



MARINE OUTFALLS

SEATEC SARL

We understand the language of Waves

LEBANON

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SUPERVISING EXPERTS AND TECHNICAL ENGINEERING CONSULTANTS SINCE 2000

/ ABOUT US /

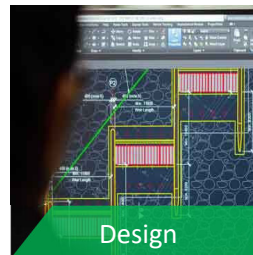
SEATEC provides its clients with design and supervision services in coastal and port engineering, covering surveying, site investigation, tender and detailed design, numerical modeling, feasibility and EIA studies, permitting, construction planning, management and supervision.

Serving public as well as private sectors in Lebanon and abroad since 2000, **SEATEC** is dedicated to give its clients the best engineering assistance.

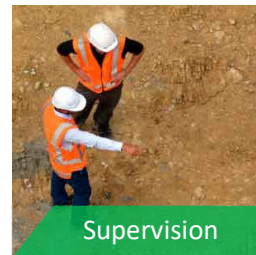


OUR SERVICES

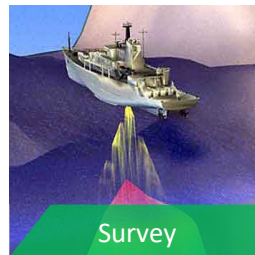
*SEATEC IS COMMITTED TO PROVIDING ITS CLIENTS
WITH THE BEST ENGINEERING SERVICES COVERING THE FOLLOWING:*



Design



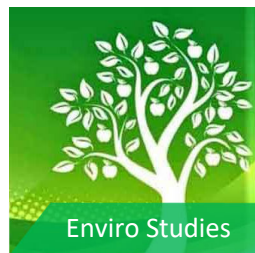
Supervision



Survey



Marine Outfalls



Enviro Studies

Marine Outfalls – SEATEC Scope

• DESIGN

- Conceptual, Tender and detailed design
 - o Overall layout
 - o Marine protection
 - o MEP
 - o Feasibility studies
 - o Detailed drawings
 - o Tender documents, technical specification and BOQ
 - o Assistance of Client in bidding procedures
- Modeling
 - o Numerical modeling of offshore and nearshore waves
 - o Numerical modeling of diffused waters
- EIA / Permitting
 - o EIA studies
 - o Permits follow up

• SURVEY

- Topographic survey
- Bathymetric survey (multi beams echo sounding)
- Underwater inspection (diving, underwater pics and videos, sampling, assessment of existing structures conditions)
- Geotechnical investigation: Follow up on site of drilling and sampling operations (onshore and offshore)

• SITE SUPERVISION

- Follow up by SEATEC supervision team of works execution on site (daily presence)
- Instructions for contractors
- Inspection
- Approval of contractor payments

MPWT	: Ministry of Public Works and Transport
DGLMT	: Directorate General of Land and Marine Transport
DGRB	: Directorate General of Roads and Buildings
POTA	: Port Of Tripoli Authority
EDL	: Electricité Du Liban





Marine Outfalls

MARINE OUTFALLS

- **HDPE SEA OUTFALL AT TRIPOLI (LEBANON – CLIENT : POTA)**
 - Assistance of OEPT port for the installation of the outfall in the vicinity of the Port. (2008 - 2009)
- **MARINE PROTECTION OF THE OUTFALL FOR WWTP AT CKEKKA (LEBANON – CLIENT : WS ENG)**
 - Design of the outfall marine protection (L=600m). (2003 - 2004)
- **MARINE PROTECTION OF THE OUTFALL FOR WWTP AT BATROUN (LEBANON – CLIENT : WS ENG)**
 - Design of the outfall protection (L=450m). (2003 - 2004)
- **MARINE PROTECTION FOR THE OUTFALL FOR WWTP AT BYBLOS (LEBANON – CLIENT : WS ENG)**
 - Design of the outfall marine protection (L=450m). (2006 - 2007 - 2008)
- **WATERFRONT CITY SEA OUTFALL (LEBANON – CLIENT : MAJID AL FUTTAYM PROPERTIES / JOSEPH KHOURY)**
 - Detailed design of HDPE sea outfall (L=1000m) and a WWTP plant (Diffusion modelling - Maritime protection - Decree preparation.). (2012 - 2013)
- **OUTFALL AT RAMLET LE BAYDA (LEBANON – CLIENT : BEIRUT MUNICIPALITY)**
 - Design (Bathymetric survey, hydraulic and maritime design, marine protection). (2019 - 2020)
- **OUTFALL AT AIN MRESISSE (LEBANON – CLIENT : BEIRUT MUNICIPALITY)**
 - Design (Bathymetric survey, hydraulic and maritime design, marine protection). (2019 - 2020)
- **TYR SEA OUTFALL (LEBANON – CLIENT : RESEARCH CONSORZIO STABILE JV RESEARCH SPA / DANASH CO)**
 - Detailed design (Bathymetric survey, hydraulic and maritime design, marine protection). (2014 - 2015)



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THE END

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