

## **Environmental Services**



Environmental Management,  
SEA/IEE/EIA,  
Environmental Audits,  
Pollution Control Engineering,  
Waste Management

# Who we are

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

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

We have conducted hundreds of projects in various environmental and engineering 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 and residential developments, infrastructures, waste management, treatment facilities and natural resources development. 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 general engineering and environmental fields:

## ▪ Environmental Planning

- Strategic Environmental Assessment (SEA),
- Permitting and regulatory compliance,
- Initial Environmental Examination (IEE),
- Environmental impact assessment (EIA),
- Site selection and suitability assessment

## ▪ Environmental Management

- Environmental, Health and Safety audits and monitoring of industrial facilities,
- ISO 14000 EMP
- Corporate environmental Strategies

## ▪ Pollution Control Engineering

- Emissions assessment,
- Industrial process review,
- Wastewater management and treatment,
- Leachate management and treatment,
- Piping design and installation,
- Marine outfall structures

## ▪ Geology and Hydrogeology

- Geological mapping and investigation,
- Groundwater impact assessment,
- Water resources development

## ▪ Waste Management

- Master plan studies,
- Waste generation studies,
- Sorting and pre-treatment,
- Recycling and waste minimization,
- Waste treatment,
- Waste landfilling,
- Medical waste management,
- Industrial and hazardous waste management,
- Construction and demolition (C&D) waste management

## ▪ Environmental Remediation

- Investigation of contaminated sites,
- Contamination dispersion modeling,
- Delineation of contaminated soil and groundwater,
- Remediation of contaminated sites

## ▪ Landfill Design/Construction & Operation Supervision

- Liner containment system,
- Capping system,
- Operating Plans,
- Environmental monitoring plans

# 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
- 🔧 Coordination with the Architects and Designers

## Professional Services

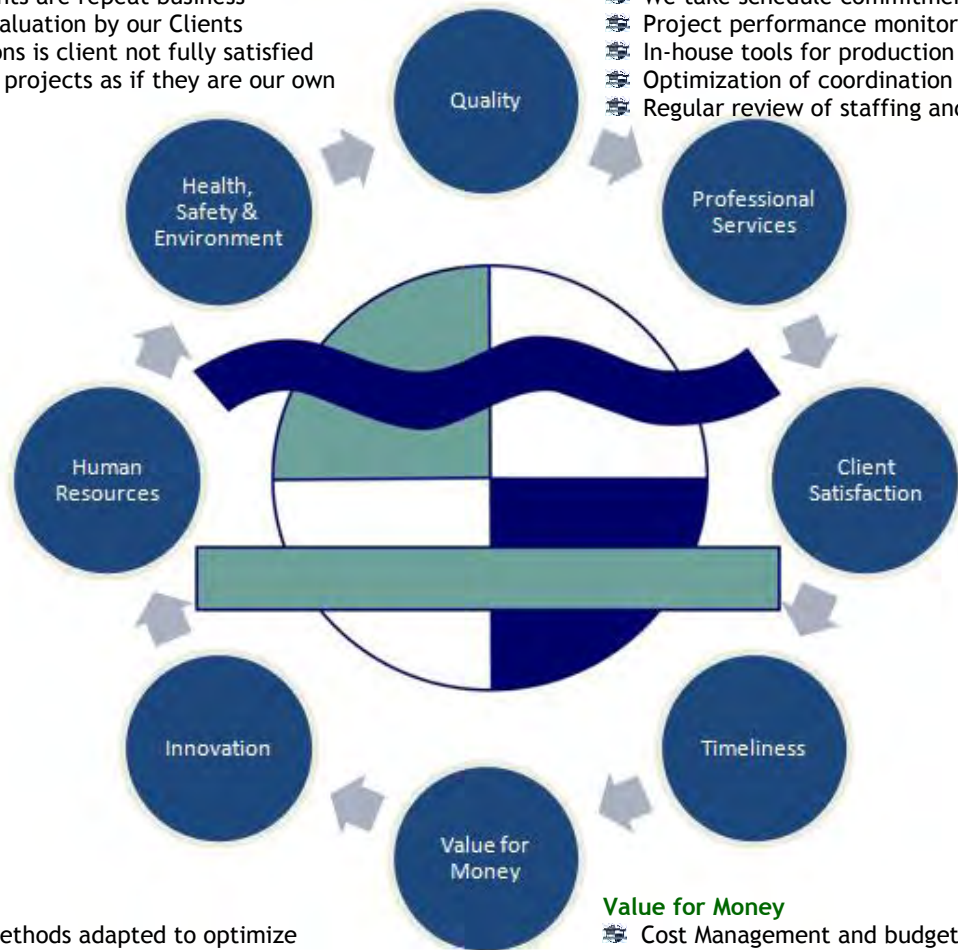
- 🔧 Project organization
- 🔧 Proper supervision with the proper tools
- 🔧 Communication
- 🔧 Daily log of activities
- 🔧 Monitor changes and inform the client promptly
- 🔧 Compliance with international standards
- 🔧 Insurances

## 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
- 🔧 Accredited staff for Green Building Design according to LEED, BREEAM and ESTIDAMA
- 🔧 Numerous environmental assessments of projects throughout the Middle East

# 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



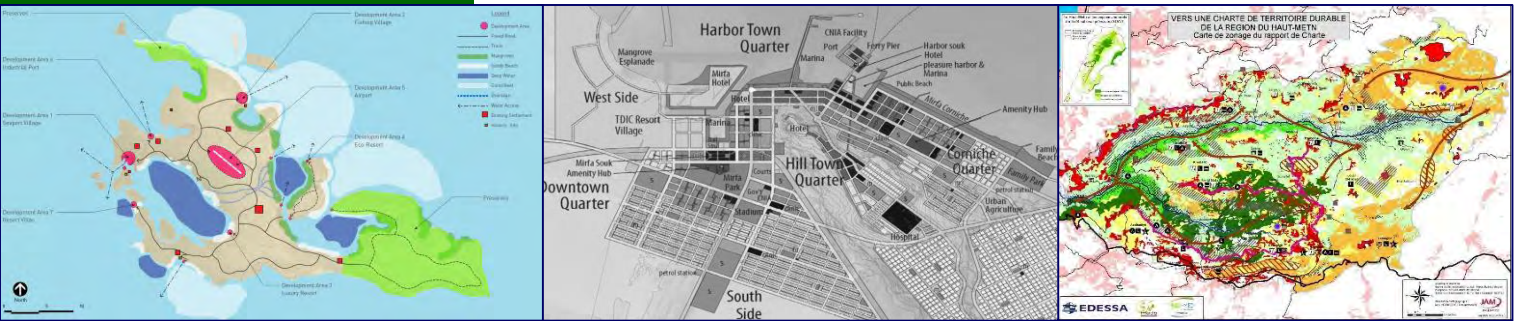
# Environmental Assessment

Environmental assessments (EA) are critical elements in the development and implementation of policies, technologies or specific projects. The stage at which the environmental assessment is done defines the type of EA required. At policy, technology or master plan level, the environmental assessment takes the form of a Strategic Environmental Assessment (SEA) that defines the environmental framework under which a policy, technology or master plan should be tackled.

SEA deal with general issues. Moreover, provided that SEA is undertaken prior to major project-level decisions, public administrations can propose policy-level alternatives and program-wide mitigation plans, thereby reducing the resources required for developing project specific mitigation plans.

## Strategic Environmental Assessments

- SEA of the Mirfa Master Plan, UAE - Abu Dhabi Urban Planning Council
- Environmental Master Plan of Dahlak Island - Qatari Diar
- Sustainable Territory Environmental Charter for the Upper Metn Region - Région Ile-de-France



## IEEs and EIAs

Further into the development stage of a project, the environmental assessment becomes more specific and focused and takes the form of an Environmental Impact Assessment (EIA) in which specific recommendations can be made based on specific design developments. Once a project is implemented, environmental evaluation of existing conditions take the form of an environmental audit identifying the problems already occurring and proposing remedial and corrective measures in order to comply with environmental legislations or good practices.

Industry	Typical Clients	
Oil and Gas	Al Jazeera Consultants	Oxfam GB
Power	Averda	Plus Properties
Water	Caroni Investment	Poten & Partners
Wastewater	CGI Saradar Group	Qatari Diar
Industrial Projects	Dergham & Hamdar	Sakr Group
Waste	Kellogg Brown & Root	Serene Investment
Treatment/Disposal	Kingdom Hotels	Sithe Energy
Airport	Nigerian Ministry of Environment	Skydive Dubai
Marine Projects		South for Construction
Residential Projects		
Universities		

Impact Evaluation	Range	
Positive/Negative	Positive	Negative
Directness	Direct	Indirect
Extent/Location	Limited	Large
Immediacy	Immediate	Cumulative
Permanence	Short Term	Long Term
Probability	Unlikely	Frequently
Significance	Nuisance	Loss of Life



# Environmental Audits

Environmental Compliance Audits have been conducted for numerous industries and international donors such as the **Plan Bleu** (A Division of the **World Bank**). Audits also included health, safety and environmental evaluation of facilities operations.



Industry	Typical Clients
Cable Manufacturing	Alcatel
Cardboard manufacturer	Al-Sharq Sweets
Cement facilities	Arab Printing Press
Cosmetics manufacturer	Boulos Group
Equipment	Bypec-Coral
Gas station	Clos St. Thomas
LNG terminal	Cosma d'Or
Mattress manufacturing	Eavel Paints
Motorcycles	Gemayel Frères
Oil pipeline installation	Ghaddar Industry
Paint manufacturer	Joseph B. Amatoury
Paper recycling	Kellogg Brown & Root
Printing press	Liban Cables
Sweets manufacturer	Librasil
Water heater manufacturer	Qatari Diar
Winery	Technica Automation

# Pollution Control Engineering

The company's experience encompasses all aspects of pollution control engineering for waste management, wastewater management and air emissions. These range from process engineering, emission minimization and recycling to the design and implementation of protection/remediation programs for air, soil, surface water and groundwater resources. Below are some project examples.

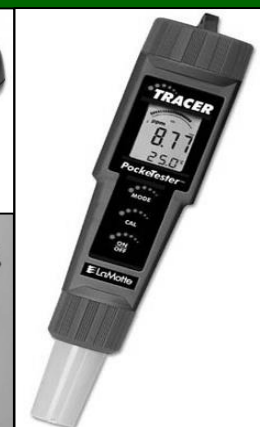
Wastewater	Wastewater treatment plant	Mercy Corps
	Leachate treatment plant	Sukomi
	Dora Outfall	CDR/EIB
	Ghadir Outfall	Euromed
	Tabarja Outfall	Municipalities
Air Quality	Indoor air quality assessment	Synopsys
	Outdoor air monitoring	Skydive Dubai
	Air monitoring in Chekka	Gboard



# Monitoring Equipment

EDESSA has invested over the years in a number of field and laboratory equipment for various applications including air monitoring, water and soil testing. These include:

- EVM-7 multi-parameter air monitoring logger
- Calcium, Magnesium & Hardness test kit
- pH, conductivity & temperature probe
- Kestrel 4500 weather meter
- TES-1350 noise meter
- SMART3 Colorimeter
- LaMotte Tracer





# Waste Management

EDESSA provides integrated waste management, engineering, design, environmental and regulatory support services for the successful management of waste. EDESSA's staff has one of the most comprehensive experience portfolios in the waste management sector. Waste management projects include all aspects from **waste characterization/quantification to sorting, recycling** and **reuse** studies and full-scale treatment using various technologies such as composting, waste-to-energy, gasification, bioremediation and physical and chemical treatment of special waste.



## Waste Studies/ Master Plans

Our projects range from **Master plan studies, feasibility studies and financial models** to advise on the best ways to tackle this difficult market. We get involved in the early stages of assessment, quantification and characterization of the waste stream. We advise on **waste collection** services and **equipment**. Waste studies have been conducted by EDESSA for **municipal waste, industrial** and **hazardous waste** as well as for **healthcare** waste.

- Solid Waste Management Audits of 41 Municipalities | **UNICEF**
- Baghdad Solid Waste Master Plan | **Coalition Provisional Authorities**
- Byblos and Blat Solid Waste Recycling Master Plan | **MED-3R**
- Healthcare Waste Master Plan Abidjan-Lagos Corridor | **World Bank**
- Qatar Solid Waste Collection Study | **Gulf Waste Management**



## Selected Clients





We have been involved in many Integrated Solid Waste Management Facilities including:

- Sharjah Waste-to-Energy Plant | **Chinook**
- Hbaline ISWMF | **MAN Enterprise**
- Saida ISWMF | **Office of the Prime Minister**
- Cotonou Transfer Stations | **The World Bank**
- Por Harcourt ISWMF | **Nigeria Federal Ministry of Environment**
- Abu Dhabi ISWMF | **Veolia Environnement – Al Jaber**

## Integrated Solid Waste Management Facilities (ISWMF)

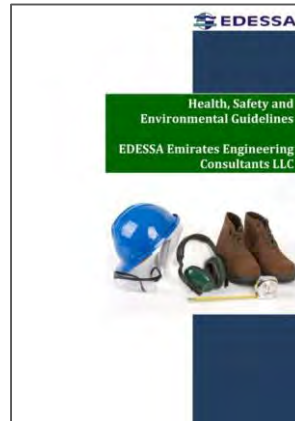
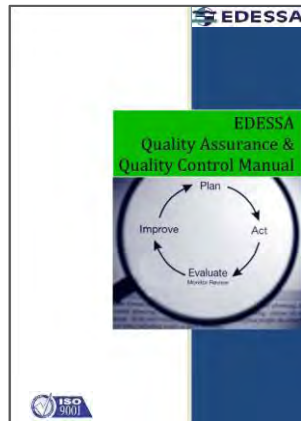


Numerous projects dealing with landfills and remediation of existing dump sites have been completed by our staff in Lebanon, the Middle East, Africa, Europe and the United States.

- **Dhafra hazardous waste landfill, UAE | Lavajet**
- **Bsalim and Naameh landfills, Lebanon | Sukomi**
- **Borj Hammoud Dump Site Remediation, Lebanon | Linord**
- **Normandy Dump Site Remediation, Lebanon | Solidere/CDR**
- **Bouira & Boumerdes landfills, Algeria | EIB**
- **C&D Waste landfill, Sir Bani Yas Island, UAE | Thiess**
- **Rehabilitation and Closure of Marrakech Dump Site | Averda**

## Landfill Engineering

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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