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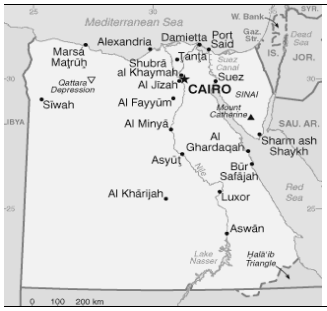

EGYPT

NEW ASSIUT BARRAGE FEASIBILITY STUDY

Client	Ministry of Water Resources and Irrigation (MWRI), Reservoirs and Grand Barrages Sector (RGBS)
Financing	Kreditanstalt für Wiederaufbau (KfW)
Duration of Services	2004 - 2006
Cost of Implementation	280 Mio. € (new barrage and new hydropower plant)

Scope of Services

- Determination of design parameters
- Development and preliminary design of alternatives for constructing a new barrage
- Environmental and socio-economic study, capacity building and institutional development
- Investigation of the economic and technical feasibility of providing hydropower generation at the barrage site
- Preparation of feasibility level designs for technical alternatives of the chosen option.
- Demonstration of the economic viability of the chosen option by carrying out a full assessment of the technical, economic and environmental issues associated with its implementation.
- Comparison of rehabilitation option with the new barrage option by economic, technical, environmental analysis
- Training and integration of counterpart personnel, seminars and presentations

Brief Project Description

The Assiut Barrage was constructed between 1892 and 1902 to sustain a water level difference of about 4 m in order to feed the Ibrahimia Canal (length about 350 km) which irrigates an area of almost 600.000 ha. The barrage was remodelled by 1938 to increase the permissible headpond level difference to 4.2 m and thereby increasing the capacity of the Ibrahimia Canal. The civil works have been affected by age and also by tailwater erosion as a consequence of a modified river regime after the construction of the Aswan High Dam.

The Assiut Barrage Feasibility Study effected by a joint venture under the leadership of CES showed the technical and economical feasibility of the rehabilitation of the existing barrage including the installation of a low head hydropower plant of about 40 MW. The corresponding measures would cover an increase of the headpond level for improvement of waterintake to Ibrahimia Canal, improvement of navigation conditions as well as optimization hydropower output, without serious environmental impacts.

In 2004 RGBS / Egyptian Electricity Holding Company (EEHC) / Hydropower Plants Executive Authority (HPPEA) and KfW agreed to extend the Assiut Barrage Feasibility Study by subjecting the option “New Barrage 200 m d/s of the existing one with hydropower plant” to the same detailed feasibility analyses as prepared for the alternative “Rehabilitation with hydropower” in order to have both alternatives at the same level for correct evaluation and final decision.

Partners: Mott McDonald, Inros Lackner AG, Fichtner, Hamza Associates