



**Water, Structures
& Environment**

A GENERAL INTRODUCTION

We started as a Canadian consultancy company, founded in 1973, Whose name changed to GNEC Later in 1983, and now we are the most continuously operating engineering firm in Iran and the Middle-East. It's been more than four decades since we started working with this new name in different fields of the Energy Industry, in Engineering and Consultancy projects, and we have proved to be the most successful and well-known company in IRAN. With more than 1000 experts, we provide clients with various engineering, management, procurement and construction services in the fields of Power Transmission Lines and Substations, Distribution, Networks, Water and Wastewater, Dam and Hydropower, Irrigation and Drainage, Renewable Energies & Energy Optimization, Gas, Steam and Combined Cycle Power Plants, and Oil, Gas and Petroleum.

OUR EXPERIENCES

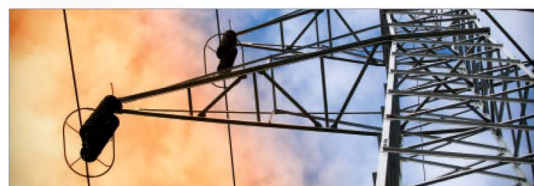
We have already provided services for:

- More than 27,000 Km of power transmission lines and many distribution networks from 33kV to 400kV.
- More than 820 substations in all voltage levels from 33kV to 400kV.
- More than 60,000 MW of power plants.
- More than 310 projects in dams, water transmission lines, irrigation, drainage, hydropower plants and about 500 km of water & wastewater network.
- More than 3000 km of gas transmission lines and several fuel storage tanks.
- More than 100 renewable energy plants and energy management projects with a wide variety of services.



OUR SERVICES

- Design and engineering services
- Project review, project management, construction control and supervision
- Conceptual, preliminary and detailed design
- Consultancy services and economic studies
- Management of contract (MC)
- Feasibility studies, EIA, ESIA, HSE, and RAP
- Surveying and geotechnical investigations and engineering
- Engineering, procurement and construction (EPC) services
- Electricity grid and access studies and reliability improvement



BUSINESS EXPANSION

Our area of activities has always been expanding by adding new business fields such as Hydro structures in 1994, Oil & Gas in 2002, renewable energies in 2005 and continue to grow by entering into exporting engineering services, and participating in EPC, BOO and BOT projects.

Business Growth During the Years

1973 1975 1993 1995 1997 1999 2000 2002 2005 2007 2008 2011

Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Combined and Gas Power Plant, Power Plant Industries, Oil and Gas, MC projects, Renewable Energies, Engineering Services Export, EPC, **BOO and BOT Projects**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Combined and Gas Power Plant, Power Plant Industries, Oil and Gas, MC projects, Renewable Energies, Engineering Services Export, **EPC Projects**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Combined and Gas Power Plant, Power Plant Industries, Oil and Gas, MC projects, Renewable Energies, **Engineering Services Export**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Combined and Gas Power Plant, Power Plant Industries, Oil and Gas, MC projects, **Renewable Energies**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Combined and Gas Power Plant, Power Plant Industries, **Oil and Gas and MC projects**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Combined and Gas Power Plant, **Power Plant Industries**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, Gas and **Combined Cycle Power Plant**



Steam power plants, Transmission lines and Substations, Hydro Structures, Electricity Distribution, **Gas Power Plant**



Steam power plants, Transmission lines and Substations, Hydro Structures, **Electricity Distribution**



Steam power plants, Transmission and Substations, **Hydro Structures**



Steam power plants, **Transmission Lines and Substations**



Steam power plants



Certificates

ISO 9001



ISO 14001



ISO 45001



HSE-MS



ISO 10015



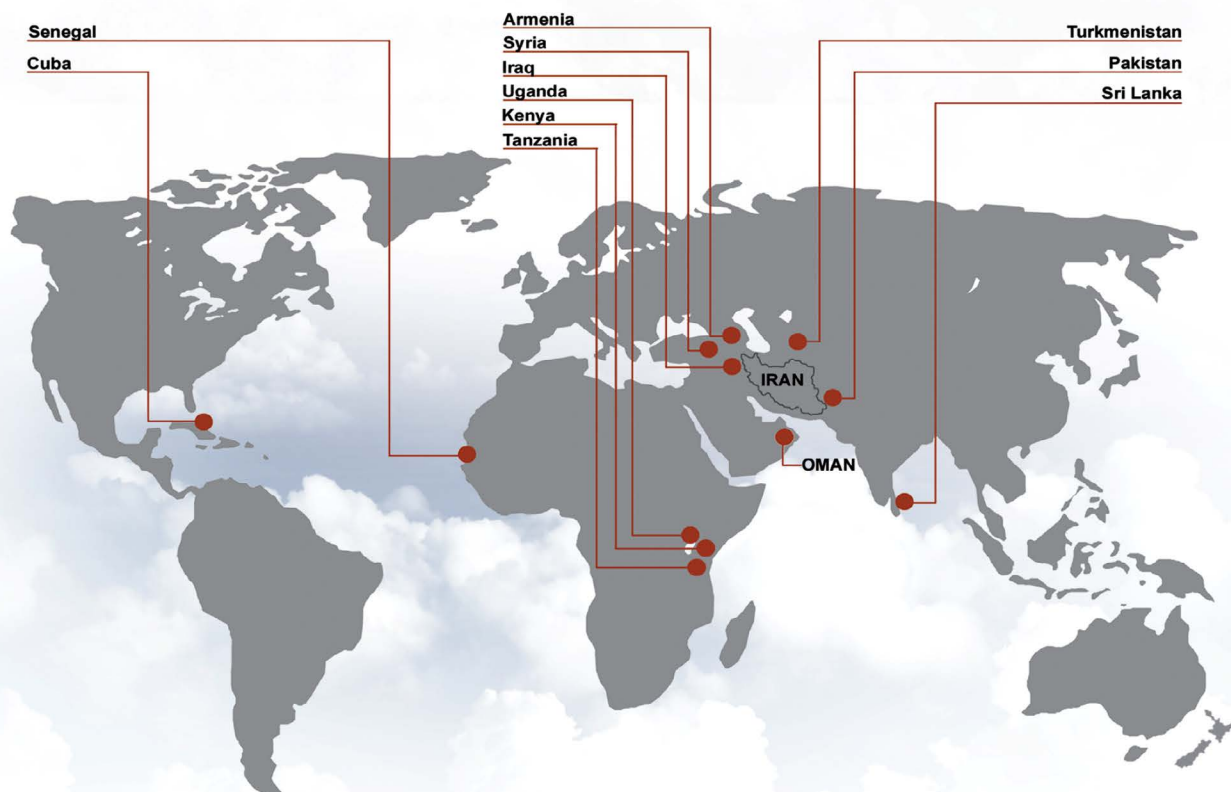
EFQM

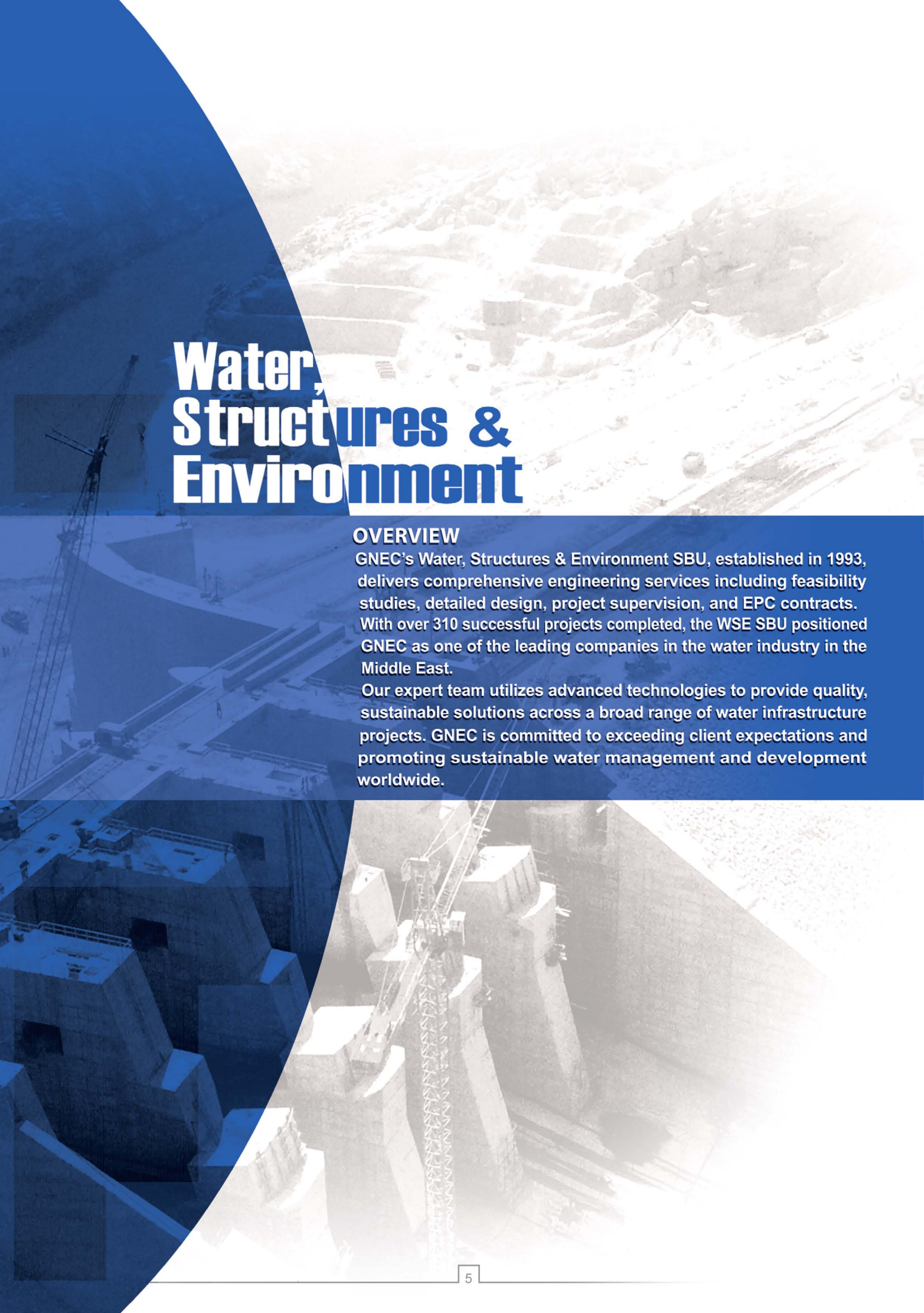


ISO 10006



GNEC Area of Activity





Water, Structures & Environment

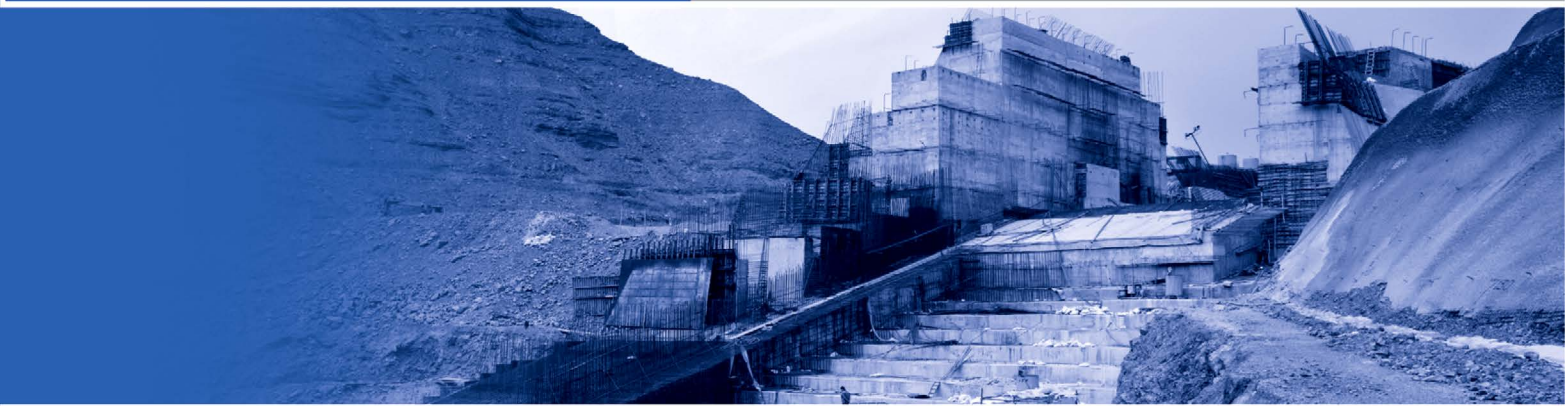
OVERVIEW

GNEC's Water, Structures & Environment SBU, established in 1993, delivers comprehensive engineering services including feasibility studies, detailed design, project supervision, and EPC contracts. With over 310 successful projects completed, the WSE SBU positioned GNEC as one of the leading companies in the water industry in the Middle East.

Our expert team utilizes advanced technologies to provide quality, sustainable solutions across a broad range of water infrastructure projects. GNEC is committed to exceeding client expectations and promoting sustainable water management and development worldwide.

FIELD OF ACTIVITIES

- Dam and Hydropower plant
- Water supply and urban water transfer
- Pumping and transmission for rural water supply
- Studies of water resources
- Desalination
- River Engineering
- Irrigation and Drainage Networks
- Water and Wastewater(Sewage) Reuse
- Studies of Integrated Management of Water Resources and Watersheds
- Building and Access Road & Tunnel construction
- Environmental, Social and Health Impact Assessment (ESHIA) & Resettlement Action Plan (RAP)
- Passive defense
- Dam Monitoring
- Studies and Finding the potential of Mini and Small Hydropower plants
- GIS (Geographic Information Systems)



SERVICES

- Consultancy and Engineering Services
- Pre-Feasibility (Reconnaissance) & Feasibility study and Detailed Engineering Design
- Review of Feasibility study and Detailed Design
- Geotechnical Supervision
- Construction Supervision
- Project Management
- Energy Management Strategic Studies
- Tender Document Preparation and Proposals Evaluation
- ESHIA and RAP Study
- Training Workshop on Dam monitoring
- Training Workshop on Environmental, Social and Health Impact Assessment (ESHIA)



Highlighted Projects

Vanyar Dam Project

Location: East Azerbaijan province (Iran)

Category: Dam and Hydropower plant

Dam type: Rockfill with Clay core

Name of client: East Azerbaijan regional water corporation

Dam Height from Foundation: 93 m

Length of Dam Crest: 278 m

Reservoir Capacity at N.W.L: 361 MCM

Objective: Water Supply for Development of Downstream Agricultural land & Flood control by performing services such as review of Feasibility study and Detailed design and Construction Supervision.



Khersan 1 Dam & Pump Storage Power Plant Project

Location: Border of Chaharmahal-o-Bakhtiari & Kohgiluyeh and Boyer-Ahmad provinces

Category: Dam and Hydropower plant

Dam type: Concrete arch dam

Name of client: Iran water and power resources development company

Dam Height from Foundation: 194m

Installation capacity, Number Units (pumped storage powerplant): 800MW

Objective: HydroPower Energy Generation



Provision of Project Management Consultancy Services for Construction of Kidunda Dam Project

Location: Tanzania

Category: Dam and Hydropower plant

Dam type: Earthfill dam

Name of client: Dar es Salaam Water Supply and Sanitation Authority (DAWASA)

The project including:

1) water reservoir(dam), 2) Hydropower plant to generate 20 megawattshydropower, 3) Construction of 101km power transmission line to transmit power from Kidunda to Chalinze substation and 4) The Access Road from Kidunda to Ngerengere approx. 75km

Seydun Dam Project

Location: Khuzestan Province

Category: Dam and Hydropower plant

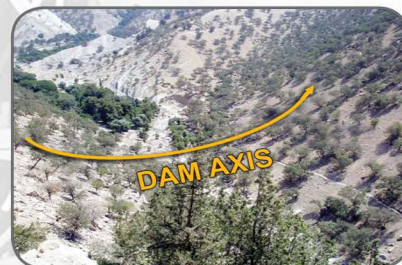
Dam type: Earthfill dam with Clay core

Name of client: Khuzestan water & power authority

Dam Height from foundation: 86 m

Length of Dam Crest: 350 m

Objective: Water storage and control of surface water in order to Drinking water and Agricultural Water Supply



Shirin ab Dam Project

Location: Khuzestan Province

Category: Dam and Hydropower plant

Dam type: Earthfill dam with Clay core

Name of client: Khuzestan water & power authority

Dam Height from foundation: 95 m

Length of Dam Crest: 326 m

Objective: Water storage and control of surface water and floods in order to water supply for Industrial and Agricultural



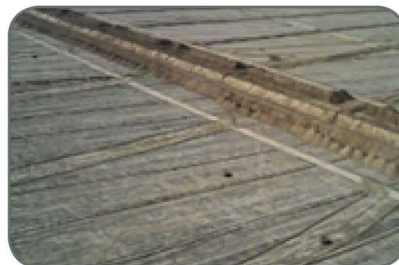
Jofeir Irrigation and Drainage SubNetworks Project

Location: Khuzestan Province

Category: EPC project of Irrigation and Drainage SubNetworks

Name of client: Jahade Nasr Institution

Objective: Construction Supervision of Water Reservoirs, Booster Stations ,Pumps and Transmission and Distribution mains, Irrigation Infrastructure development & Irrigation Management



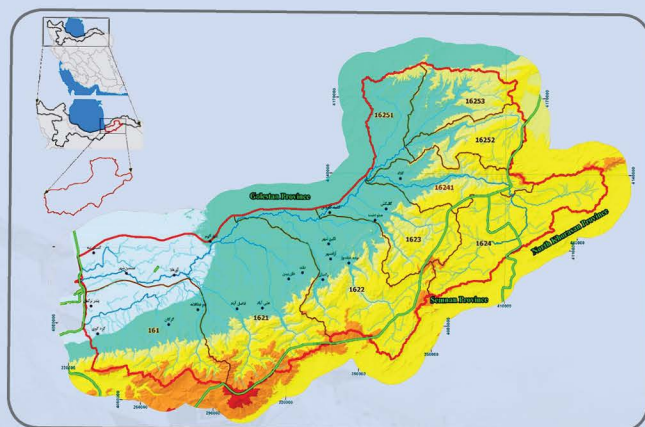
Esfahan Steel Sewage Treatment Project

Location: Esfahan Province

Category: Water and Wastewater (Sewage) Reuse

Name of client: Tose Novin Ab Mapna Company

Objective: is Faecal sludge management services, training and capacity building



IWRM Water Resources Management Studies Qarasu-Zarringol Catchment area of Golestan Province

Category: Studies of Integrated Management of Water Resources and Watersheds

Name of client: Golestan Regional Water corporation

Objective: The project located in Golestan province. The main objectives of this project includes: Identify and assess the recharge mechanism and groundwater resources & aquifer systems and the recharge areas (high precession / resolution) of both shallow (up to 250 m) and deep (deeper than 500 m)

Urmia Lake Project

Location: West Azerbaijan Province (Iran)

Category: Environmental, Social and Health Impact Assessment (ESHIA)

Name of client: Department of Environment of Iran

Objective: The study of Evaluating of Ecosystem Services and identifying strategies to increase resilience and reduce the effects of climate change is carried out in order to protect the wetlands of Iran.



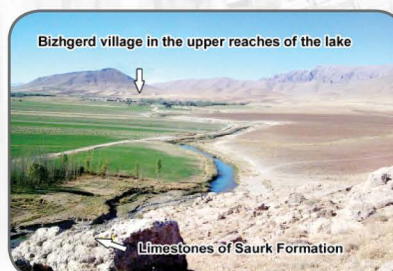
Social studies and the exploitation system of popular participation for the phase 2 of Aghbolagh Drainage & Irrigation network Project

Location: Chaharmahal and Bakhtiari Province

Category: Social and Resettlement Action Plan (RAP)

Name of client: Regional Water Company of Chaharmahal & Bakhtiari

Objective: Recognizing the potential and actual capabilities for settling and employment



References

Finish Date	Assignment Name	Name of Client & Country of Assignment	Role on the Assignment
Dam and Hydropower Plant projects			
Ongoing (2024)	Behavior mapping and Behavior measurement of concrete dams in Khuzestan province	Khuzestan water & power authority	Consulting services
Ongoing	Engineering services for reviewing existing studies and finding the potential of mini and small Hydro power plants in the watersheds of Zayandeh Rood (Gavkhouni), Karun Bozorg, Jarrahi-Zohreh and the southern basins, the Central and Eastern Plateau basins	Iran water and power resources development company	Consulting services
Ongoing	Engineering services for reviewing existing studies and finding the potential of mini and small Hydropower plant sites in Aras, Urmia Lake, Atrak River and Northern basin & Karkheh and Western border and Sefidrud basins	Iran water and power resources development company	Consulting services
2021	phase 1(Feasibility study) and Geotechnical Supervision of Shiveh(Kanishinka) dam and Hydropower plant and water transmission system (with ESIA,RAP studies)	Iran water and power resources development company	Consulting services (Feasibility study and Geotechnical Supervision)
2020	Comprehensive Studies to construct Hydropower plant on transmission lines and 29 drink water reservoirs of Tehran	Iran water and power resources development company treatment company	Consulting services
2019	Monitoring studies and Behavior Measurement of Kosar Dam	Kohgiluyeh and Boyer- Ahmad regional water corporation	Consulting services
2018	phase 2(Detailed Engineering Design) and Geotechnical Supervision of Sardasht reservoir dam (with ESIA,RAP studies)	Khuzestan water & power authority	Consulting services (Detailed Engineering Design and Geotechnical Supervision)
2012	Studies of reviewing recognition phase and studies of first phase of Agi Soo dam	Golestan regional water corporation	Consulting services
2012	phase 2 (Detailed Engineering Design) and Construction Supervision of Sardasht reservoir dam and Irrigation network (with ESIA, RAP studies)	Regional Water Company of Chaharmahal & Bakhtiari	Consulting services (Detailed Engineering Design & Construction Supervision)
2010	phase 1(Feasibility study) and Geotechnical Supervision of Bazoft dam and Hydropower plant. (With ESIA, RAP studies)	Iran water and power resources development company	Consulting services (Feasibility study and Geotechnical Supervision)
2009	Studies of recognition phase of Tangezi dam	Char mahal o bakhtiari regional water corporation	Consulting services
2009	phase2 (Detailed Engineering Design) and Geotechnical Supervision of Roodbar(Ruddbar) dam and Hydropower plant in Lorestan province (with ESIA,RAP studies)	Iran water and power resources development company	Consulting services (Feasibility study and Geotechnical Supervision)
2006	Environmental studies of Shirin Ab dam	Khuzestan water & power authority	Consulting services
2006	phase 1(Feasibility study) and Geotechnical Supervision of Koshksaray reservoir dam	East Azerbaijan regional water corporation	Consulting services (Feasibility study and Geotechnical Supervision)
2005	Studies of phase 1 of Talug dam	Khuzestan water & power authority	Consulting services
2004	Studies of preparation of Vanyar dam reservoir	East Azarbayejan regional water corporation	Consulting services
2000	Studies of phase 2 of Tajyar dam & social studies of Tajyar downstream lands	East Azarbayejan regional water corporation	Consulting services
1997	Studies of phase 1 of Aghbolagh dam, Pumping and transmission	Char mahal o bakhtiari regional water corporation	Consulting services
1997	Studies of phase 1 of Kharaji dam	Char mahal o bakhtiari regional water corporation	Consulting services

Finish Date	Assignment Name	Name of Client & Country of Assignment	Role on the Assignment
Irrigation and Drainage Networks projects			
2022	Engineering Services of EPC project of Irrigation, Drainage sub-network (low pressure), equipping, rehabilitation of first and second development regions of Minoo & Joref lands	Jahade Nasr Institution	Engineering services of EPC project
2014	Detail design studies & updating of phase 2 of Aghbolagh dam and irrigation & drainage network	Char mahal o bakhtiari regional water corporation	Consulting services
2012	Studies of Drainage & Irrigation network of Aghbolagh downstream lands (phase 4& 3 of network) with Environment, Social studies	Chaharmahal and Bakhtiari	Consulting services (Detailed Engineering Design and Geotechnical Supervision)
2007	Site supervision on construction of Tajyar main irrigation	East Azarbayejan regional water corporation	Consulting services
Water supply and urban water transfer & Water and Wastewater (Sewage) Reuse projects			
ongoing	Feasibility study and Detailed Engineering Design (studies of the First and Second stages) of water transfer from Hajiler dam to Anjerd copper plant	MehrAsl Mining and Production Industries company	Consulting services (Feasibility study and Detailed Engineering Design)
2019	Review of feasibility study (phase 1) & Detail design studies of Sewage treatment of Industrial Regions of Ardebil2 and Nojeh Deh industrial region	Ardebil province Industrial regions company	Consulting services (Feasibility study and Detailed Engineering Design)
2019	Supervision on taking census(inventory) of Surface and Groundwater resources of studied regions of Bushehr province	Bushehr regional water corporation	Supervision
2018	Feasibility study(phase1) of Water Supply, transmission, Irrigation and Drainage project of Dena City (Sisakht and Deli Bahram Beygi regions about 1000 hectares)	Kohgiluyeh and Buyer ahmad regional water corporation	Consulting services (Feasibility study)
2017	Supervision (Superior & Top) on wastewater project of Meshkin Shahr	Water and waste water company of Ardabil Province	Supervision
2014	Studies of water supply and transmission to Takestan Gardens and optimum usage of existing water resources	Qazvin regional water corporation	Consulting services
Environmental, Social and Health Impact Assessment (ESHIA) projects			
2023	Performing consulting services regarding the preparation of reports and conducting studies and obtaining environmental approval, comprehensive management and monitoring program and health impact assessment of Shazand Combined CyclePower Plant	Markazi region electricity generation company	Consulting services
2022	Modeling of the distribution of air pollutants in the country's fuel oil power plants	Niroo Research Institute	Consulting services & Research
2009	Studies of environmental impact assessment of Agi Chai salinity control structures	East Azarbayejan regional water corporation	Consulting services
2011	Studies of environmental impact assessment of Aghbolagh dam and irrigation & drainage network	Char mahal o bakhtiari regional water corporation	Consulting services (Feasibility study and Geotechnical Supervision)
2020	Studies of evaluation of environmental effects of Vanyar dam	East Azarbayejan regional water corporation	Consulting services



We Promote Reliability, Quality, Cooperation and Competency

