ is responsible for implementation of the important policy component of the Programme, and UNDP will closely coordinate all aspects of implementation of Component 2.

### **1.14 SUSTAINABILITY OF THE ACTION**

Ensuring sustainability of interventions in a complex sector, such as the water management sector, is a challenging endeavor. As the technical capacity building component deals primarily with education and training of water sector institutions and practitioners, the primary task in hand would be integration of all methodologies and approaches into existing national institutions. Adoption of a unified capacity development methodologies and training modules by the Government, would enable a steady flow of financing, which otherwise would be fragmented and would have limited impact. The improved capacities of training providers and practitioners shall enhance timely and accurate delivery of water resources to irrigated croplands and prevent from significant reductions in agricultural production and increase economic productivity even in situations of increased water-stress.

Sustainability will also be ensured by involving other line ministries into discussions about water management issues. While agricultural sector is the biggest water user, improved knowledge and awareness of the risks associated with hydro-meteorological changes and their impact on water resources availability will facilitate better cross-sectoral planning and more efficient water use. At present, environmental needs for water and along with the needs of the growing industrial sector remain largely unaccounted for; therefore, more efficient use of water in the agricultural sector would free-up water for other purposes, ensuring sustainability of the economy at large. Water management at WUA, and farm levels underpin the environmental sustainability of regions and river basins. Conservation of aquatic ecosystems and riparian vegetation is as important as use of water for irrigation/agriculture. Proper implementation of efficient water allocation and supply will serve to ensure environmental sustainability.

Once adopted by the Government, the new unified capacity development methodologies and approaches shall be recommended to incorporate into the national curricula of the relevant training institutions, thus assist the agricultural sector in meeting the challenges of anticipated shortage of water due to climate change and increasing population, by managing and using water more efficiently. The proposed approaches will also help to shift the conventional attitude of water management players from managing supply to managing demand. UNDP will be responsible for putting together a full set of training material, for presenting the new curricula, or part of it, to the Government of Uzbekistan who shall put into practice.



The effective, sustainable and catalytic impact of the project will be ensured by planning and executing activities in a participatory manner and in close collaboration with authorities and end-users of water resources, thus facilitating an informed dialogue. This would enable demand-driven project implementation, particularly with regards to formulation of community development plans with a particular focus on water resources management in pilot provinces.

Sustainability will also be ensured by integrating issues of potential replication and scale-up already during project implementation. All project outputs, such as the unified/systemized capacity building programme and training modules, community development plans embedding water management as a cross-cutting issues, technical reports and recommendations on technological know-how will be channeled to the Government of Uzbekistan, as they become available. Opportunities will be sought (including through Component 1) to integrate such knowledge into Government investment package for scale-up and replication.





## 1.15 APPENDIXES

**Appendix 1 – Workplan (annexed separately)**

**Appendix 2 - Budget Estimates of Component 2 (annexed separately)**

**Appendix 3 – Rationale for pilot projects**

**Appendix 4 - Organizational Structure of Basin Irrigation System Authority (BISA)**

**Appendix 5 - Water information flow**

**Appendix 6 – PIU ToRs**



### Appendix 3: Rationale for pilot projects

Pilot projects are an integral element of the technical capacity building process. The Component 2 will implement a series of pilot activities at two levels – at Basin level and WUAs level with a dual purpose:

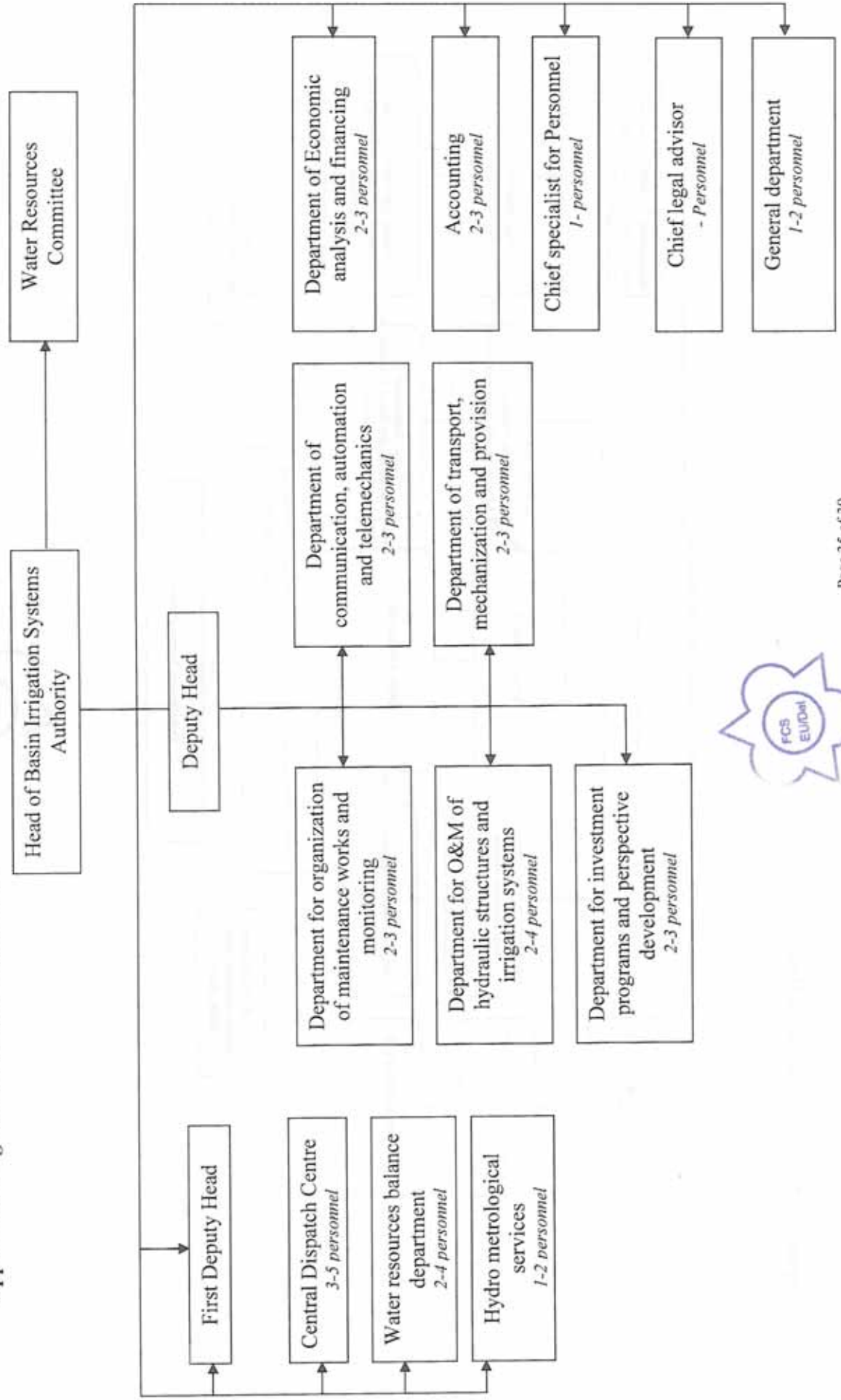
- Pilots will demonstrate varying approaches to efficient water management and use.
- Pilot activities will help to identify and assess feasibility of technical capacity building programme and training modules.

At Basin level, pilot activities will demonstrate how strengthened capacities (including material-technical base) of pilot BISA and ISA can enhance their ability in targeted water delivery, thereby meeting farmers' water consumption needs and improving water and energy use efficiency through reduced energy costs of pumping and supplying water. In addition, establishment of extension service centres at BISA and ISA level, equipped with modern training infrastructure and capacity building methodology, can demonstrate the effectiveness of bringing advisory/extension services closer to ultimate water managers and users and their needs.

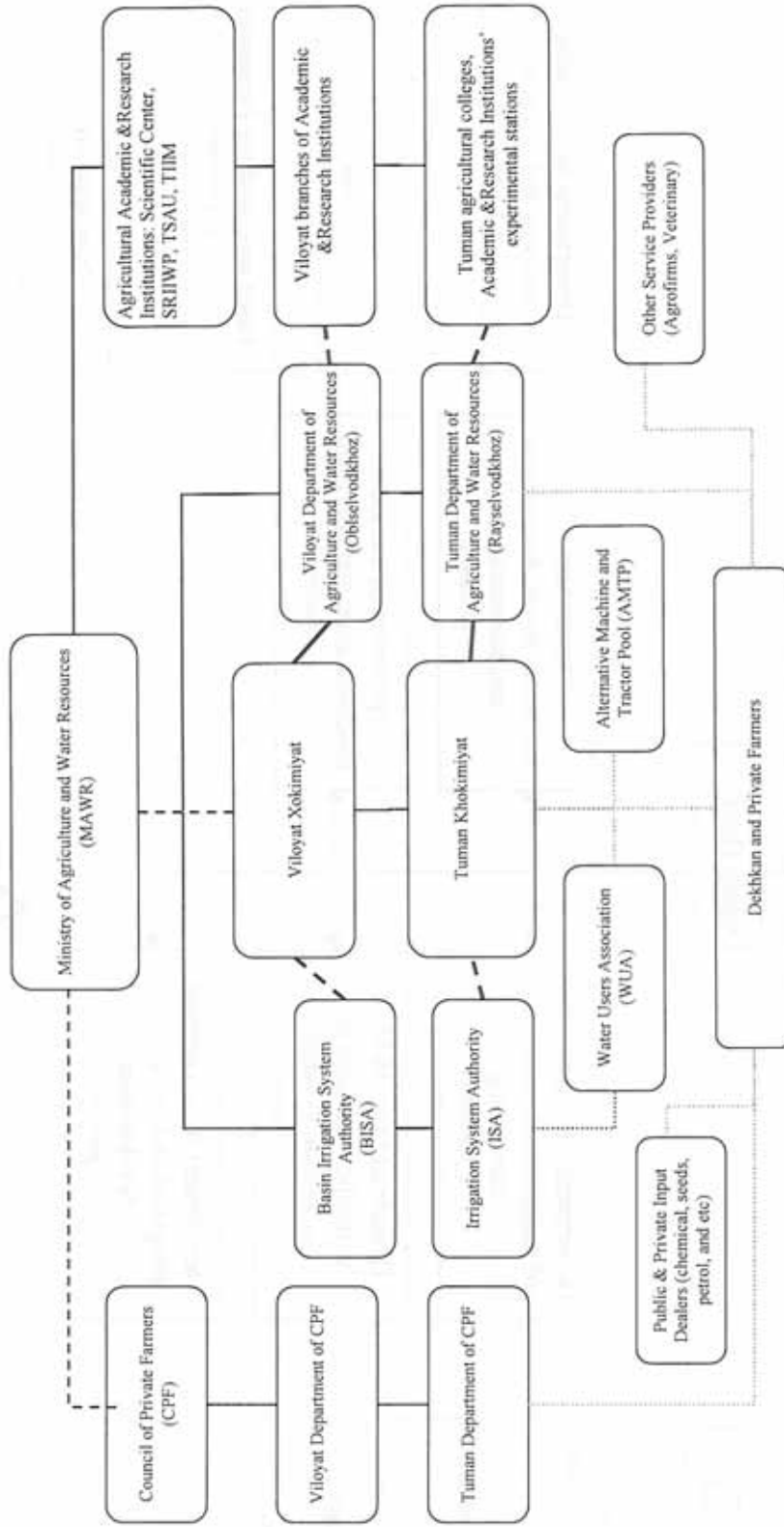
At WUA and farm/dekhkan farm level, pilot activities will serve to enhance theoretical (trainings) and practical competence (demo projects on water and energy saving technologies and methods) in tertiary irrigation approach of water managers and users at the lowest tiers of the hierarchy. With only theoretical knowledge, it would be somewhat of a less convincing argument for farmers and WUAs who struggle with meeting the O&M demands of the outdated irrigation system and strive to ensure sustainable income generation. Besides, improved water management is impossible without its proper integration into community development planning processes – small scale and household farmers rely on the same tertiary irrigation systems for their agricultural needs. Similar to Basin level activities, extension centres will be established at WUA level, which would allow meeting advisory service needs of farmers in an expedited manner and using indigenous knowledge.



Appendix 4: Organizational Structure of BISA



**Appendix 5: Water information flow**



## APPENDIX 6. Project Implementation Unit ToRs - Indicative

### Project Manager (SC-9)

Under the direct supervision of Head of Environment and Energy Unit, the Project Manager will perform the following duties and responsibilities:

#### *Functions / Key Outputs Expected*

- Responsible for day-to-day management, administration and decision-making for the project;
- Oversees strategic planning process for the project and ensures its implementation in accordance with the signed project document;
- Responsible for ensuring that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost;
- Manage the realization of project outputs through activities;
- Ensures that project contributes to the promotion of gender equality by reaching, involving and benefiting both women and men in its activities (gender mainstreaming);
- Provide direction and guidance to project team(s)/ responsible party (ies);
- Identifies partnership strategies with regard to providers of specialised expertise and possible co-financiers, and assists in resource mobilisation for project components;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Liaise with any suppliers;
- Perform other duties related to the scope of work of the PM as required

#### *Recruitment Qualifications*

##### Education:

Master's degree or higher in one of the following areas: Water Management, Business/Public Administration, Economics, Management, Development Studies, Agriculture, Environment, Natural Resource Management.

##### Experience:

Proven track of at least 7 years of progressive work experience in the field of water resource management related issues, experience with an international organization, especially within UN system.

##### Language Requirements:

Fluency in English, Uzbek, Russian are required.



## **National Technical Advisor (SC-8)**

The National Technical Advisor (NTA) of the Project will report to Project Manager and be responsible for overseeing on a day to day basis the sound and timely implementation of all technical tasks of the project. Specific responsibilities will include:

### *Work planning and Reporting*

The NTA will provide support to the PM in the preparation of all required work planning and reporting in terms of their technical content including AWP, Quarterly reports, Terminal Project report, etc.

### *Supervision of technical consultants*

- TOR drafting: the NTA will have primary responsibility for defining the technical responsibilities and deliverables expected from national and international consultants and service providers recruited by the project and to elaborate them in comprehensive Terms of Reference
- Supervision: the NTA will have responsibility for ensuring technical consultants prepare adequate workplans, will monitor progress, and provide technical guidance as required
- The NTA will ensure effective management of work towards defined project results by consultants recruited by the project through periodic technical staff management meetings

### *Technical Reports Oversight and finalization:*

The NTA will be responsible for reviewing, following up and finalization of all technical reports, best practices, lessons learned, publications, etc. prepared by the project.

### *Liaison and Support to International Consultants (ICs)*

- The NTA will liaise and consult closely with the part-time ICs in order to ensure that the technical direction of the project implementation remains on course.
- The NTA will directly support and work closely with the ICs while in-country and in particular during the project Inception phase in order to facilitate effectiveness of results and reach clear understanding of technical tasks to be achieved during the project duration.

### Education:

Master's degree or post graduate qualification in an appropriate subject/s (i.e. agriculture, agricultural economics, water resources management, environmental management etc.).

### Experience:

At least 5 years of relevant work experience in project implementation, including management of experts' team in international organizations and/or projects.

Work experience in projects related to natural resource management, especially to sustainable water use management is required.

### Language Requirements:

A good working knowledge of Uzbek, Russian and English is a requirement.



## **Administrative and Finance Assistant (SC-6)**

### ***Description of duties and responsibilities***

Under the direct supervision of Project Manager, the Administrative and Finance Assistant (AFA) performs the following duties and responsibilities:

- Be responsible for office logistics as well as recruitment/extension/separation of the project staff;
- Keep Project personnel attendance records on daily basis and provide monthly attendance reports;
- Based on consultations with Project Manager, National Technical Adviser and UNDP operations, to perform procurement related operations in accordance with UNDP rules and procedures;
- Maintain, update and transmit inventory records of non-expendable equipment in accordance with UNDP rules;
- Develop quarterly and annual budget plans for recruitment of personnel; maintain financial records and monitoring systems to record and reconcile expenditures, balances, payments and other data for day-to-day transaction and reports;
- Advise and assist Project staff, experts and consultants on all respects of allowances, salary advances, make visa arrangement, travel claims and other financial and administrative matters, and calculates and authorizes payments due for claims and services;
- Prepare detailed cost estimates and participates in budget analysis and projections as required to handle all financial operations of the project office, make cash payments and reconcile all accounts in required time frame
- Performs other related duties that are assigned by the Project Manager.

### ***Required qualifications***

- Bachelor's degree in Business Administration, Finance and/or Economics;
- At least 2 years of experience in a related area, experience with UNDP-funded projects is an asset;
- Excellent interpersonal and communication skills;
- Initiative, organizational skills, analytical judgment, ethics and honesty;
- Ability to use IT and all standard MSOffice software;
- Ability to work under stress;
- A good working knowledge of Uzbek, Russian and English is a requirement.



