

United Nations Development Group Iraq Trust Fund
Project #: E3-19
Date and Quarter Updated: December 2010 (4th Quarter)

Participating UN Organisation: UNESCO	Sector: WATSAN
Government of Iraq – Responsible Line Ministry: Ministry of Water Resources	

Title	Advanced Hydrogeological Survey for Sustainable Groundwater Development in Iraq (Phase I)				
Geo. Location	Nationwide				
Project Cost	US \$ 675,000				
Duration	6 months				
Approval Date	27 June 2010	Starting Date	24 Aug 2010	Completion Date	24 Feb 2011
Project Description	This project will undertake a preliminary assessment of existing knowledge of hydrogeological resources in Iraq in order to enhance the government's understanding and management of subsurface water resources.				

Development Goal and Immediate Objectives
The overall goal of the project is to collect, collate and interpret available in-country data on the physical groundwater occurrence and related hydrogeological regimes and dynamics, which are currently dispersed throughout government institutions. The immediate objectives are: (1) GoI has an inventory of hydrogeological resources in Iraq; and (2) GoI has improved capacities for hydrogeological data collection, processing and management.

Outputs, Key activities and Procurement	
Outputs	<ol style="list-style-type: none"> 1.1. Extraction of existing hydrogeological data from relevant sources including government and academic institutions, research centers, relevant studies, and the private sector 1.2. Creation of a centralized database containing existing hydrogeological data in Iraq 1.3. Establishment of a preliminary report featuring collected data 1.4. Analysis of current hydrogeological conditions in Iraq 1.4. Plan of implementation created for the advanced hydrogeological survey (Phase II) 2.1. Establishment of a team of hydrogeological experts 2.2. Enhanced capacity for the Government of Iraq to effectively monitor and manage national water resources 2.3. Generate connections between universities, researchers, KRG, and the Central Government of Iraq 2.4 Enhanced coordination between ministries and private sector partners
Activities	<ol style="list-style-type: none"> 1.1.1. Compile existing knowledge of subsurface water resources through consultations and field visits 1.2.1. Produce an inventory of data, maps and database on hydrogeological resources 1.3.1. Analyze gaps in data and current knowledge of subsurface water systems 2.1.1. Establish an inter-ministerial and academic team of hydrogeological experts 2.2.1. Harmonize government coordination in the management of groundwater data systems 2.2.2. Expand government management capacity through workshops, training exercises, and coordination with academia/private sector
Procurement	<ul style="list-style-type: none"> • Administrative staff to oversee data acquisition and compilation • Data processing equipment

Funds Committed	US \$262,134	% of approved	38%
Funds Disbursed	US \$115,051	% of approved	17%
Forecast final date	31 May 2011	Delay (months)	3

Direct Beneficiaries	Number of Beneficiaries	% of planned (current status)
Government agencies (MoWR, KRG, MoAWR, MoA, MoOil, MoIndustry, MoPDC, KRG MoP, and KRG MoNR)	8	0
Others		
Indirect beneficiaries		

Quantitative achievements against objectives and results		% of planned
(1) GoI has an inventory of hydrogeological resources in Iraq	Preliminary preparations, such as recruitment of staff, procurement of necessary equipment have both been completed. Beginning stages of data collection have begun.	50%
(2) GoI has improved capacities for hydrogeological data collection, processing and management.	Team of experts being formed.	10%

Qualitative achievements against objectives and results
<ol style="list-style-type: none"> 1. A revision of the budget was approved on 21 October 2010. 2. Equipment has been procured: 3 laptops, 2 A0 scanners, and a number of IT equipments 2 netbooks, 6 external HDs, 2 A4 scanners and 2 external DVD drives. 3. Location of the database servers has been decided for both Baghdad (MoWR) and Erbil (KRG MoAWR) 4. Recruitment of staff for the collection and development of data. Two collection officers, one in Erbil and one in Baghdad, began work in October. 5. Metadata sheets and collection forms were developed, and are being updated on a regular basis by field staff and government. 6. A contractor, Radar Technologies International, has been hired to implement the services of constructing the preliminary GIS database of existing hydrogeological data in Iraq and providing analysis on gaps and reliability of data in Iraq. 7. The collection of data began in October, and is expected to conclude by 30 January 2011. Through its data collectors in Erbil and Baghdad, UNESCO has obtained data from 9 government ministries (MoWR, MoA, MoIM, MoHESR, MoPDC, MoOil, KRG MoAWR, KRG MoP and KRG MoHESR), covering all 18 governorates and several fields of hydrogeology, including hydrology, geology, land use, geophysics, climate. Data sets were provided electronically and hardcopy. The US Government (PRTs), and some UN agencies have provided some data. Major datasets include the location and attributes of over 15,000 water wells nationwide, a hydrologic atlas of Iraq, US Government constructed GIS database indicating all villages, major water infrastructure and other points of interest, and nationwide surface monitoring data from government. Initial analysis indicates a number of gaps and issues with the well database, including inconsistency and lack of accuracy. 8. UNESCO transfers data that is collected to the UNESCO Contractor (RTI) for processing and integration. RTI finalized the analysis and integration of Iraqi well data into the national database. An national, integrated, mosaic of hydrologic maps has been constructed by RTI in order to provide a comprehensive view of Iraq's water resources and identify data collection gaps and quality concerns. 9. Project oversight has been provided by the inter-ministerial Project Steering Committee, which has met on 6 December in Baghdad, and again on 14 December in Erbil. The PSC reviewed and endorsed the progress made so far and provided decisions on items such as the composition of GIS training course, place of installation of data collection equipment and servers, and coordination matters among ministries. The PSC has been an essential forum to maintain visibility and communication with the government partners about the project.

Main implementation constraints & challenges (2-3 sentences)
Initial analysis of the quality of data in Iraq indicates some inconsistency and low reliability. This will require additional development by UNESCO, RTI and the government. Overall, the government has been proactive and facilitating in transferring data to UNESCO. However, UNESCO has experienced some difficulty in obtaining seismic line data from the Ministry of Oil and the KRG Ministry of Natural Resources. UNESCO is currently setting out a joint plan of action with these ministries to facilitate the transfer of such data.