



Working together towards sustainable environmentally friendly projects

Presenting



International Experience

Countries

Bosnia
Bangladesh
Burkina Faso
Cape Verde
Comoro
Egypt
Jordan
Kazakhstan
Kenya
Lesotho
Mali
Malaysia
Mauritania
Moldova
Morocco
Namibia
Niger
Pakistan
Senegal
Saudi Arabia
Sudan
Syria
Togo
Tunisia
Turkey
Yemen
Uzbekistan
United Kingdom
Zimbabwe

Financing Agencies

Arab Fund
EIB
KfW
Kuwait Fund
OPEC Fund
UN
UNDP
World Bank

PROFILE

AWMc has been established since 1997 in the United Kingdom and is a member of the Association of Consulting Engineers (ACE). It offers specialised integrated consulting services in the water sector, management and the related infrastructure. It has an autonomous associate partner, AWMc (Tunisia), which is a member of the Association of Consulting Engineers in Tunisia (ABEIC). Both of these associations are members of the Federation Internationale des Ingenieurs-Conseils, (FIDIC).

SCOPE

AWMc undertakes services in management, information technology, feasibility and environmental assessment studies, as well as the design and supervision of water-related projects and the associated infrastructures including primary, secondary and rural feeder roads, electricity, power generation and architecture. It also provides supportive agricultural and water management services to ensure that the implementation of projects is technically sound, economically viable and administratively efficient.

SUSTAINABILITY

In carrying out its services, AWMc pays particular attention to cost recovery and sustainability. This is mainly approached by conducting the relevant financial analysis for projecting demand and for calculating cost using different production facilities, taking into consideration such factors as the cost of energy, the life span of the plant and discount rates, on the one hand, and the ability or willingness to pay of the beneficiaries or consumers, on the other hand.

PRIVATISATION

AWMc appreciates the role of the private sector and has the capability to assess prospects for privatisation and investment, taking into account the need for the highest financial returns consistent with adequate operation and efficiency of supply. With this in mind, AWMc places special emphasis on the importance of operation and maintenance and has the practical capability to establish operation and maintenance set-ups and to recommend the appropriate managerial procedures.

THE SERVICES

- **Strategies for water resource development:** Identifying and evaluating various options - both conventional and non-conventional - and proposing master plans and costed development programmes.
- **Water demand management:** Identifying the issues to be tackled as well as the methods to be adopted to deal with them, placing special emphasis on:
 - **Water demand and resources:** Projecting water demand and the sustainability of resources on a realistic basis, taking into consideration living standards, agricultural and industrial activities, tariffs, unaccounted-for water and methods of supply.
 - **Unaccounted-for water:** Determining the technical, managerial and accounting aspects of unaccounted-for water and the optimum levels for viable economic and financial returns.
 - **Tariff structures:** Establishing procedures for the formulation of new tariff structures and the updating of existing ones, taking into consideration local and social conditions as well as major economic indicators so as to enhance the income of water authorities
 - **Institutional set-up:** Specifying measures required for improving management efficiency and financial self sufficiency.
- **Use of non-conventional water resources:** Assessing, if appropriate, the desalination of sea and brackish water, the reuse of sewage effluent or irrigation drainage, the artificial recharge of groundwater, and the possible use of aquifer storage recovery.
- **Institutional set-up:** Advising on restructuring institutional set-ups and the formation of supporting relevant associations such as WASA, WUA and similar set-ups and co-operatives to strengthen the participation of the beneficiaries in cost recovery of the projects and their sustainability.
- **The Environment:** Preparing "Environment Impact Assessment" reports, together with recommendations, and estimating the cost of proposed mitigation measures. Also providing safety contingency plans, auditing services, risk assessments plans and proposing methods for the treatment of industrial and urban waste.
- **Design:** Carrying out design work in order to estimate cost of construction at the feasibility study stage or preparing detailed design for the preparation of tender documents.
- **Pre-feasibility studies:** Identifying and analysing the concepts underlying projects to be submitted to funding agencies, taking into consideration those agencies' rules and regulations.
- **Feasibility studies:** Carrying out feasibility studies and estimating the economic and financial internal rates of return, taking into consideration all important factors which can be fully quantified, and using sensitivity analysis based upon realistic assumptions for all aspects where quantification is found to be difficult.
- **Tendering:** Proposing tendering procedures and evaluating tenders in accordance with internationally accepted rules and regulations.
- **Supervision:** Advising on or appointing construction contractors, and also engineers for the supervision of construction contracts, together with subsequent monitoring of their performance.
- **Information Technology:** Establishing new I.T. applications as well as assessing existing I.T. applications in order to enhance their business benefits and performance and align I.T. applications with business objectives and vision.
- **G.I.S.:** Establishing new G.I.S. applications as well as assessing existing G.I.S. applications in order to enhance their business benefits and integration with I.T. applications, placing particular emphasis on applications for water/wastewater network maintenance operations.
- **Organisational Performance:** Helping water services organizations measure their performance through the definition of key performance indicators (KPI's) and the subsequent monitoring of KPIs, utilizing software automation of the primary business processes of the organization.
- **Costing water:** Carrying out the financial analyses required to produce realistic projections of water demand and calculating the cost of water obtained from various resources using different production facilities, taking into consideration factors such as the cost of energy, the life span of the plant, discounting rates etc..
- **Privatisation:** Assessing prospects for privatisation and investment taking into account the need for the highest financial returns consistent with adequate operation and efficiency of supply.
- **Operation and maintenance:** Establishing operation and maintenance set-ups and recommending appropriate managerial procedures.
- **Investment:** Determining the investment required, the procedures to be adopted and the legal agreements to be drawn up for external funding, if required.

All services can be presented in English, French, Russian and Arabic

STAFFING

Apart from their distinguished academic qualifications, the staff employed by AWMc have extensive practical experience extending over long and consistent professional working periods of more than forty years in some cases. In addition, the staff are also well versed in the latest IT developments required for their technical input.

While engineering aspects form the core of AWMc's activities, the staff also have special expertise for ensuring sustainable management, providing agricultural support, and carrying out the operation and maintenance of all types of infrastructure projects, including water supply facilities, together with their primary, secondary and rural feeder roads and the associated engineering components.

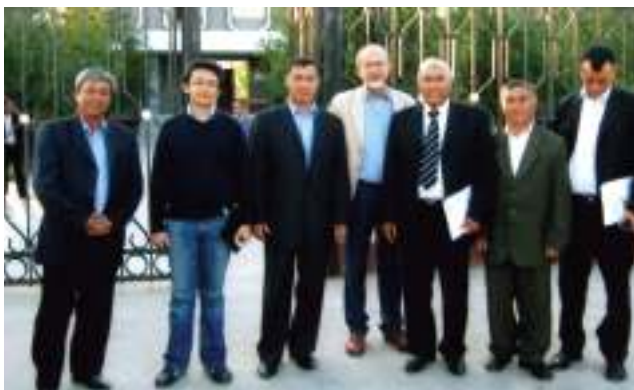
The key staff of AWMc consists of experts in a wide range of disciplines including engineering, economics, financial analysis, tariff structuring, unaccounted-for water reduction, desalination, agronomy, agriculture, horticulture, apiculture, marketing, environmental protection, solid waste, re-use of sewage effluent for irrigation or industrial processes, architecture, primary roads, training and institutional structuring.



*staffing,
institutional
support,
restructuring and
strengthening
management at
all levels*



*training and sharing
experience in
workshops or on site*



TYPICAL PROJECTS

Uzbekistan

Feasibility Study for the Rehabilitation of Irrigation and Drainage Networks in Djizakh and Syrdarya (as sub-consultants to

Kuwait Consulting and Investment Company). The objectives of the project identified by the feasibility study were to increase the agricultural productivity of cotton and cereals, in particular, and fruit and vegetables, in general, in an agricultural area of about 210,060 ha in Djizakh Region and 222,200 ha in Syrdarya Region, which will assist in increasing per capita income and the living standard of the population in the project areas. These objectives are to be achieved by carrying out the rehabilitation, extension, and improvement of the agricultural support services. This includes strengthening the extension services, marketing operations, and credit facilities for the lower income groups, as well as improving the institutional set-up and the Water Users Associations.

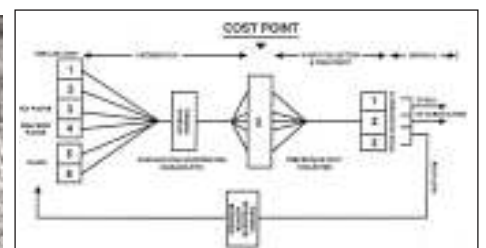


dam and pumping station designs

Yemen

Northern Regional Integrated Rural Development Project, Phase II (in association with Khatib and Alami, Lebanon). The objective of the study was to identify projects that increase agricultural productivity and farmers' incomes and enhance the sustainability of natural resources in the four Governorates of Sana'a, Sa'adah, Hajjah and Amran. This is to be achieved by improving agricultural and extension services, the better management of water resources and manpower, improved irrigation and agricultural practices, the provision of safe drinking water to the rural population, and the construction of village water schemes. It will also involve developing the role of women, increasing work opportunities, ensuring easy access to micro-rural and agricultural credits, and improving the social services and conditions for rural women.

Wadi Hajr and Coastal Hadramout Districts Rural Development Project - II (in association with Khatib and Alami, Lebanon). The objective of the project was to increase the productivity of agriculture, animal husbandry, and apiculture in the areas concerned. This is to be achieved by improving the management of water resources, the introduction of modern irrigation systems, the provision of effective extension services, credit facilities, and veterinary services, together with the establishment of relevant training programmes and facilities, while placing special emphasis on women's role in rural development. The project comprises the construction of eight small dams, with facilities for the artificial recharge of groundwater, modern irrigation systems, a demonstration farm, a nursery, and the construction of three veterinary centres and a laboratory. The project also includes technical support for strengthening the institutional set-up, developing human resources, and providing easily accessible credit facilities for the lower income groups.



exploring water resources, modelling and estimating the cost of alternatives

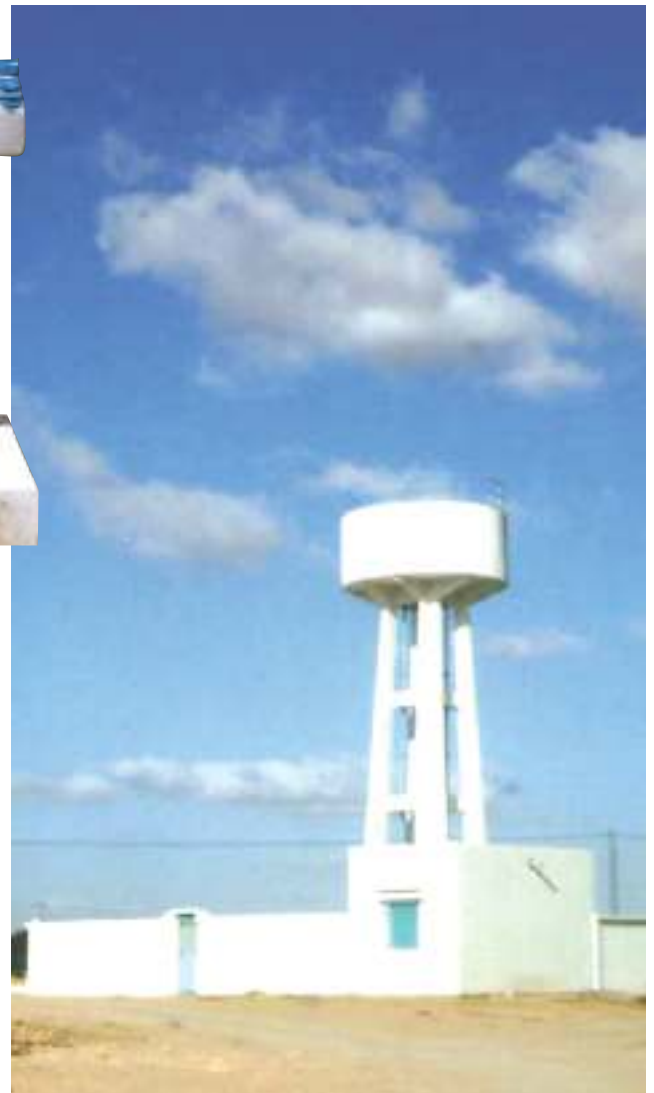
Syria

Wastewater Strategic Planning and Priority Investment Study in Barada and Ghouta Gharbiya II (in association with Khatib and Alami, Lebanon). The objective of the study was the protection of public health and the environment and the establishment of a strategic plan for the action required for resolving the difficulties encountered as a result of the rapid increase in the production of raw sewage, which is discharged into natural watercourses. The study established the basis for the reuse of sewage effluent in accordance with realistic standards and put forward proposals for the identification and rapid execution of priority projects that were technically sound and economically viable. It considered privatisation options, proposed a code of practice for the reuse of sewage effluent, and made suggestions for protecting groundwater resources and establishing options for cost recovery that would show an impact on the economy of the country. The study also reviewed and proposed strengthening and restructuring the present set-up for the proper operation and maintenance of the Sanitation Sector in the Governorate of Damascus Rif.

Tunisia

Rural Water Supply Projects for numerous villages in various regions of Tunisia. These projects included feasibility studies, detailed designs for the distribution networks, pumping stations, reservoirs, wells and the preparation of tender documents, as well as carrying out social awareness campaigns and establishing and strengthening Water Supply and Sanitation Associations (WASA) and Water Users Associations (WUA).

Water Conservation Strategy in the Tourist Sector Project. The objective was to reduce the consumption of potable water to 300 litres per room per day in the tourist areas on the Mediterranean coast. The project included auditing the internal water supply of 67 hotels, assessing the situation, and proposing different technical strategies for reducing the water consumption.



Social awareness campaigns as a means for establishing sustainability

Moldova

Improvement of Water Supply and Sewerage System Planning for Priority Regions of Moldova (in association with Jacobs-Gibb and Kuwait Consulting and Investment Company). A pre-feasibility study for fifty prioritised rural locations leading to a feasibility study with detailed plans and an investment programme for three to five selected locations, together with recommendations for a future strategy for water and wastewater development.

Bosnia

Sarajevo Water and Wastewater Masterplan (in association with Jacobs-Gibb and Kuwait Consulting and Investment Company). The objective of the study was to examine the future water and wastewater requirements of the Sarajevo Cantons and to prepare a Master Plan. This included carrying out a review of the existing water and sanitation situation following the cessation of hostilities in 1997, carrying out water demand projections, and developing water resources to satisfy water demand for the year 2020 time horizon. In addition, the Master Plan proposed the extension and improvement of the water supply distribution systems and the rehabilitation and extension of the sewerage system as well as reviewing the institutional set-up and proposing restructuring for sustaining effective water and sanitation conditions.

Egypt

Greater Cairo East Bank Effluent Study (in association with Montgomery Watson/Gibb, UK, the Kuwait Consulting and Investment Company and Ahmed Abdul Warith, Egypt). The objective of the study was the proper planning and action required for resolving the difficulties encountered as a result of the rapid increase in sewage collection on the East Bank of Cairo. The study aimed to ensure that the reuse of sewage effluent was carried out in accordance with realistic standards, and put forward proposals for the rapid execution of priority projects.

Mauritania

Nouakchott Wastewater Master Plan (in association with Mott MacDonald, STUDI International and BET-GP). The objective of the study was the protection of public health and the environment by the construction of a sewage system for the capital city, Nouakchott, and the renovation of the existing system. The study considered possible technical alternatives and carried out economic and financial analyses. It also included the submission of proposals for restructuring SONELEC, the authority responsible for the project.

Turkey

Yesilcay Water Project (in association with Jacobs-Gibb and Kuwait Consulting and Investment Company). This project was for the supply of water to Greater Istanbul. It had been under execution for nearly three years, when the financiers requested an updated Feasibility Report prior to extending additional funding. The report updated the feasibility of the project in the light of the actual progress of the implementation and the prices of the contracts.



participation of beneficiaries in conveying water to remote areas

primary, secondary and rural feeder roads



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