

COMPLETION REPORT FOR PROJECT:

Summary

Participating UN Organisation:

UNESCO

Cluster:

Cluster A

Project No. and Project Title:

A5-12

Capacity Building in Water Institutions of Iraq

Project Location/Region/Province:

Nationwide

Reporting Period:

January 2005 – December 2006

Report Number:

No.5

Counterpart organisations / implementing partners:

Ministry of Water Resources

Project cost:

Project cost at approval: 3,275,550 USD
Project cost at completion: 3,165,391 USD
1st budget revision was on 8 December 05
2nd budget revision was on 26 April 06
3rd budget revision was on 29 November 06
4th budget revision was on 20 December 06

Abbreviations and acronyms:

MoWR: Ministry of Water Resources
MoPDC: Ministry of Planning and Dev. Coop.
MoEnv: Ministry of Environment
IWRM: Integrated Water Resources Management

Project Duration:

Original duration: Oct 2004 - Dec 2005
1st rev. - Mar 2006
2nd rev. - Jun 2006
3rd rev - Sep 2006
4th rev. - Dec 2006

I. Purpose

Main objectives and outcomes expected as per approved Project/Programme/project document:

Development goals of this programme are two-fold; 1) ensuring the water security of Iraq through integrated water resources management and 2) establishing the regional framework on equitable water sharing on the Tigris and Euphrates Rivers. The water security involves protection of vulnerable aquatic systems, building of defenses against hazards such as floods and droughts, sustainable development of transboundary water resources and safeguarding of (access to) water functions and services. The water security thus is a prerequisite for food and health security, environmental sustainability and social reconstruction and development of the country. In order to achieve the overall goals, the programme has five components to produce the following outcomes; 1) technical capacity of IWRM enhanced, 2) institutional capacity of water planning developed, 3) the training and research center inside Iraq rehabilitated and developed, 4) pilot studies and researches as a preliminary water resources assessment launched and 5) the dialogue of the regional cooperation on transboundary water issues on the Tigris and Euphrates Rivers initiated. Upon completion of this project, outcomes expected will together focus on the full-fledged formulation of the national water policy and strategy in the next project.

Reference to how the programme/project related to the UN Assistance Strategy to Iraq and how it aimed to support Iraq national development goals and the Millennium Development Goals:

In order to realize the clean and sufficient water access for all, rehabilitation and improvement of water resources management capacity is crucial as the limited water resources should be well managed to satisfy needs of all water consuming sectors and users in a sustainable way. In addition, due to the fact that Iraq heavily depends on their water resources that are coming from out of the country, the project is addressing the international water resources issues on the Tigris and Euphrates Rivers with neighbouring countries (Turkey, Syria and Iran) articulated in NDS and the Constitution as the top priority of the Iraqi water planning sector.

Project Management arrangements

The project aimed at building capacity of Integrated Water Resources Management to ensure the water security of the country. To transfer the latest knowledge, information and expertise in an effective way, most of capacity building activities therefore were organized out of the country, expecting that Iraqi experts would also reconnect to the regional and international water community after their lost years. The project therefore did not have a direct supervising arrangement inside Iraq (except procurements shared with other UNESCO projects). The focal point (Director General of Planning and Development) in the Ministry of Water Resources was appointed by the Minister to keep close coordination in implementing activities. The focal point functioned to coordinate with water-concerned ministries as well.

Cooperation with MoWR has been fully developed with mutual confidence so that UNESCO could keep providing technical assistance and advice to MoWR when MoWR has to negotiate with other donors and partners.

a) Capacity development activities

UNESCO Iraq Office directly implemented and monitored all activities supervised by UNESCO Cairo Office, Regional Bureau for Natural Sciences and UNESCO HQ. The project fully utilized four pillars of UNESCO's water activity framework: International Hydrological Programme, World Water Assessment Programme, UNESCO-IHE, Institute for Water Education and UNESCO's centers for water. Those frameworks have delivering capacities in the region to contribute to rehabilitation and reconstruction in Iraqi water planning sector.

Based on UNESCO's regional capacity on water issues, external implementing partners such as ALECSO (Arab League Education, Cultural and Scientific Organization), ACSAD (Arab Center for Studies on Arid Zone and Dry Lands), Turkish Water Foundation, The University of Jordan, IUCN (The World Conservation Union), Ministry of Water in Jordan and Egypt, Kuwait Institute for Scientific

Research were involved in delivering trainings and organizing meetings.

Other international partners such as US Army Corps of Engineers, US Department of Energy, GTZ and JICA were involved and consulted in conducting activities as well as developing strategic planning.

The “core” capacity of IWRM must be developed in MOWR eventually to lead water-related ministries to address a broader scope of water issues in the next phase. In this regard, FAO and UNEP in the cluster were involved in mainly developing the next phase of the project through implementation. A project proposal on formulating water policy and strategy is being developed by UNESCO and FAO and a project proposal on sustainable development on the Iraq Marshlands by UNEP and UNESCO are examples for potential intra-cluster cooperation.

b) Arrangement for procurement

Procurement of the project consisted of three parts:

1. Water sampling and analysis equipments for rehabilitation of water laboratory of MoWR
2. Technical books and academic journals for rehabilitation of library of MoWR
3. IT equipments for reestablishment of the local training center

The local companies were not available due to the specialities of goods to be procured so that the international bidding process was held according to UNESCO’s regulations. Local appropriateness and acceptability were taken into consideration in such a way to check the availability of local agent for sustainable operation and maintenance of equipments.

c) Monitoring and quality control system for the project

As above-mentioned, UNESCO Iraq Office directly monitored implementation of activities by implementing partners and Evaluation unit of UNESCO HQ was backstopping in monitoring and evaluation. The financial management of this project was incorporated into UNESCO’s financial system (online system connected to HQ) and status was monitored and tracked all the time. All projects were subject to audit with other UNESCO Iraq Office’s project in a lump sum on biannual basis. This project was audited twice on March 2005 and December 2006. As of March 2005, there was no point as the project had just started, and the the final report of the 2006 audit is being finalized.

The changing political and security situation in Iraq caused in modifications of the project implementation from the content of activity level to the new subject of activity. The project was considered as the preliminary phase of the long-term framework to ensure the water security of the country, a certain level of flexibility was reserved In order to keep quality of expected outcomes of the project as the whole, official evaluation reports from participants and the final reports from the organizers and evaluation reports by the project manager were discussed with the focal point of MoWR on a regular basis (every 3 month on average) to review the progress and reorientation of activities. For instance, based on the good result of trilateral official meeting on the Tigirs and Euphrates, the joint training with Turkey, Syria and Iran was organized, possibility of which was difficult to foreseen as of the beginning of the project.

II. Resources

Total approved budget and summary of resources used for the programme/project from the UNDG Iraq Trust Fund (and non-Trust Fund resources where applicable):

Total approved and received budget was 3,725,550 USD (all from UNDG ITF, un-earmarked) and the total expenditure was 3,195,391 USD. The breakdown of 10 categories is as follows.

	UNDG Approved budget	Actual cost	Percentage of approved
1. Personnel	412,424	276,573	67%
2. Contracts	250,000	377,788	151%
3. Training	1,111,825	1,148,761	103%
4. Transport	0	n/a	n/a
5. Supplies and commodities	0	n/a	n/a
6. Equipment	1,208,253	1,194,295	99%
7. Travel	58,760	21,780	37%
8. Security	61,225	7,080	12%
9. Miscellaneous	20,000	19,945	100%
10. Agency Management Support	153,063	149,170	97%
Total Expenditure	3,275,550	3,195,391	98%

There are some major points on deviations of actual project expenditure versus original budgets:

1. Original personnel costs included international consultants who were supposed to go to Baghdad according to the security prospect as of early 2004. As the situation did not improve, dispatching consultants was cancelled.
2. Instead as agreed with MoWR, the amount of capacity building activities was increased. In particular, more attention was paid on the transboundary water issues. Increased amount of contracts (shifted from personnel) were spent for contracts to organize more trainings and meetings.
3. Travel cost was also reduced since we could not travel to Iraq against our expectations.
4. Security cost was less spent for the same reason above.

Budget revision

1st Budget revision was approved on 8 December 2005

2nd budget revision was approved on 26 April 2006

3rd budget revision was approved on 29 November 2006

4th budget revision was approved on 20 December 2006

See the details in amount in Annex 2.

Human Resources

International staff (programme): 1 Project manager (P2 grade based in Amman)

International staff (operation) : 2 Procurement Officers, (The first one was P2 based in Amman shared with other projects, 2 months was paid from this project, the second one was P3 based in Paris, 3 months)

National staff (programme): 1 Programme assistant (G6 grade based in Amman)

National staff (operation); Administrative assistant (G6 grade based in Amman)

Project Assets

2 desktop PCs and 2 laser printers (installed in UNESCO Iraq Office, Amman); 3,192 USD

Barcode Reader (ditto.): 2,712 USD

III. Results

An assessment of the extent to which the programme/project component / programme /project has achieved the outcomes and outputs expected

Rehabilitation and Reconstruction of the water planning sector is one of the highest priorities of the Iraqi government and the Ministry of Water Resources, but the country lacked qualified human resources, technical and institutional capacities to attain these objectives. In the past two decades, due to the political situation, the Iraqi capacity to deal with the demands of the sector deteriorated through a continuous brain-drain of key experts, sanctions on Iraq and the neglect in the infrastructure which subsequently all resulted in a reduced human and institutional capacity in managing the water sector. Additionally, water planning was used as a political tool to persecute minorities in such a way that inflow water to their area was reduced by constructing dams at the upstream end. Consequently, the implications were inadequate water resources management.

Iraq has relatively abundant freshwater resources as compared to other countries in the Arab region. Iraq however, is already facing multiple water-related problems and complexities, which need to be addressed immediately such as formulation of national water policy, environmentally sound water management, promotion of wastewater reuse, introduction of brackish water desalination, planning on groundwater use and regional cooperation on water sharing on the Tigris and Euphrates.

The project designed to achieve the development goals as mentioned in the PURPOSE section, consisting of five main components, 1) building technical capacity, 2) building institutional capacity, 3) developing the local research and training center, 4) supporting pilot studies and researches, and 5) international shared water resources issues to achieve five immediate objectives.

The impact of the project was made in the field of capacity development and policy dialogue in the field of Integrated Water Resources Management. The primary objective of this project was to establish a basis of IWRM in the country by developing human resources, transferring the latest knowledge and information to water experts, providing necessary procurements for water resources assessment and facilitating international dialogue with neighbouring countries. **18 training courses and 6 workshops were organized on a variety of subjects of IWRM resulting in that 300 water experts participated in capacity building activities.** 1 country preliminary country assessment paper was produced for UNESCO International Hydrological Programme, 4 research papers were presented in the international and regional conferences.

Some activities were designed to overarch the water related-ministries to enable them to address water issues in a concerted manner. Ministries involved in the activities in the projects are Ministry of Water Resources, Ministry of Planning and Development Cooperation, Ministry of Environment, Ministry of Agriculture, Ministry of Higher Education and Scientific Research, Ministry of Municipalities and Public Works, Ministry of Foreign Affairs, Ministry of Science and Technology, Ministry of Transport and Kurdistan Regional Government (**9 Ministries in the central government and 1 ministry of KRG**). These efforts have contributed to strengthening relationships and developing networks among Iraq water specialists, researchers and decision makers.

After the isolation from the international water community, it was also important for Iraqis to rejoin the international water community to keep upgrading their knowledge and expertise. Within the project, National Iraq IHP committee was re-established; the membership for the World Water Council (Secretariat for the World Water Forum) was facilitated.

Overall achievements of the project were satisfactory as the first phase of the long-term development framework of IWRM even though the project was forced to shifting emphasis from one immediate objective to another due to the security situation and requests from MoWR. Technical and institutional capacity building was well addressed better than the original planning in quantity and quality (number of activities, participants and involved partners). Support of pilot studies and researches were modest since a few studies could be implemented under the current security situation. Unexpected progress was made in the international water issues of the Tigris and Euphrates since neighbouring countries were positive to tackle this problem with the new Iraqi government. The final evaluation report by a third party is under preparation.

Main activities undertaken and achievements/ impacts:

Activities and achievements/impacts will be briefed in this section one by one. Achievements of one component are expected to combine and integrate with those of other components to realize the bigger picture of IWRM, The project consists of five main components, 1) building technical capacity, 2) building institutional capacity, 3) developing the local research and training center, 4) supporting pilot studies and researches, and 5) international shared water resources issues to achieve five immediate objectives.

Technical and institutional capacity building activities such as IWRM trainings and workshops were implemented in order to strengthen the national capacity of water resources management. As originally planned in the first phase, 300 water experts participated in capacity building activities in 16 different subjects of Integrated Water Resources Management involving a wide range of participation from DG level officials to PhD students according to the targeted group of each activity.

Some activities were specialized to strengthen the relationship among water-concerned ministries as described in the previous section.

In order to conduct pilot studies and researches, water sampling and analysis equipments were installed in the laboratory of water resources. Three hundred the fifty (350) technical books and 10 academic journals back numbers were provided for the restoration of the Ministry library for technical references. One preliminary country assessment paper was produced by National International Hydrological Programme committee (chaired by MoWR) and four pilot research papers were presented in the regional and international conferences.

The training center for water experts was equipped with necessary equipments. Additionally, the workshop on "Operation and Management of the training center" was organized to make the training center functional in practice. All training materials used out of the country were handed over with agreement with authors to reuse for the local training.

Progress made on the trans-boundary water issues vis-à-vis the Tigris and Euphrates rivers was satisfactory. In the reporting period, three trilateral meetings attended by government officials from Turkey, Syria and Iraq were organized to discuss regional cooperation on the shared water issues on the Tigris and Euphrates. Consequently, some joint capacity building activities were implemented: one joint workshop on the international water resources modeling in cooperation with US Department of Energy and a joint training on Dam safety, both were attended by Turkish, Syrian, Iranian and Iraqi experts. Outputs of these activities could bring positive inputs to the official track of on-going diplomatic negotiation among the countries. Challenges however persist. Sharing water is one of the politically sensitive subjects among neighbouring countries as they have never reached a comprehensive agreement for a long time. Progress made was satisfactory during the period to initiate some joint activities, but intermediary efforts to facilitate continuous dialogues must be sustained with help of the international community.

Details and achievements of main activities are in the following table.

Activities Undertaken	Results/Achievements
Expert panel meeting in transboundary water issues (Beirut, July 2005)	<ul style="list-style-type: none"> • Type of activity: meeting • No. of participants: 14 (1 Iraqi expert) International and regional experts on several issues on transboundary water issues were assigned to prepare the training materials for conflict-resolution and prevention on water issues.
Integrated Water Resources Management training (Utah USA, August 2005)	<ul style="list-style-type: none"> • Type of activity : training • Number of participants :10 This course was in collaboration with Brigham

	<p>Young University that has outstanding experiences in water management in the arid zones. Especially the training focused on the latest watershed modelling and operation of reservoirs modelling, which has been introduced to Iraq by American instructors after the fall of the previous regimes.</p>
<p>Participation in International Water Week in Stockholm, the special session on Middle East Water (Sweden, 5 days, August 2005)</p>	<ul style="list-style-type: none"> • Type of activity : Conference • Number of participants :2 <p>H.E. the Minister attended the special session on Middle East Water. It was successful in raising awareness on Iraqi water issues in the international water community and in preparing activities for transboundary water issues in the following period.</p>
<p>Irrigation water quality and monitoring (Jordan, 2 weeks, September 2005)</p>	<ul style="list-style-type: none"> • Type of activity : training • Number of participants :22 <p>Chemists for water quality analysis and engineers in charge of water monitoring system attended the course to learn water laboratory quality assurance and standard procedures of water quality analysis and monitoring. This course is in conjunction with procurement of water laboratory equipments (See below).</p>
<p>The 11th Arab International Hydrological Programme meeting (Damascus, 4 days September 2005)</p>	<ul style="list-style-type: none"> • Type of activity : workshop • Number of participants: 3 <p>Iraqi National IHP committee, the national focal point of UNESCO's water activities, had been dormant for a long time. By UNESCO National Commission, the new member of IHP committee has been appointed and has resumed to the IHP regional activities in the Arab States. Country assessment paper was presented and committed Iraqi Ministry of Water Resources to join the Arab Water Mapping project.</p>
<p>Knowledge management for decision-makers in the water sector (Netherlands, 2 weeks, October 2005)</p>	<ul style="list-style-type: none"> • Type of activity : training • Number of participants: 18 <p>This course was designed to invite high-level officials from water-related ministries in order to facilitate inter-ministerial relationship on water issues. MoWR, MoPDC MoEnv, MoA and MoMPW sent decision-makers for this training. It was fruitful that they recognized the importance of sharing "common language and tools" among them in decision-making on water issues. Participants agreed to keep coordination chaired by MoPDC and MoWR</p>
<p>UNESCO-ETIC (Euphrates and Tigirs Initiative for Cooperation) trilateral meeting on the Euphrates river (India, 3days, October 2005)</p>	<ul style="list-style-type: none"> • Type of activity : meeting • Number of participants: 10 (4 from Iraq, 3 from Syria, 3 from Turkey) <p>This trilateral meeting was the first time in the past 30 years. The last and 5th trilateral meeting was held in 1974, and then it had been frozen. The meeting this time was a sort of preliminary meeting to resume the official negotiations but government officials dispatched by respective country discussed to identify potential areas for future cooperation.</p>

<p>On-farm water management training (Cairo, 6 week, November-December 2005)</p>	<ul style="list-style-type: none"> • Type of activity : training • Number of participants: 3 <p>This regional training course was co-organized with Regional Center for Training and Water Studies (RCTWS) in Egypt. Participants from Arab and North African countries together attended and discussed their common issues on irrigational water management in the arid zone.</p>
<p>The 7th Gulf Water Conference (Kuwait, 4 days, November 2005)</p>	<ul style="list-style-type: none"> • Type of activity : conference • Number of participants :3 <p>Two research papers by Iraqi scientists were approved to present in the conferences. For some years, Iraqi water community had isolated situations were not well known from countries. In this context, rejoining the regional and international water activities should be encouraged by presenting the current situations of Iraq to other experts.</p>
<p>The 8th regional training on Groundwater protection (Cairo, 2 weeks, December 2005)</p>	<ul style="list-style-type: none"> • Type of activity : training • Number of participants :10 <p>Groundwater protection is one of the important common themes among the Arab states. Iraq's dependency on groundwater is relatively less than other countries in the region but its importance to overall water management will increase. In this regard, technical capacity of groundwater utilization in Iraq is somehow falling behind. Networking with groundwater specialists through this kind of training was instrumental to obtain latest expertise and to review the current planning of groundwater utilization.</p>
<p>The 3rd Wadi Hydrology Conference (Yemen, 4 days, December 2005)</p>	<ul style="list-style-type: none"> • Type of activity : conference • Number of participants :2 <p>Two papers by Iraqi experts concerning groundwater use in Diyala were presented by Iraqi experts. For the same reason mentioned in the 7th Gulf Conference, UNESCO will encourage Iraqis participation and make a presentation in the conferences in order to attract more attention on water situations in Iraq.</p>
<p>Training workshop on watershed Modeling and Analysis (Cairo, Egypt, January 2006)</p>	<ul style="list-style-type: none"> • Type of activity: training • No. of participants: 20 <p>The second phase of "Rainfall-Runoff Analysis Modeling Using the Watershed Modeling System" This second phase of hands-on training (The first course was held in April 2004) was based on the strong request from Ministry of Water Resources as they are resuming their capacity to conduct water modelling analysis and they need more staff to be trained. The main topic is how to develop the rainfall and run-off model in the catchments by using the watershed modelling software.</p>
<p>Rainwater harvesting training (Damascus, Syria, 2 weeks, February 2006)</p>	<ul style="list-style-type: none"> • Type of activity: training • No. of participants: 15 <p>Rainwater harvesting is an effective method to maximize rain water utilization: Recently its</p>

	<p>techniques are advanced. In the mountain areas in Iraq, rainwater harvesting is being practiced but outdated. The training intend to introduce the latest knowledge and information on rainwater harvesting techniques and GIS application</p>
<p>Dam safety assessment (Istanbul, Turkey, 2 weeks, February 2006)</p>	<ul style="list-style-type: none"> • Type of activity : training • Number of participants : 25 (8 Iraqi experts) <p>As a result of the trilateral meeting (Turkey, Syria and Iraq) on the Tigris and Euphrates rivers in November 2005, this joint training on dam safety assessment was planned to gather experts from riparian countries to address their common issues on the Twin rivers as well as to share information and experience. Dam experts from four countries (Turkey, Syria, Iran and Iraq) also participated in discussion for potential regional cooperation, hosted by Turkish authorities.</p>
<p>Ministerial meeting in the 4th World Water Forum (Mexico, 2 days, March 2006)</p>	<ul style="list-style-type: none"> • Type of activity : Conference • Number of participants :20 (4 Iraqis) <p>UNESCO co-organized special sessions on potential regional cooperation on the Tigris and Euphrates Rivers during the fourth World Water Forum in Mexico. Ministerial delegation of major riparian countries attended UNESCO's special session on the Tigris and Euphrates rivers. The following points were agreed by ministers to promote regional cooperation.</p> <ol style="list-style-type: none"> 1. Exchange hydrological information and records 2. Work on basin-wide water management planning 3. Define operational procedures for dams and reservoirs on the Rivers to reactive the technical committee for cooperation, which had been on halt since the 80's
<p>Analysis on water and wastewater (Jordan, 2 weeks, March 2006)</p>	<ul style="list-style-type: none"> • Type of activity : training • Number of participants :22 <p>Chemists and biologists for water quality analysis attended the course to be trained on water laboratory quality assurance and standard procedures of water quality analysis by chemical and biological indicators. This course is the second round of hands-on trainings in conjunction with procurement of water laboratory equipments</p>
<p>Regional Training on artificial recharge on aquifer (Cairo, 2 weeks, May 2006)</p>	<ul style="list-style-type: none"> • Type of activity : workshop • Number of participants: 1 <p>As Arab Regional IHP activities, this regional workshop was organized to enhance artificial recharge on aquifers. Iraq has been using groundwater to a lesser extent than other Arab countries, but it is predicted to explore groundwater resources more than ever in the coming years. Due to increasing water demands and deterioration of surface water quality and quantity. The "Lessons learned" by other countries was instrumental for Iraqi participants.</p>

<p>Desertification workshop: Integrated dryland ecosystem services to national development strategy</p>	<ul style="list-style-type: none"> • Type of activity: workshop • Number of participants: 2 <p>Desertification is becoming a serious issue in Iraq, especially in the western desert. The security situation and water scarcity, for instance, has not allowed farmers to maintain their vulnerable farmlands, and arable lands are rapidly changing to deserts. It is a kind of destruction of social infrastructure. The Desert Research Center of Anbar University and the Ministry of Environment were invited to this international workshop in order to develop the national strategy of combating desertification in Iraq.</p>
<p>Procurement of technical books and academic journals</p>	<ul style="list-style-type: none"> • Type of activity: procurement <p>In order to rehabilitate the library of Ministry of Water Resources, more than 300 titles of technical reference book and 5-year back issues of academic journals (15 titles) were delivered.</p>
<p>Procurement of IT equipment for water planning and its training</p>	<ul style="list-style-type: none"> • Type of activity: procurement <p>Ten high-calibre PCs for water modelling and analysis and 40 PCs for training with equipments for training facilities were delivered. This procurement was done in conjunction with surface and groundwater modelling training.</p>

Implementation constraints, lessons learned from addressing these and knowledge gained from assessments, evaluations and studies that have taken place during the project:

In general, all projects face constraints to implement under the current circumstances. Apart from the general concerns we all share, the followings are constraints and lessons specific to this project.

1. Integrated Water Resources management, which pursue water distribution to all stakeholders, is a long-term challenge by nature and it is very difficult to reach political agreement under the current circumstances. Water allocation between Central Government and KRG has been a longstanding unsolved issue. Currently combined with on-going discussion of the political system of the whole country, it has become more complicated to reach a comprehensive agreement immediately. It will have to be started with developing the general framework of water policy according to the international standard, and then we will go into details step by step according to the political picture.

2. Most of activities were implemented out of the country due to the availability of trainers and expertise, in particular, the security situation. There are 12,000 staff members in MoWR so it is necessary to conduct the local trainings to disseminate the information and knowledge targeting a wider range, but it was difficult to launch the full-fledged scale local training even though the facility was equipped.

3. According to the original plan of procurement, MoWR was responsible for receiving equipments such as fixed water analysis equipments. All equipments provided by this project were not utilized. For instance, installing some instruments took such a long time that the consumables eventually expired. Another example is that a certain equipment was expected to be used in the field to monitor water parameters, but those are currently out of use because of the worsening security situation.

In order to minimize the risk and maximize the effectiveness, capacity building activities which can be justified to implement out of the country were more focused with agreement with MoWR. Meetings and trainings on transboundary issues on the Tigris and Euphrates with neighbouring countries, which

are the top priorities, are examples.

Detail major findings of evaluation reports where relevant and indicate how recommendations were followed in project implementation.

Provide table of monitoring, evaluation, inspection and audit missions undertaken.

Key partnerships and inter-agency collaboration, impact on results:

Within the UNDG cluster framework, the project is being implemented in close collaboration with other UN agencies as IWRM is related to all water consuming sectors. As long as the agricultural sector of Iraq, for instance, was the largest water consumer, the collaboration with FAO is essential. The partnership with UNEP was also indispensable regarding water and the ecosystem, in particular the water management of the Iraqi Marshlands areas. Training activities are implemented mainly by the international and regional institutions and experts pertaining to UNESCO's International Hydrological Programme in accord with activities by other international partners as USAID, USACE (US Army Corps of Engineers), JICA, IUCN (The World Conservation Union) and ACSAD (The Arab Center for Studies on Arid zones and Drylands). UNESCO's extensive network of water specialists was advantageous for capacity building activities since the Iraqi water community have to rejoin the regional and international water community, which is also an integral part of capacity development.

Highlights and cross cutting issues pertinent to the results e.g. gender disaggregation, policy engagement and participation of the public:

This project specifically aimed at building capacity of upstream water resources management targeting water experts in the water planning sector. In this regard, vulnerable or marginalised groups and gender issues were not in the direct scope of the project even though this project intends to secure clear and sufficient water access to all in the long run. When it comes to capacity building, all achievements contribute to capacity building in ministries and academics.

IV. Follow up actions and sustainability

Priority actions that should be supported/implemented following completion of project to build on achievements and partnerships rectify shortcomings encountered and use the lessons learned during the project with strong emphasis on achieving sustainability of the outcomes:

Basic concept paper is prepared by UNESCO and FAO to follow up the completion of project; tentatively titled Capacity building and policy formation towards integrated water resources management in Iraq

Development goals of the next phase are two-fold; 1) ensuring the better water governance through the formulation of national water policy and strategy in order to facilitate socio-economic development and 2) promoting the regional cooperation on the Tigris and Euphrates Rivers for the water security as endorse in the Cluster A matrix up to 2008. The water governance involves protection of vulnerable aquatic systems, building of defenses against hazards such as floods and droughts, sustainable development of transboundary water resources and safeguarding of (access to) water functions and services. The water security thus is a prerequisite for food and health security, environmental sustainability and socio-economic reconstruction and development of the country.

In order to achieve the above goals, the project intends to launch the **National Water Policy and Strategy** formulation with a special emphasis on international considerations on the Tigris and Euphrates Rivers. The regional water allocation based on a certain agreement also needs to be addressed. The formulation process of the national water policy and strategy requires extensive elements ranging from strong commitment by Iraqi Government, the legal framework, water data availability, human resources, environmental consideration, and regional arrangement with neighbouring countries and support from the international community. The project will also pay special attention to water resources assessment and to institutional capacity building as the basis for the full-fledged policy and strategy formulation process in the next step. It is expected concrete Policy Goal and Action Plan for the next phase could be set up as results of the project.

Indication of major adjustments in the strategies, targets or key outcomes and outputs:

There were no major adjustments in the strategies, targets as the project was designed as the first phase for pursuing the sound water management of the country.

Estimated Budget required:

In order to launch the full project mentioned in the above section, it will cost 2million USD for 1.5-2 years. At least, to sustain activities on the international water issues going and to keep engaging Turkey, Syria and Iran, half million for two years will keep things going to facilitate negotiation process and promote regional cooperation.

Annex 1 Key Performance Indicators – Log Frame Matrix

Objectives	Measurable indicators	Means of verification	Outcomes
Development Objectives:			
Ensure the water security of Iraq through integrated water resources management	Indicators of water resources conditions , including hydrological and meteorological data	Water resources assessment inside Iraq	The water security recognized as a prerequisite of all activities as articulated in the Constitution
Establish equitable water sharing on the Tigris and Euphrates Rivers.	Establishment of the policy goal of the national water strategy Establishment of cooperative agreement on the Tigris and Euphrates Rivers	Hydrological data exchanged among neighboring countries Post-project evaluation	The Constitution supports an equitable water distribution regulated by internal and external water law. Dialogue among riparian countries on the Tigris and Euphrates has initiated for further regional cooperation
Immediate Objectives:			
Build technical capacity of Iraqi experts staffs to conduct water resources assessment	Number of trained personnel utilizing their acquired skills and expertise	Government policy document Project proposals for pilot projects Post-project evaluation	
Build institutional capacity of Iraqi policy makers to formulate the national water policy and strategy	Number of trained personnel utilizing their acquired skills and expertise	Government policy document Action Plan for the National Water Master Plan	Nine water-concerned ministries and KRG was involved in activities to facilitate sharing knowledge and build common background on water issues. The special training for knowledge management for high-level officials from five ministries was organized.
Develop the training center in Iraq to disseminate the concept of IWRM at all levels	Number of participants of local training courses Number of training courses prepared	Government policy document Document of water demand projections by line ministries Post-project evaluation	The training center was partially rehabilitated to conduct local training courses. A workshop on operation & management of the training facility was organized.

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Assess available water resources through pilot studies and researches	<p>Number of proposals of plot project</p> <p>Number of project conducted</p> <p>The final reports of the pilot studies</p>	<p>Government policy document</p> <p>Baseline hydrological and meteorological analysis</p>	<p>A preliminary country assessment paper generated and five research papers were presented in the regional and int'l conferences</p>
Enhance regional cooperation of water sharing of Tigris and Euphrates Rivers	<p>Number of participants of workshops</p> <p>Number of agreement on joint training and research initiative</p>	<p>Government policy document</p> <p>Post-project formulation</p>	

OUTPUTS:			
Component 1 Technical capacity building for integrated water resources management	Number of Iraqi nationals receiving training in various subjects Number of training workshop prepared and delivered	Participants list Training courses evaluation Training material distribution records Meeting minutes	Cooperation by related ministries and institutions Cooperation by ministries and local governorate
Component 2 Institutional capacity building for sustainable water governance and formulation of the national water policy	Number of samples data assessed in the field observation Number of watersheds to be hydrologically assessed Number of Iraqi nationals receiving training	Participant list Training course evaluations Report on equipment use and management Report on the national water policy	Availability of suitable international and local experts Availability of hydrological and meteorological data needed to formulate the water policy Cooperation with international advisers in the Ministry
Component 3 Establishment of the training center to disseminate the concept of IWRM at all levels and train local experts	Number of Iraqi nationals receiving training various subjects Number of training workshop prepared and delivered	Participant list Training courses evaluation List of training courses prepared	Identify adequate participants Follow-up of training courses Coordination with MoWR and local governorate
Component 4 Implementing Pilot studies and researches for preliminary water resources assessment	Number of proposals to be submitted Number of papers presented in the regional and int'l conference	Proposal list Field missions and assessment conducted by Iraqi experts Progress and final report of studies	Security situation permits field mission and project implementation Availability of historical data on water resources
Component 5 Launching international dialogue with riparian countries on the Tigris and Euphrates Rivers	Number of Iraqi policy maker receiving training in various subjects Number of participant from riparian countries	Workshop agenda Training courses evaluation Agreement on cooperative activities and coordination	Ten participants including Water Minister attended a total of 3 trilateral meetings on th Tigris and Euphrates. A total of 12 Iraqi experts attended a joint training on dam safety and a workshop on modeling with Turkish, Syrian and Iranian experts.; a total number of participants from those countries were 25 experts.

Annex 2 PROJECT COSTS

	UNDG Approved budget	Actual cost	Percentage of approved	1st Budget revision approved (8 Dec 05)	2nd Budget revision approved (26 Apr 06)	3rd Budget revision approved (29 Nov 06)	4th Budget revision approved (20 Dec 06)	Percentage of revision (with 4th revision)
1. Personnel	412,424	276,573	67%	267,424	267,424	276,387	278,497	68%
2. Contracts	250,000	377,788	151%	320,000	360,000	369,645	378,603	151%
3. Training	1,111,825	1,148,761	103%	1,146,825	1,192,585	1,177,435	1,166,367	105%
4. Transport	0	0	n/a	0	0	0	0	n/a
5. Supplies and commodities	0	0	n/a	0	0	0	0	n/a
6. Equipment	1,208,253	1,194,295	99%	1,245,253	1,198,253	1,194,795	1,194,795	99%
7. Travel	58,760	21,780	37%	58,760	23,000	23,000	23,000	39%
8. Security	61,225	7,080	12%	61,225	61,225	61,225	61,225	100%
9. Miscellaneous	20,000	19,945	100%	20,000	20,000	20,000	20,000	100%
10. Agency Management Support	153,063	149,170	97%	153,063	153,063	153,063	153,063	100%
Total Expenditure	3,275,550	3,195,391	98%	3,272,550	3,275,550	3,275,550	3,275,550	3,275,550

Annex 3 List of contract awards by procurement method

DESCRIPTION of Project/Activity	Contract No.	Supplier Name	Cur.	Contract Amount
Water sampling and analysis equipments	FR3240061377 - C5-12 - IRQ/05/017	VWR Int.	USD	689,514.00
319 technical books	FR3240067687-C5-12-IRQ/05/035	COUTTS	USD	30,520.91
Academic journals	FR3240073321 - C5-12 - IRQ/05/073	Dar Wael	USD	91,198.75
IT Equipment Phase	FR3240061378- C5-12 - IRQ/05/014	ZAK Solutions	USD	308,998.97
Shipping of Water equipments	IRQ/PO/05/12-1T	Kuhne & Nagle	USD	25,405.00
Shipping of sensitive water equipments	IRQ/PO/05/12-1T	Kuhne & Nagle	USD	2,448.13
Shipping of technical books	IRQ/PO/06/046	Orient	USD	330.00
Powersim Studio Expert	IRQ/PO/06/139	Powersim Software AS	EUR	3,910.00