

Marine Services



Bathymetric and Seismic Surveys,
Diving Surveys, Sea Conditions Monitoring,
Offshore Geotechnical Investigations

Who we are

Setup in 2000 by taking over the business of **URS/Dames & Moore** (one of the largest US marine engineering firms) in Lebanon

EDESSA is an acronym for “Engineering, Design and Environmental Services SA”. We are a leading marine engineering firm who has conducted numerous consultancy, design, supervision and contracting projects around the world.

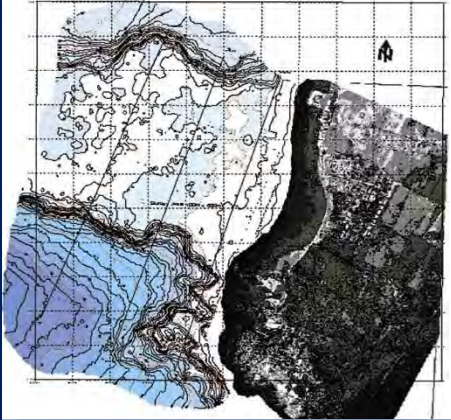
We have conducted many projects in various marine fields for dozens of clients in Europe, Africa and the Middle East. We are able to follow a project from inception to execution through:

- Strategic Studies,
- Pre-planning and master plans,
- Site evaluations,
- Engineering and design,
- Project and construction management and execution

The firm’s projects comprise a high degree of diversity including industrial facilities, commercial, tourist developments, infrastructures and wastewater treatment facilities. Our clients include leading corporations and developers, businesses and industries in the private sector, public utilities companies, architects, engineers, contractors, financial institutions and governmental agencies.

Our main area of expertise has traditionally been in the earth sciences field and has evolved to include the following fields:

- **Marine Engineering**
 - Bathymetric surveys (single and multibeam, 3D models),
 - ROV Surveys (outfall inspections, wreck search),
 - Seismic reflection and refraction surveys,
 - Side scan sonar surveys
 - Sand search (Subbottom profiling)
 - Diving surveys (Inspection, underwater photos and videos)
 - Shipwreck assessment
 - Harbor and marina design
- **Offshore Geotechnical Engineering:**
 - Borehole and CPT investigation,
 - Grab Sampling
 - Laboratory analysis and interpretation



Selected Clients



Our Values

Quality

- 🔧 In-house QA/QC procedures
- 🔧 Pre-qualified subcontractors and suppliers
- 🔧 No compromise policy
- 🔧 Material testing and certification
- 🔧 Consulting arm is a great asset for technical solutions
- 🔧 Documents and drawings control
- 🔧 Material approval or rejection procedures

Professional Services

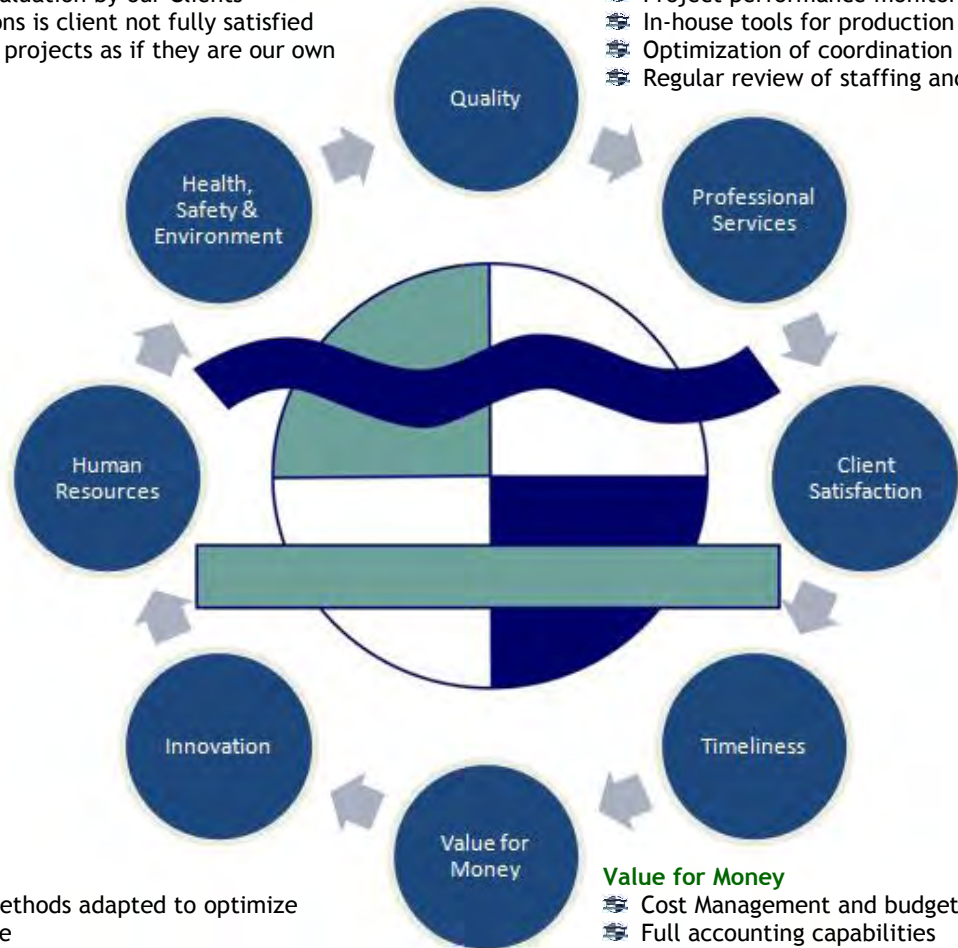
- 🔧 Project organization
- 🔧 Proper supervision with the proper tools
- 🔧 Communication
- 🔧 Daily log of activities
- 🔧 Monitor changes and inform the client promptly
- 🔧 Compliance with international standards
- 🔧 Insurances

Client Satisfaction

- 🔧 Most of our clients are repeat business
- 🔧 Performance Evaluation by our Clients
- 🔧 Corrective actions is client not fully satisfied
- 🔧 We manage the projects as if they are our own

Timeliness

- 🔧 We take schedule commitment very seriously
- 🔧 Project performance monitoring software
- 🔧 In-house tools for production rate tracking
- 🔧 Optimization of coordination between trades
- 🔧 Regular review of staffing and resource plans



Innovation

- 🔧 Use of tested methods adapted to optimize Clients objective
- 🔧 Technical, financial and administrative innovation through value engineering and schedule monitoring

Value for Money

- 🔧 Cost Management and budget tracking
- 🔧 Full accounting capabilities
- 🔧 Cash flow projections
- 🔧 Value engineering
- 🔧 Aim at reducing cost without affecting quality

Human Resources

- 🔧 Our strength is in our staff
- 🔧 Very low staff turnover
- 🔧 Staff take pride in the projects they do
- 🔧 New Challenges on every project
- 🔧 Incentives on international projects
- 🔧 Rotation of staff to gain experience

Health, Safety and the Environment

- 🔧 Adoption of Health, Safety and Environmental Procedures
- 🔧 Diving Safety
- 🔧 Assessment of marine environment

Our Added Values

- 🔧 Strong solution oriented technical design support
- 🔧 Understanding Client's needs and constraints
- 🔧 Aligning our objectives on the Client's objectives
- 🔧 Value engineering to optimize project design components

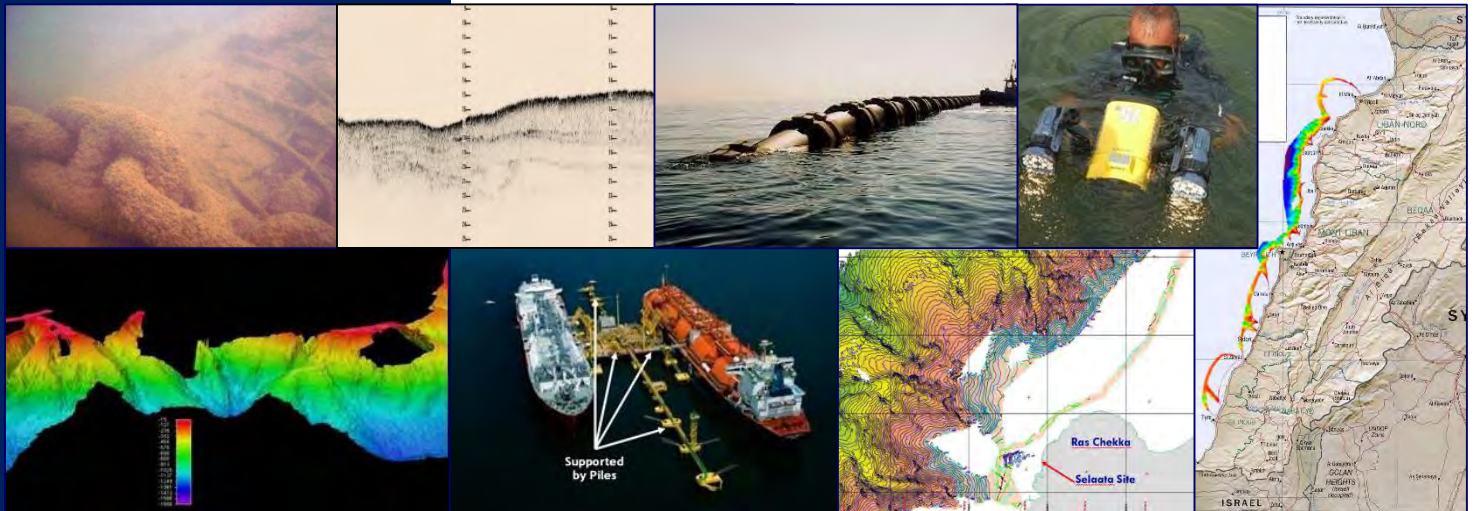
- 🔧 International experience
- 🔧 Ability to mobilize quickly even in remote areas
- 🔧 Working in difficult environments and countries
- 🔧 Innovation and Commitment
- 🔧 Rigorous construction procedures

Marine Services



EDESSA's staff has been involved in some of the most challenging coastal and off-shore engineering projects in Lebanon. Whether the project includes the construction of a breakwater, a sea defense structure, a marina, an **Oil & Gas** project, a **reclamation** project, a **harbor** or a **coastal industrial facility**, our staff has provided numerous types of services to find the optimal solutions for the project siting. Our marine service capabilities are not limited to offshore geotechnical engineering; but include geophysical, design and environmental work as well.

Geophysical surveys typically include bathymetric surveys, seismic reflection and refraction surveys, as well as tide and current measurements. Another aspect of our marine experience includes environmental impact assessments of new facilities, effluent discharges or dredging works.



We are one of the very few companies that employ on a full-time basis environmental and geotechnical accredited diver. We also work with professional and **certified divers** for specific missions.

Sector	Client	Project
Oil and Gas	Poten & Partners	Environmental partner in LNG supply study
	Kellogg Brown & Root	Offshore geophysical surveys
	Tractebel - Suez Group	Multibeam bathymetric Survey - Entire coastline of Lebanon
	Ministry of Energy and Water	Bathymetric survey, subbottom profiling of 9km ² area in Zahrani - diving and current survey
Coastal Developments	Entrecanales	Sand search off the coast of Lebanon
	Bouygues Offshore - Solidere - CDR	Extensive bathymetric, seismic reflection and refraction survey and offshore borehole and CPT investigation of Solidere Reclamation area
	Linord	Supervision of bathymetric, geophysical, CPT and borehole investigation of Northern Beirut Coastline
	Jamil Saab (Tortuga)	Bathymetric, diving survey and marina design
	Private Client	Bathymetric Survey for yacht refitting facility
Outfall	CDR - EIB	Inspection of Dora Outfall including bathymetric survey, sidescan sonar survey, diving survey, ROV survey inside the entire 1,760m of the outfall.
	EuroMed	Evaluation of the Ghadir sewer outfall
	Tabarja-Kfar Yassine Municipality	Bathymetric survey Outfall design

Marine Equipment

REMOTE OPERATED VEHICLE (ROV)

EDESSA has a state-of-the-art Proteus 500 Remote Operated Vehicle (ROV) manufactured by Hydroacoustics Inc. The Proteus 500 represents the latest technology in the exploration, surveillance and protection of underwater environments. The ROV is capable of reaching depths of 150m and can be deployed up to 2km away from the control station based on the 2km tether available.

SUBBOTTOM PROFILER

EDESSA has an EDGETECH 3100 SB-216s subbottom profiler towfish system with 35m of towfish cable that can be deployed upon demand based on the water depth. The SB-216S sub-bottom profiler is able to work at frequency ranges of 2 to 16 kHz. It is capable of penetrating up to 80m in clay (less in coarser sediments). The system is managed by EDGETECH's Discover software. It produces high-resolution imagery of the sub-bottom profile and provided in real-time acoustic mapping of the seabed.

CURRENT METER

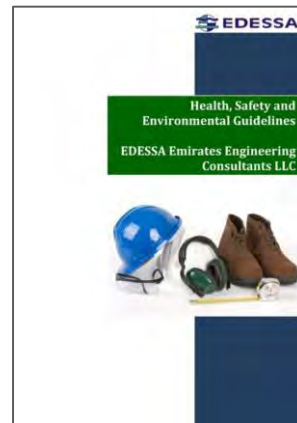
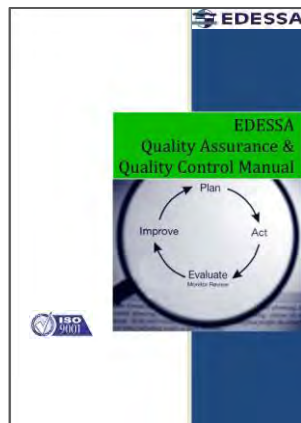
EDESSA has a SonTek Argonaut-MD high precision acoustic Doppler current meter. It is equipped with an internal compass. The readings are automatically corrected for pitch and roll of the unit under the influence of the current. The current meter can be set to record data at very short intervals and its battery life allows the deployment of the units for several months at sea for data acquisition.

ECHOSOUNDER

EDESSA has a Lowrance LCX-16 dual frequency (50 and 200 kHz) echo sounder and an external 12 channel on-the-fly GPS directly linked to the echo sounder. We are able to produce high quality bathymetric surveys, contour maps, 3D models and sections of the seabed.



Our environmental and waste management services are backed up by strict health and safety and quality assurance and quality control programs



QA/QC and HSE

Selected Partners



Prequalified with:



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