



## **CORPORATE PROFILE**

A World of Sustainable Development

**TAHAL**  
G R O U P



# OVERVIEW

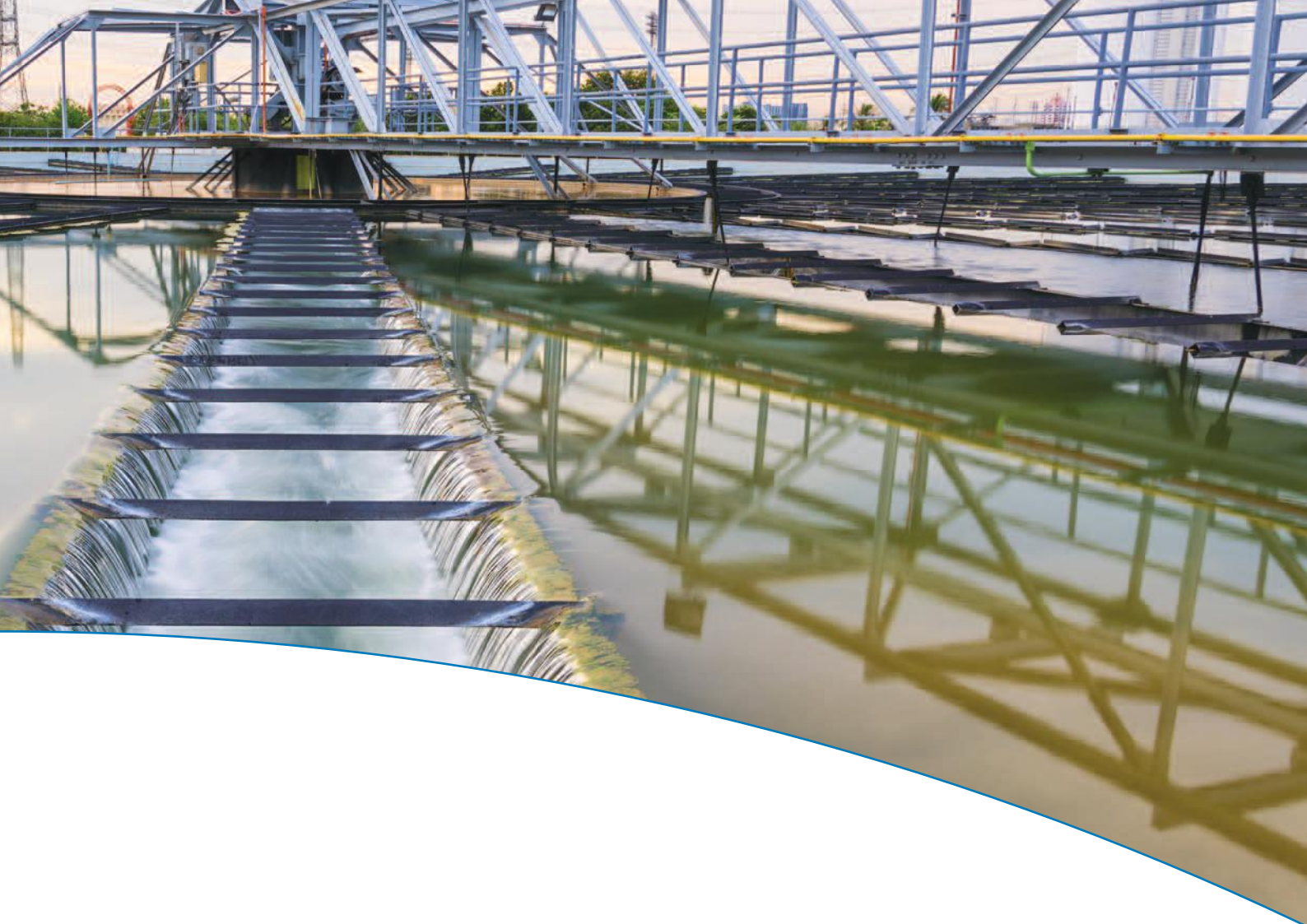
## ABOUT TAHAL

TAHAL Group is a leading global provider of sustainable infrastructure development projects in emerging markets worldwide. Operating in more than 30 countries, TAHAL uniquely delivers integrated solutions across the fields of water, wastewater, agriculture, solid waste and natural gas.

With over 60 years of proven global experience and engineering expertise, TAHAL is a one-stop provider of comprehensive end-to-end services covering project initiation, financing management, implementation, and operations of turnkey projects.

Leveraging its international track record, expert know-how, and extensive industry partnerships, TAHAL implements cost-effective solutions to help clients optimize their strategic infrastructure development projects.





## WHY TAHAL

### **Integrated Projects**

TAHAL implements fully integrated projects that address the combined water, wastewater, agriculture, solid waste and natural gas needs of clients.

### **End-To-End Services**

Covering all stages of the project value chain – from planning & design through management & implementation to operations & maintenance – TAHAL is a one-stop provider of comprehensive project services.

### **Global Footprint**

Over the course of 60+ years, TAHAL has successfully implemented hundreds of projects in over 50 countries worldwide.

### **Multi-Disciplinary Expertise**

Specializing in a wide variety of engineering disciplines, TAHAL's professional pool of seasoned managers and expert engineers offers effective and innovative solutions to address client challenges.

### **Technology-Independent Approach**

TAHAL takes a vendor-independent approach, deploying technologies and solutions that best fit client and project needs.

### **Third-Party Financing**

Thanks to long-standing relations with leading financial institutions – including the World Bank, the IDB, and the EBRD – TAHAL has a proven track record of helping clients mobilize third-party funding.

### **“Global/Local” Know-How**

Combining broad global experience and expertise with deep local knowledge, TAHAL delivers optimized resource projects that meet specific client requirements.

### **Customer-Oriented Solutions**

TAHAL leverages its engineering expertise and rich experience to partner with customers and deliver cost-effective solutions that meet exact project needs.



# SERVICES

## End-to-End Services

Taking a holistic approach that covers all stages of the project value chain – from planning & design through management & implementation to operations & maintenance – TAHAL is a one-stop provider of comprehensive project services. Adhering to innovative yet proven project methodologies, TAHAL's interdisciplinary engineering teams deliver tailored cost-effective solutions that meet and exceed client requirements.



## Planning & Design

- ▶ Master plans – national and regional
- ▶ Pre-feasibility and feasibility studies
- ▶ General and detailed engineering design
- ▶ State-of-the-art engineering solutions
- ▶ Advanced modeling and simulation
- ▶ Environmental and social impact assessments (EIAs, SIAs)
- ▶ Economic and financial analysis
- ▶ Management and geographic information systems (MIS, GIS)
- ▶ Tendering process assistance

## Management & Implementation

- ▶ Project management consulting (PMC)
- ▶ Procurement services
- ▶ On-site construction supervision
- ▶ Equipment supply and installation
- ▶ Construction and commissioning
- ▶ Cost and schedule control
- ▶ Quality assurance and control (QA, QC)
- ▶ Training, capacity building and knowledge transfer

## Operations & Maintenance

- ▶ O&M of water, wastewater, solid waste and natural gas facilities
- ▶ Preventive and corrective maintenance

## Third-Party Financing

Leveraging long-running relations with financial institutions and credit agencies – including **the World Bank, the IDB, the EBRD, the AfDB and the UN** – TAHAL has a proven track record of tailoring financial packages and mobilizing third-party project funding. TAHAL helps clients identify relevant financing sources, procure guarantees, and conduct negotiations with a global network of leading commercial banks and export credit agencies.

## Project Models

In line with project needs, TAHAL has the requisite project management, engineering and financing capabilities to help clients implement and operate economically viable projects. TAHAL has executed a wide range of project models including:

- ▶ Turnkey / lump sum
- ▶ Engineering, procurement and construction (EPC)
- ▶ Engineering, procurement and construction management (EPCM)
- ▶ Public-private partnership (PPP)
  - Build-own-operate (BOO)
  - Build-operate-transfer (BOT)
  - Transfer-operate-transfer (TOT)



# WATER

## State-of-the-Art Water Projects

As a major player in the water sector for over 60 years, TAHAL has helped provide clean and safe water to millions of people worldwide. TAHAL's extensive water-related knowledge and proven design and implementation capabilities ensure effective delivery of sustainable solutions that increase water availability, quality and revenues.





## Areas of Expertise

- ▶ Surface water and groundwater development
- ▶ Aquifer development and protection
- ▶ Desalination of seawater and brackish water
- ▶ Water treatment plants
- ▶ Flood protection systems
- ▶ Urban and rural water supply systems – regional and national schemes
- ▶ Hydraulic structures – dams, reservoirs and intakes
- ▶ Pumping stations
- ▶ Water conveyance and distribution systems
- ▶ Supervisory control and data acquisition (SCADA) systems
- ▶ Non-revenue water (NRW)
- ▶ Water security

## Client Benefits

- ▶ Effective development of new and existing water resources
- ▶ Increased water quality and availability
- ▶ Safe water supply for domestic, industrial and agricultural usage
- ▶ Enhanced management of existing water resources
- ▶ Reduced water loss and increased water revenues





# WASTEWATER

## Wide-Ranging Wastewater Projects

TAHAL has been a leading wastewater player in developing countries worldwide for over 50 years, specializing in wastewater treatment and reuse of treated effluent for irrigation and industry. TAHAL maintains high proficiency in the design and implementation of state-of-the-art solutions – including those based on activated sludge, membrane bioreactor (MBR), sequencing batch reactor (SBR), upflow anaerobic sludge blanket (UASB), and soil aquifer treatment (SAT) technologies. TAHAL wastewater solutions empower reduced environmental impact and increased economic benefit.







## Areas of Expertise

- ▶ Municipal and industrial wastewater systems, including zero liquid discharge (ZLD)
- ▶ Wastewater collection systems
- ▶ Wastewater treatment plants, including tertiary and quaternary treatment
- ▶ Reuse in industry and agriculture
- ▶ Effluent disposal systems
- ▶ Sludge treatment systems and biogas production

## Client Benefits

- ▶ Expanded wastewater collection and treatment coverage
- ▶ Improved public health
- ▶ Diminished negative environmental impact
- ▶ Increased water availability for industry and agriculture via reuse
- ▶ Greater economic benefit from reused water revenues and biogas production



# AGRICULTURE

## **Tailor-Made Agriculture Projects**

TAHAL leads market-driven rural and agricultural development efforts in developing countries across the globe. Leveraging extensive agronomic expertise, a one-stop-shop approach, and large-scale project management capabilities, TAHAL delivers tailor-made solutions that transform challenging environmental conditions into economically successful agricultural initiatives.







## Areas of Expertise

- ▶ Business-oriented agricultural development based on market, soil and climatic conditions
- ▶ Rural development and regional/national irrigation and agricultural master plans
- ▶ Agricultural enterprise management
- ▶ Utilization of modern technologies and practices
- ▶ Integrated agro-industry enterprises with on-site value-added production
- ▶ Overcoming challenging climatic and soil conditions – from desert to tropical
- ▶ Marketing assessments
- ▶ Establishment of new agricultural communities
- ▶ Development of advanced irrigation and drainage systems
- ▶ Design and establishment of organic food production units
- ▶ Establishment of wholesale markets
- ▶ Agricultural service and training centers
- ▶ Post-harvest facilities and logistics solutions

## Client Benefits

- ▶ Improved food security and reduced poverty
- ▶ Job creation and enhanced standards of living
- ▶ Introduction of new, diversified crops to a country's agricultural base
- ▶ Modern, export-oriented production
- ▶ Enhanced rural infrastructure
- ▶ Optimized agricultural production
- ▶ Modernized agriculture sector
- ▶ Knowledge dissemination
- ▶ Increased competitive advantage



# SOLID WASTE

## Eco-Friendly Solid Waste Projects

Recognizing that resource conservation and recovery are key to a better future, TAHAL provides sustainable and eco-friendly solid waste management solutions. TAHAL's innovative solid waste projects convert environmental challenges into economic benefits.







## Areas of Expertise

- ▶ Solid waste collection, treatment and management systems
- ▶ Design, construction and operation of solid waste landfills
- ▶ Mechanical biological treatment (MBT) plants
- ▶ Municipal solid waste (MSW) recycling
- ▶ Industrial waste treatment
- ▶ Landfill gas (LFG) management
- ▶ Leachate collection and treatment
- ▶ Compost production for agriculture
- ▶ Generation of energy from biogas
- ▶ Production of refuse-derived fuel (RDF) for industrial and other energy generation
- ▶ Environmental impact assessments (EIAs)
- ▶ Environmental mitigation programs
- ▶ Odor control

## Client Benefits

- ▶ Improved public health and safety
- ▶ Expanded coverage of solid waste collection and treatment
- ▶ Diminished environmental damage
- ▶ Greater energy availability from biogas, RDF and other waste-to-energy solutions
- ▶ Enhanced economic benefit from recycling and compost/energy production
- ▶ Better preservation of land reserves/resources



# NATURAL GAS

## Field-Proven Natural Gas Projects

Since 1995, TAHAL has carried out dozens of turnkey/EPC projects involving natural gas storage and conveyance systems that connect power plants and industrial concerns to natural gas sources. Thanks to TAHAL gas projects, public-sector clients can reduce environmental impact and cut energy costs in their local markets.







## Areas of Expertise

- ▶ Design and construction of high- and low-pressure gas pipelines
- ▶ Supply and installation of pressure regulating and metering stations (PRMSs)
- ▶ Compliance with stringent international standards
- ▶ Standardization of natural gas systems
- ▶ Compressed natural gas (CNG) infrastructure
- ▶ Infrastructure for natural gas vehicles (NGVs)
- ▶ Connecting power plants and businesses to gas sources
- ▶ Offshore pipelines and liquefied natural gas (LNG) facilities
- ▶ Marine and land receiving terminals

## Client Benefits

- ▶ Effective development of natural gas infrastructure
- ▶ Greater availability of natural gas for power generation and industry
- ▶ Improved public safety
- ▶ Diminished negative environmental impact
- ▶ Reduced energy costs for companies and consumers
- ▶ Enhanced economic benefit from natural gas revenues

# TAHAL GLOBAL DEPLOYMENT



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