

United Nations Development Programme
Country: Libyan Arab Jamahiriya
Project Document

Project Title: Establishing Geographical Information System for GMMRWUA
Expected CP Outcome(s): Awareness, capacities, and means developed to preserve environment at the global, national and local levels.
Expected Output(s): GIS established & GMMRWUA's Technical Capacity developed
Executing Entity: UNDP Libya
Implementing Agency: Great Man-Made River Water Utilization Authority (GMMRWUA)

Brief Description

In order for the *Great Man-Made River Water Utilization Authority* (GMMRWUA) to deal with the ever growing concern over the water sector, it has been concluded that the establishment of a Geographical Information System (GIS) needs to be become its uttermost priority. By using this management tool (GIS), GMMRWUA will be able to reorganize all water resources data in a geographically referenced computerized data base and improve information access for enhanced water resources monitoring and agricultural land use planning. This project is thus meant to be an instrument to provide adequate knowledge and technology to GMMRWUA, that it requires for the planning, design and implementation of an Enterprise Geographic Information System (GIS). Furthermore, this project is designed to support GMMRWUA through the development of a consultative process that includes training activities and provision of the authority's departments with technical support. The project does fall in the area of capacity building which is one of the objectives of UNDP's Country Programme 2006-2009.

Programme Period:	2006 - 2009
Key Result Area (Strategic Plan)	Mainstreaming environment and energy
Atlas Award ID:	_____
Start date:	01.05.2009
End Date	31.12.2009
PAC Meeting Date	_____
Management Arrangements	NEX

Total resources required	\$367,500
General Manag. Support (3%)	\$11,025
Total allocated resources:	\$378,525
• Regular	_____
• Other:	_____
o Donor	_____
o Donor	_____
o Donor	_____
o Government	\$378,525
o Unfunded budget:	_____
In-kind Contributions	_____

Agreed by (Government) _____

Agreed by (Executing Entity): _____

Agreed by (UNDP): _____



14/4/09

LIST OF ACRONYMS

APR	Annual Progress Report
CDR	Combined Delivery Report
CO	Country Office
CP	Country Programme
DRR	Deputy Resident Representative
EGA	Environment General Authority
GIS	Geographical Information System
GMMRA	Great Man-Made River Authority
GMMRWUA	Great Man-Made River Water Utilization Authority
GMS (%)	General Management Support
MDG	Millennium Development Goals
NEX	National Execution Modality
NPC	National Project Coordinator
TOR	Terms of Reference
UNDP	United Nations Development Programme

I. SITUATION ANALYSIS

Libya is one of the driest regions of the world with an annual rainfall less than 200mm. Only five per cent of the entire area of Libya exceeds 100mm annually. Evaporation rates are also high, ranging from 1,700mm in the north to 6,000mm in the south.

Despite being an arid country, Libya is endowed with quite significant water resources, particularly in the form of groundwater. However, the exploitation of these resources over the past few years has severely reduced their sustainability. The overuse of groundwater diminishes the resource base and results in a drop in water levels. The water quality also deteriorates due to sea water intrusion as saline water from lower lying water-bearing formations seeps into the ground water supply. If this is allowed to continue, all aquifers in coastal areas will have saline water only.

Conscious of the above problems, the Government has undertaken a large scale project known as the Great Man-Made River project (GMMR) designed to bring groundwater (encountered in the desert areas of Murzuk, Sarir and Kufra basins at the depth of 300 - 2200m) to the most populated coastal areas, by means of large diameter pipelines. Phase I and Phase II have been completed. The first of them brought water to the coastal areas stretching from Sirt to Benghazi. Phase II carries ground water from the Fezzan region to the coastal region around Tripoli at the rate of 1.5 million cubic metres per day. Both pipelines are expected to be further developed within the next phases of the project. This supply of water is expected to reduce the overexploitation of ground water in the coastal areas and to control water quality deterioration caused by excessive water withdrawal.

The Great Man-Made River Project is implemented and managed by the Great Man-Made River Authority (GMMRA) that was established in 1983 by law No. 11/1983 by the General People Congress. In 1994, the General People's Committee issued its Decree No 230 to establish an Authority to utilize the Water System of GMMR (Phase II) known as the "Great Man-Made River Authority" (GMMRWUA). The main task and responsibility of this Authority is to organize and invest the Conveyance System through policies, plans, programs which it sets up aiming to reach maximum levels of agricultural and animal production with the best possible economic returns.

In order for the *Great Man-Made River Water Utilization Authority* (GMMRWUA) to deal with the ever growing concern over the water sector, it has been concluded that the establishment of a Geographical Information System (GIS) needs to be become its uttermost priority. By using this management tool (GIS), GMMRWUA will be able to reorganize all water resources data in a geographically referenced computerized data base and improve information access for enhanced water resources monitoring and agricultural land use planning. This project is thus meant to be an instrument to provide adequate knowledge and technology to GMMRWUA, that it requires for the planning, design and implementation of an Enterprise Geographic Information System (GIS).

UNDP has been also assisting two other Libyan Authorities in establishing GIS through two different projects; the first one, *"The Mapping of Natural Resources project - LIB/00/004"*, was jointly signed in 2000 with the General Authority for Agriculture, and the Food and Agriculture Organization of the United Nations (FAO). Its main objective is to improve the planning base for agricultural and rural development. The second project *"Establishment of an Environmental Geographic Information System project - #54203"* was signed in 2006 with the Environment General Authority (EGA).

In view of UNDP Libya's long experience in assisting national Authorities in establishing GIS, GMMRWUA therefore asked UNDP for assistance in this regard and requested to formulate a project to be nationally implemented "NEX modality". This project builds on a long history of fruitful collaboration between UNDP Libya and GMMR. Their last joint venture, launched in 1990, which was implemented by UNESCO - training was provided for engineers and technicians in the operation and maintenance of the Great Man-Made River's installation. UNDP Libya is confident that this new project will set the scene for a strengthening of its partnership with GMMR Authorities.

II. STRATEGY

Libya has accomplished significant progress in the development of national plans and strategies within the field of Water Resources Management such as the **National Strategy for Water Resources Management, 2000-2025**. The strategy includes the evaluation of existing water resources situations, future development needs and methods to achieve targets.

The principal outputs/results of this project will be:

1. Capacity Development of GMMRWUA's staff.
2. Establishing GIS at GMMRWUA.

These outputs/results will contribute to achieving the Country Programme (CP) outcomes, in particular, to make significant movement towards recognition of the relevant aspects of the Millennium Development Goals (MDG), greater awareness, capacities, and means to monitor and preserve the environment at global, national and local levels. UNDP is cooperating with Libyan Institutions to help them meet their international commitments under the various international environmental conventions through technical assistance in the form of Enabling Activities.

The project will be executed under the National Execution (NEX) modality, and the strong and transparent cooperation with GMRA-Jebel Hasauna-Jefara is the pillar of strength for the project. GMRA-Jebel Hasauna-Jefara will provide funds for the project, assigns staff and offers political and logistical support as and when needed, while UNDP will provide expertise and facilitates the internal and external training programmes.

III. RESULTS AND RESOURCES FRAMEWORK

Intended Outcome as stated in the Country Programme Results and Resource Framework: Greater awareness, capacities, and means to preserve the environment at global, national and local levels (Outcome 2).

Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets:

Indicator 2.3: national access to safe water and sanitation improved
Baseline (2004): almost 40 % of Houses estimated as not linked to sanitation system according to NIDA (MDGR draft)- No figure available for access to safe water
Target: develop an explicit action plan for access to safe water, sanitation and waste management in less affluent areas

Applicable Key Result Area (from 2008-11 Strategic Plan): 4.1. Mainstreaming environment and energy – outcome 2: Policies, institutions and programs for environmental sustainability and energy that are pro-poor and gender sensitive developed, funded and implemented through national development plans and systems

Partnership Strategy: National Execution with Governmental Counterpart

Project title and ID (ATLAS Award ID):

INTENDED OUTPUTS	OUTPUT TARGETS FOR (YEARS)	INDICATIVE ACTIVITIES	INPUTS
Output 1: GMMRWUA's staff capacities in GIS developed Baseline: - No GIS specialized unit within GMMRWUA is available. - Lack of technical capacity in GIS. Indicators: • GIS unit within GMMRWUA established. • 3 training workshops are conducted. • 4 Project team members participated in 2 international events. (Conferences, workshops etc.).		1.1. Capacity/ Training needs assessment 1.1.1. Prepare TORs for GIS team members, international GIS expert and GIS national consultant 1.1.2. Design a training programme taking into account different needs between men and women within GMRA. 1.1.3. Identify and recruit relevant experts at national or international level 1.1.4. Organise training activities (6 workshops) throughout the project life cycle incorporating Gender sensitive need assessment and result based management. 1.1.5. Participating in conferences, workshops and international meetings.	- incentives for the NPC @ \$1,000 per month (8 months) = \$8,000 - GIS national consultant: 8 mth @ \$2500= \$20,000 - GIS international expert: 8 mth @ \$3000= \$12,000 - Training materials + stationery= \$10,000 - Conferences (2): 4 participants @ \$5000 /each= \$20,000 Sub Total = \$ 70,000 GMS (3%) = \$ 2,100 TOTAL = \$ 72,100

<p>Output 2:</p> <p>GIS at GMMRWUA Jebel Hasauna established.</p> <p>Baseline:</p> <ul style="list-style-type: none"> • GIS as a planning tool is not available at GMRA-Jebel Hasauna authority <p>Indicators:</p> <ul style="list-style-type: none"> • a fully functioning Geographical Information System (GIS) 	<p>2.1. GIS at GMRA-Jebel Hasauna authority established.</p> <p>2.1.1. Identify and recruit international GIS experts.</p> <p>2.1.2. Identify national/regional suppliers of GIS</p> <p>2.1.3. Conduct procurement of GIS software & hardware</p> <p>2.1.4. Establish close cooperation mechanism with the Environment General Authority (EGA)</p> <p>2.1.5. Identify and procure satellite imagery from supplier</p> <p>2.1.6. Develop intelligent GIS maps for identified agricultural areas</p>	<p>- Incentives for local staff @ \$2000/8mth= \$16,000</p> <p>- Equipment and suppliers= \$278,300</p> <p>- Communications (internet, tel./fax, DHL)= \$3,200</p> <p>Sub Total = \$ 297,500</p> <p>GMS (3%) = \$ 8,925</p> <p>TOTAL = \$ 306,425</p>
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IV. ANNUAL WORK PLAN

Year: 2009

EXPECTED OUTPUTS	PLANNED ACTIVITIES	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET			Expected output cost incl. GMS
		Q1	Q2	Q3	Q4		Funding Source	Budget Description	Amount	
GMMRWUA's staff capacities in GIS developed	Activity Result 1.1.: Capacity Development									\$72,100
	7.1.1.Prepare TORs for GIS team members, international GIS expert and GIS national consultant		X				incentives	\$8000		
	1.1.2.Design a training programme		X							
	1.1.3.Identify and recruit relevant experts		X				consulting	\$32,000		
	1.1.4.Organize training activities			X	X		Training	\$10,500		
	1.1.5.Participating in conferences, workshops and international meetings		X	X	X		Training	\$20,000		
	Activity result 2.1.: Establishing GIS									
	2.1.1. Identify national/regional suppliers of GIS		X	X	X					
	2.1.2. Conduct procurement of GIS software & hardware		X	X	X		GMMRWUA	procurement	\$228,500	
	2.1.3. Establish close cooperation mechanism with the Environment General Authority (EGA)		X	X	X					
GIS at GMMRWUA Jebel Hasauna established.	2.1.4. Identify and procure satellite imagery from supplier		X	X	X		GMMRWUA	procurement	\$50,000	
	2.1.5. Develop intelligent GIS maps for identified agricultural areas		X	X	X		GMMRWUA	incentives	\$16,000	
	2.1.6 project communications		X	X	X		GMMRWUA	Miscellaneous	\$13,525	
	SUBTOTAL								\$867,500	
	UNDP overhead (3%)								\$11,025	
	TOTAL								\$378,525	

BUDGET SUMMARY

Item Description Staff	Unit	Qty	Unit cost \$	Total \$
Project Coordinator	mm	8	1000	8000.00
Project Assistant	mm	8	500	4000.00
GIS specialist	mm	8	2500	20000.00
GIS training expert	mm	4	3000	12000.00
Data Entry Staff	mm	6	2000	12000.00
Subtotal Staff				56000.00
Equipment and supplies *				
Computers workstations		5	2000	10000.00
GIS Server		1	25000	25000.00
Notebooks		5	2300	11500.00
Global Positioning System		3	400	1200.00
Network installations			2000	2000.00
A0 Scanner B/W ✓		1	4000	4000.00
A4/A3 color scanner		2	400	800.00
A0 color plotter		1	4500	4500.00
Color printer		2	400	800.00
LCD Projector		1	3500	3500.00
Satellite Images				50000.00
GIS Software tools				165000.00
Subtotal Equipment & Supplies				278300.00
Training & Capacity Building				
Conferences		2	10000	20000.00
Printing of training material + stationary				10000.00
Subtotal Training & CB				30000.00
Communication				
Internet	m			2400.00
tel/fax	m			800.00
Subtotal Communication				3200.00
Project Total				367500.00
GMS 3%				11025.00

V. MANAGEMENT ARRANGEMENTS

Project implementation will follow National Execution modality (NEX) and will be undertaken by GMRA-Jebel Hasauna authority.

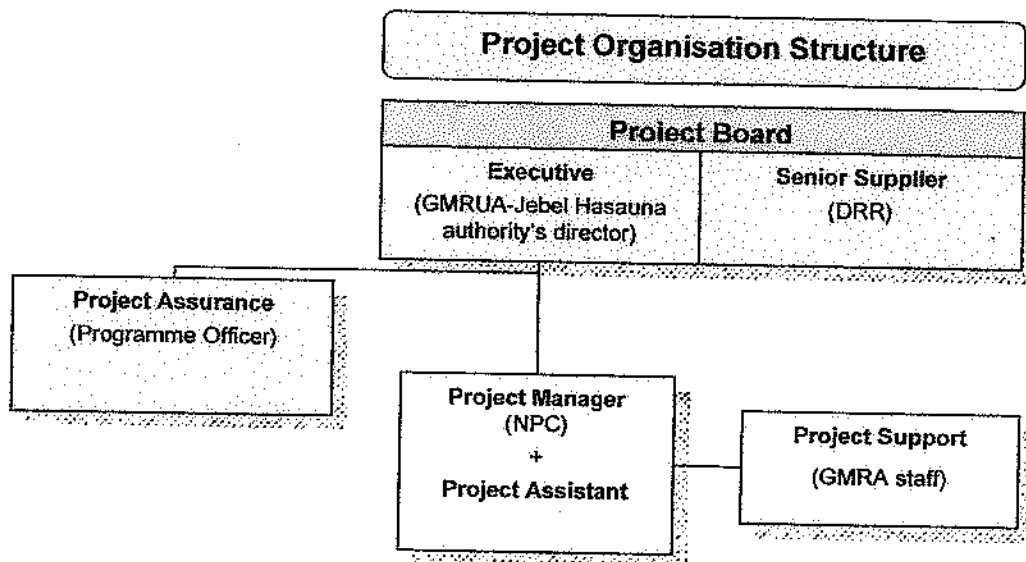
Project Manager: GMRA-Jebel Hasauna will appoint a National Project Coordinator (NPC) who will be responsible for the coordination and the day-to-day management of the project (Annex 1).

Project Support Staff (Project Assistant): GMRA-Jebel Hasauna will appoint a Project Assistant (PA) who will be assisting the NPC for the coordination and the day-to-day management of the project (Annex 4).

Project Board composed of representatives from GMRA and UNDP headed by Jebel Hasauna authority's director and the Deputy Resident Representative (DRR) of UNDP. The Project Board will meet on regular basis with the role of overseeing project planning, implementation and performance.

UNDP will provide both technical and administrative backstopping to ensure results-oriented management, proper administration of funds, maintain project accounts, facilitate experts/consultants recruitment and identifying well-known and trusted training firms. Financial transactions will be subject to annual audits undertaken by internationally certified auditors.

The following diagram explains the composition of the Board:



VI. MONITORING FRAMEWORK AND EVALUATION

The project executing partner (GMRUA-Jebel Hasauna authority) will remain responsible for delivering the outputs of the project, the actual implementation, input management, and sound administrative management.

The NPC will also be responsible for preparing the Annual Progress Report (APR), which will be submitted to UNDP, and an annual Tripartite Review Meeting will be held.

The Jebel Hasauna authority is accountable for managing the resources allocated to the project to achieve expected results in accordance with the work plan and project document. Jebel Hasauna will request UNDP to make direct payments to other parties for training programmes and services provided to the project by forwarding a standard form "Request for direct payment", duly completed and signed by Jebel Hasauna authority's director. UNDP will generate the Combined Delivery Report (CDR) that summarizes all project expenditures on annual basis. GMRUA-Jebel Hasauna certifies the CDR and returns it back to the UNDP-Libya CO for audit purposes.

The project is subject to auditing at least once in its lifetime, in accordance with UNDP rules and regulations. The ownership of all non-expendable equipments purchased by the project will be embraced by Jebel Hasauna authority upon completion of the project.

VII. LEGAL CONTEXT

This Project Document shall be the instrument referred to as such in Paragraph (I) of the Standard Basic Assistance Agreement between Libya and the United Nations Development Programme, signed by the parties on 20 May 1976. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

The administration and the financial transactions of the project activities will comply with LIBYA NEX Guidelines.

The UNDP Resident Representative in Libya is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by UNDP and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

Terms of Reference

National Project Coordinator (GMMRWUA)

Project title: Establishing Geographical Information System for GMMRWUA

Overall responsibility:

The National Project Coordinator (NPC) has the technical authority to run and manage the project on a day-to-day basis. The NPC's prime responsibility is to ensure 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.

The NPC acts under the direct supervision of the National Project Director (NPD) and with a close collaboration with UNDP PO, the NPC will undertake the following activities:

I. Project Co-ordination

- Prepare project workplan including all activities and budget for NPD approval;
- To be overall responsible for the project management and delivery of the inputs for the various activities;
- Responsible for the scheduling and carrying out formative and summative evaluation for all aspects of the project, including the collection of baseline data as required
- Arrange monthly meeting for Project Board (NPD and UNDP DRR) to ensure smooth project implementation;
- Participate in Steering committee meeting to ensure smooth implementation;
- Participate in Technical Committee meeting to ensure smooth implementation;
- Making appropriate arrangements for the logistical and technical support for the project activities;
- Keeping clear communications and taking necessary interventions to ensure co-ordination between GMMRWUA, UNDP and sub-contractors;

2. Recruitment of consultants (international/national)

- Conduct search for suitable candidates (advertisement, website, rosters);
- Prepare TORs;
- Involve in interviewing candidates;
- Prepare contract for NPD approval and signature;
- Supervise consultants' work, review and approve outputs;
- Recommend salary/consultancy fee/missions

3. Equipment and contracting

- Prepare/Review and recommend specifications
- Identify suppliers of goods and services (when necessary)
- Assist in evaluation contract
- Recommend in awarding contract (when necessary)
- Recommend payment

4. Financial Management and Accountability

- Follow-up payment with UNDP
- Ensure funds for project activities
- Assistant in preparing financial reporting
- Assistant in preparing budget revision

4. Monitoring, Reporting and Evaluations

- Prepare and submit weekly checkpoint report;
- Prepare and submit monthly progress report for the Project Board Review;
- Prepare TPR report (check if applicable with NEX project)
- Organize TPR meeting Ensuring the development of clear guidelines for assessing project progress and impact, for improving monitoring, and for identifying lessons learned and including them in the following years' work plans
- Keep project records and files

5. Awareness

- Prepare relevant information for the NPD for his dissemination;
 - Share project best practices with other GMMRWUA branches
 - Prepare articles for GMMRWUA and UNDP websites
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TERMS OF REFERENCE

PROJECT BOARD

The responsibility of the Project Board during the running and closing of the project:

1. Running the Project

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the National Project Manager;
- Provide guidance and agree on possible countermeasures/management actions to address specific risks;
- Agree on the Project Coordinator's tolerances in the Annual Work Plan and quarterly plans when required;
- Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner;
- Appraise the Project Annual Review Report, make recommendations for the next AWP, and inform the Outcome Board about the results of the review.
- Review and approve end project report, make recommendations for follow-on actions;
- Provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded;
- Assess and decide on project changes through revisions;

2. Closing a project

- Assure that all Project deliverables have been produced satisfactorily;
- Review and approve the Final Project Review Report, including Lessons-learned;
- Make recommendations for follow-on actions to be submitted to the Outcome Board;
- Commission project evaluation (only when required by partnership agreement)
- Notify operational completion of the project to the Resident Representative

TERMS OF REFERENCE

THE PROJECT ASSURANCE

The responsibility of the Project Assurance during the running and closing of the project:

1. Running the Project

- Ensure that funds are made available to the project;
- Ensure that risks and issues are properly managed, and that the logs in Atlas are regularly updated;
- Ensure that critical project information is monitored and updated in Atlas, using the Activity Quality log in particular;
- Ensure that Project Quarterly Progress Reports are prepared and submitted on time, and according to standards in terms of format and content quality;
- Ensure that CDRs are prepared and submitted to the Project Board;
- Perform oversight activities, such as periodic monitoring visits and “spot checks”.
- Ensure that the Project Data Quality Dashboard remains “green”

2. Closing a project

- Ensure that the Final Project Review Report, including Lessons-learned are prepared;
- Ensure that the project is operationally closed in Atlas;
- Ensure that all financial transactions are in Atlas based on final accounting of expenditures;
- Ensure that project accounts are closed and status set in Atlas accordingly.

TERMS OF REFERENCE

THE PROJECT SUPPORT STAFF

Under the overall supervision of the National Project Coordinator the Project Support Staff will:

1. Provision of administrative services:

- Set up and maintain project files
- Collect project related information data
- Update plans
- Administer the quality review process
- Administer Project Board meetings

2. Project documentation management:

- Administer project revision control
- Establish document control procedures
- Compile, copy and distribute all project reports

3. Financial Management, Monitoring and reporting

- Assist in the financial management tasks under the responsibility of the National Project Coordinator

4. Provision of technical support services

- Provide technical advices
- Review technical reports
- Monitor technical activities carried out by responsible parties