

**SEATEC** SARL

*We understand the language of Waves*



## LEBANON

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## ***SUPERVISING EXPERTS AND TECHNICAL ENGINEERING CONSULTANTS SINCE 2000***

### **/ ABOUT US /**

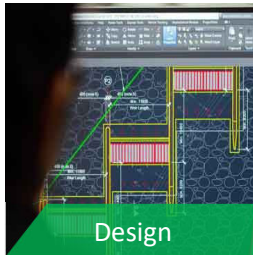
**SEATEC** provides its clients with design and supervision services in coastal and port engineering, covering surveying, site investigation, tender and detailed design, numerical modeling, feasibility and EIA studies, permitting, construction planning, management and supervision.

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

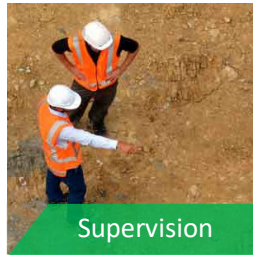


## OUR SERVICES

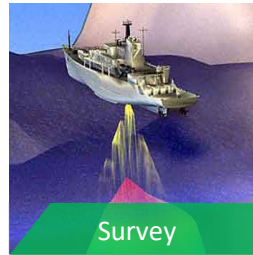
SEATEC IS COMMITTED TO PROVIDING ITS CLIENTS  
WITH THE BEST ENGINEERING SERVICES COVERING THE FOLLOWING:



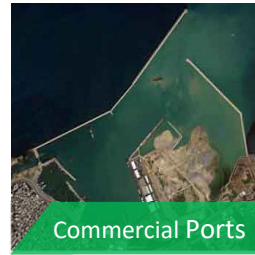
Design



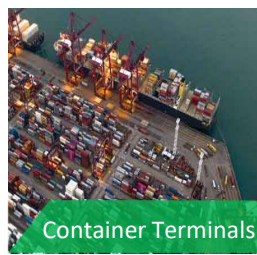
Supervision



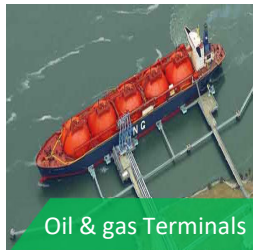
Survey



Commercial Ports



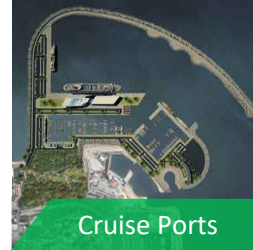
Container Terminals



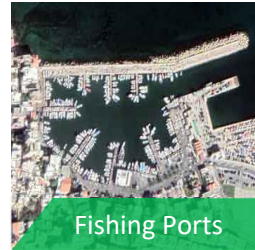
Oil & gas Terminals



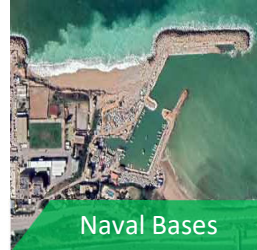
Industrial Ports



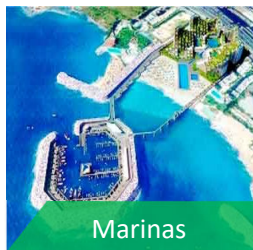
Cruise Ports



Fishing Ports



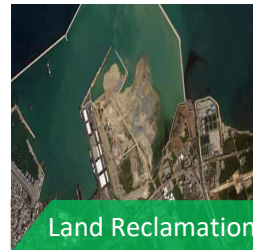
Naval Bases



Marinas



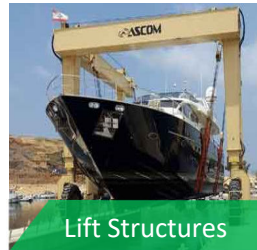
Coastal Protections



Land Reclamation



Waterfronts



Lift Structures



Marine Outfalls



Subsea pipelines



Dredging

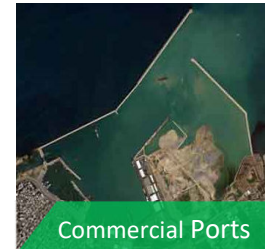


Mooring structures



EIA





Commercial Ports

## Commercial Ports

### • TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : OEPT)

- Design of Land reclamation areas using demolition of Nahr El Bared Buildings and Supervision of works. (2008 - 2009)
- Design and Supervision of Works of Water supply system for ships: GRP pipes installation, trenching, digital watermeters, pumps, data transfer by radar to OEPT headquarter. (2009 - 2010)
- Design of a breasting dolphin for the Pilot tug and Supervision of works. (2009)
- Design and works supervision of quaywall N7 extension @-8.75m for 10000 DWT vessels (Precast Concrete blocks, capping beams, land reclamation, RC platforms, 100T bollards and fender installation.). (2009 - 2010)
- Design of a passenger quaywall @-8.00m. (2009)
- Design and Supervision of Dredging works and debris removal along quaywalls. (2010 - 2011)
- Design of breasting dolphins for 5000 DWT ships and basin dredging. (2010)
- Design and Supervision of 2 breasting dolphins (piles). (2010)
- Design of passenger terminal adjacent to main breakwater (quay wall @-10.00m). (2011)
- Topographic and bathymetric survey of port basins for the economical zone. (2015)
- Design of a quaywall and platform for scrap works. (2015)
- Design of dredging works for entrance channel, basins and quay walls. (2015 - 2016 - 2021: Client CMA CGM)
- Design and Supervision of 9 mooring piles for ships berthing. (2017)
- Design of floating dock. (2017 - 2021)
- DBOT tender documents grain silos 120,000T. (2021)
- Design review of the container quay wall @-15.00m (piles / sheetpiles). (2021 : Client CMA CGM)

### • NAQOURA COMMERCIAL PORT (LEBANON – CLIENT : DGLMT)

Preliminary Design of a container Terminal / general cargo port. (Main breakwater L=2300m, Secondary breakwater L=11 00m, Main quaywall @-15.00m, L=900m for container terminal, Main quaywall @-15.00m, L=700m for general cargo / mineral terminal, platforms with all related facilities. (2018)

### • RECNR (LEBANON - CLIENT : Chamber of Commerce of Tripoli and North Lebanon)

Conceptual Design of a Land reclamation from Tripoli to Klayaat at Northern Lebanon, covering an area of 11,700,000m<sup>2</sup> along a coastal length of 20km, including the extension of the Tripoli port container terminal (Main quaywall @15.00m, L=1000m for container terminal (1,750,000m<sup>2</sup>), a LNG / oil and gas jetties/ zone, industrial, general cargo and mineral terminals zone, and the extension of the Klayaat Airport. (2019)

### • MIXED USE FACILITY (QATAR)

Technical Consultancy, BOQ pricing and method statement for contractor. (2007)

### • GUARBEQUE QUAY (FRANCE)

Preliminary Design drawings of a pile supported quay wall with French Consultant. (2005)

### • JICHY QUAYWALL (CONGO)

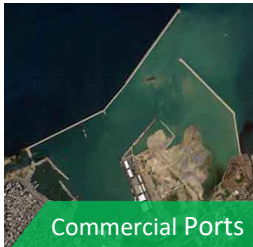
Design of pile/sheetpile quaywall @-13.00m (L=450m) for 40.000 DWT ships. (2014 -2015)

### • RTA Facilities (UAE - Dubai )

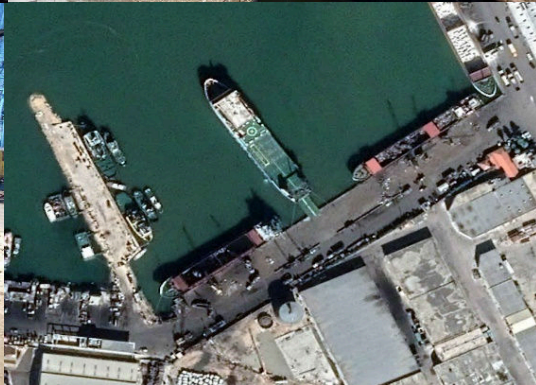
Design of RTA facilities for water taxis at Dubai (Special hoist, quaywalls, platforms). (2014)



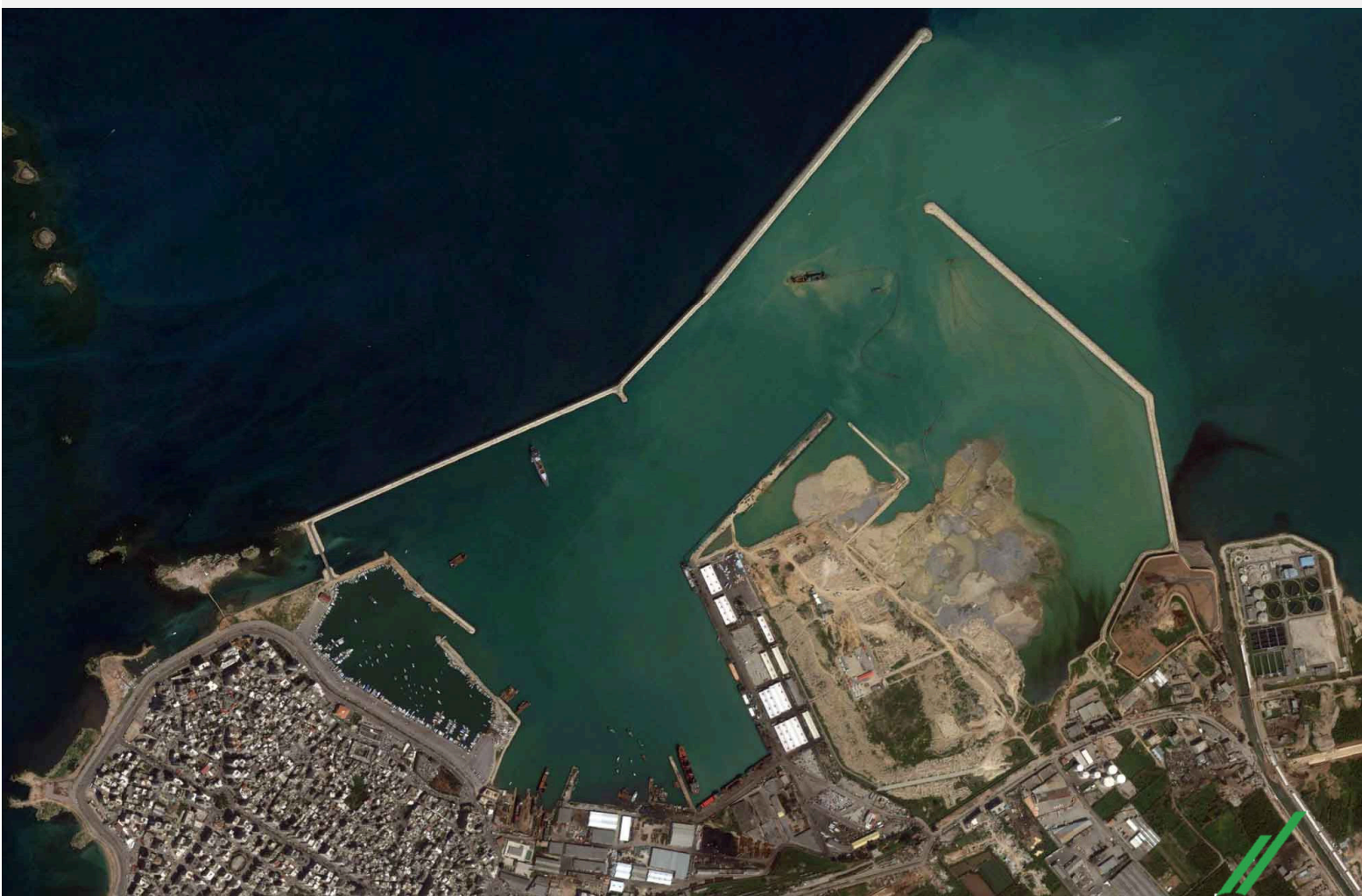




Commercial Ports



TRIPOLI COMMERCIAL PORT





## Cruise Ports

### • JOUNIEH CRUISE PORT (LEBANON – CLIENT : DGLMT)

- Conceptual Design of a Cruise port. (2012 - 2013 - 2014)
- Detailed design of the Cruise Port (Main breakwater L=2200m, Secondary breakwater L=430m, main quay wall @ -12,00m, L=550m for mega cruise ships (LOA=360m), 160,000m<sup>2</sup> of platforms with all related facilities, 2 marinas (450 berths) a terminal building for 5000 passengers.). (2016 - 2017)
- Design and Supervision of Works for the phase 1: Land reclamation, Accropodes blocks casting. (2017 - 2018)
- Design of execution works for phase 2 (Main breakwater works). (2017)
- Works supervision of phase 1. (2017 - 2019)
- Works supervision of phase 2. (2018 - 2021)
- Design of execution works for phase 3 (Main breakwater works). (2019)



JOUNIEH CRUISE PORT







## Oil and Gas Terminals

- **RECNR (LEBANON – CLIENT : Chamber of Commerce, Industry, Agriculture of Tripoli and North Lebanon)**
  - Conceptual Design of a Land reclamation from Tripoli to Klayaat at Northern Lebanon, covering an area of 11,700,000m<sup>2</sup> along a coastal length of 20km, including the extension of the Tripoli port container terminal (Main quay wall @ -15.00m, L=1000m, container terminal platforms (1,750,000m<sup>2</sup>), a LNG / oil and gas jetties / zone, industrial, general cargo and mineral terminals zone, and the extension of the Klayaat Airport. (2019 - 2021)
- **COGICO TERMINAL (LEBANON – CLIENT : BBE Power ltd)**
  - Design of a new tanker berth @ -14.00m, L=450m (extension of the existing quay wall). (2017)
  - Extension of the breakwater with Accropodes blocks armor layer. (2017 - 2021 )
- **MUTW FUEL JETTY (LEBANON – CLIENT : MUTW / DGLMT)**
  - Conceptual design of fuel jetty (L=660m) / 2 berths @ -10,00m and 2 berths @ -20,00m for 4 fuel / oil carriers at Dora. (2018)



MUTW AT DORA





## INDUSTRIAL PORTS

### • REC NOR (LEBANON – CLIENT : Chamber of Commerce, Industry, Agriculture of Tripoli and North Lebanon)

- Conceptual Design of a Land reclamation from Tripoli to Klayaat at Northern Lebanon, covering an area of 11,700,000m<sup>2</sup> along a coastal length of 20km, including the extension of the Tripoli port container terminal (Main quaywall @ -15.00m, L=1000m for container terminal (1,750,000m<sup>2</sup>), a LNG / oil and gas jetties/ zone, industrial, general cargo and mineral terminals zone, and the extension of the Klayaat Airport. (2019)

### • KFOURY METALS CO. PORT (SELAATA ILEBANON – CLIENT : KFOURY METALS CO.)

- Design of an unsheltered quay wall @ -10.00m (L=50m) and 7.00m (L=200m) (Underwater concrete blocks @ -14.00m, underwater blasting and dredging, R.C. platforms. (2006 - 2007 - 2008 - 2009).
- Supervision of execution works. (2008 - 2009 - 2010 - 2011 - 2012 - 2013)

### • BASIN OF ZOUK POWER STATION (LEBANON – CLIENT : EDL)

- Bathymetric survey of site and design of basin dredging. (2009 - 2013 - 2017 - 2018)
- Design of main breakwater rehabilitation works (Accropodes blocks, RC crown walls..). (2017)

### • DEMCO STEEL PORT (LEBANON – CLIENT : DEMCO STEEL)

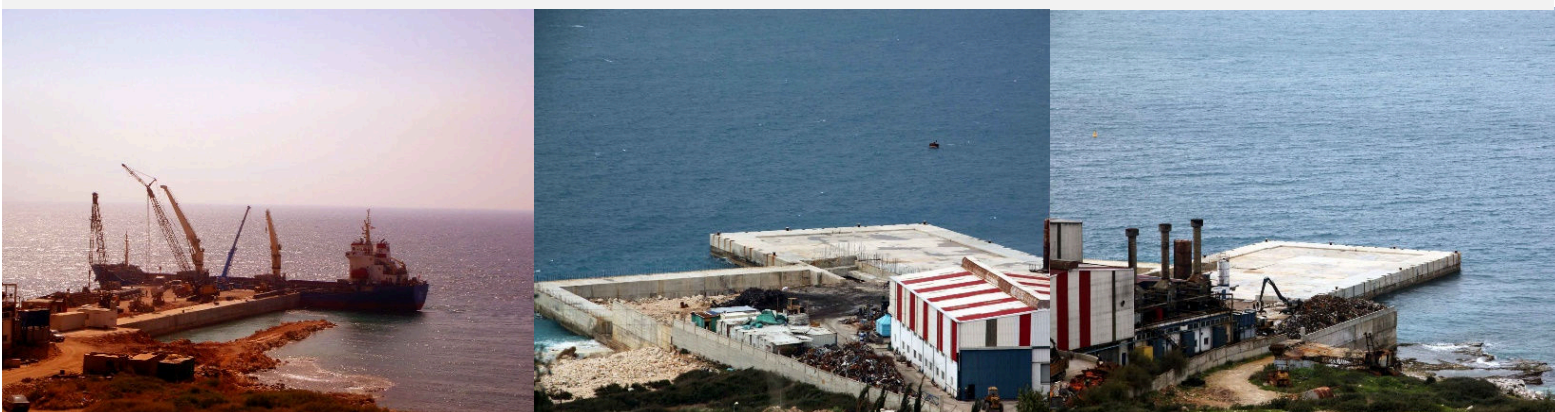
- Design of a new port with a main quay wall. (2012 - 2017)

### • BASIN OF JIEH POWER STATION (LEBANON – CLIENT : EDL)

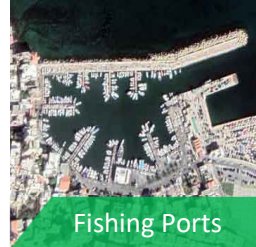
- Bathymetric survey of site, design and Supervision of basin dredging. (2009 - 2010 - 2011 - 2012)



KFOURY METALS CO. PORT







Fishing Ports

## Fishing Ports

### • AARIDA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)

- Bathymetric survey of site. (2010)
- Master plan Design. (2010)
- Bathymetric survey of Nahr-el-Kebir and design for river dredging. (2011 ).
- Design and Supervision of River Bank protection with sloped rocky protection, R.C. platforms and dredging of river entrance. (2012 - 2013)
- Design of a new fishing Port at the vicinity of the river (breakwaters, quay walls, platforms.). (2012)
- Design and Supervision of dredging works at river entrance. (2015 - 2016 - 2017)

### • CHEIKH ZENNAD FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)

- Bathymetric survey of site. (2000)

### • RAMKINE ISLAND AT TRIPOLI (LEBANON – CLIENT : MPWT / DGLMT)

- Design of lighthouse rehabilitation and service quay. (2008)

### • TRIPOLI FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)

- Overall master plan. (2011)
- Design of quaywalls @-3.00m, pontoons, platforms. (2016 - 2017)

### • HIRAN FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)

- Overall master plan. (2011)
- Design of a new fishing port (breakwater, quay walls.). (2017)

### • GROUYNE & QUAYWALL AT THE SOUTHERN SANDY BEACH AT TRIPOLI (LEBANON – CLIENT : DGLMT)

- Design of a groyne (with rocky protections) and a quay wall @-3.00m with precast concrete blocks. (2006)

### • KALAMOUN FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)

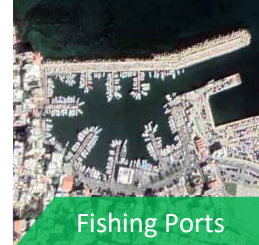
- Design for basin dredging and breakwater extension. (2008)
- Design for basin dredging. (2008 - 2010).

### • CHEKKA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)

- Design of precast concrete quaywalls, rocks protection, land reclamation, basin dredging, fishermen rooms... as a part of the first phase rehabilitation works of the existing port. (2006 - 2007)
- Supervision of execution works (Phase 1). (2008)
- Design of precast concrete quay walls, rocks protection, land reclamation, basin dredging, fishermen rooms as a part of the second phase rehabilitation works of the existing port. (2008 - 2009)
- Supervision of execution Works (Phase 2). (2010 - 2011)
- Design and Supervision of entrance Dredging. (2012)
- Design of Accropodes protection for the port entrance. (2012)
- Design of concrete pontoon for entrance protection. (2017)







• **HERY FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Master plan design. (2009)

• **BATROUN FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design for basin dredging. (2007-2008)
- Design of rehabilitation works for platforms and internal basin dredging and Supervision of execution works. (2008)

• **MARINE SCHOOL AT BATROUN (LEBANON – CLIENT : MPWT / DGLMT)**

- Design for land reclamation and coastal protection of Marine School at Batroun (Decree). (2007)

• **BERBARA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Preliminary design of existing breakwater rehabilitation, quay wall extension, retaining walls...(2006)
- Design of basin dredging (2007) and Works supervision in (2008).
- Design of existing concrete breakwater rehabilitation, quaywall extension, waves attenuator, retaining walls...(2008-2009) and Supervision of execution works. (2010)
- Design and Supervision of installation of 48 Accropodes blocks 16m3. (2010)
- Design of WWTP, fishermen rooms, R.C. platforms. (2014)

• **AMCHIT FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of quay walls, platforms, fishermen rooms (2006 - 2007) and Supervision of execution Works. (2008)
- Design of rehabilitation works for main breakwater (with Accropodes blocks and new RC crown wall, underwater concrete quay walls, lighting and water supply, inner basin dredging). (2012)
- Supervision of execution Works. (2012 - 2013 - 2014)

• **BYBLOS FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Bathymetric surveys. (2003)
- Design of extension and rehabilitation works - low crested breakwater: Accropodes armor layer, crown wall, lighting and water supply, basin dredging, rehabilitation of damaged historical sea wall. (2010 – 2011 – 2012)
- Design of submerged breakwater variant. (2014)
- Design of rehabilitation works of the old port (quay walls, platforms, lighting and water supply, basin dredging). (2015)

• **HALATE FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

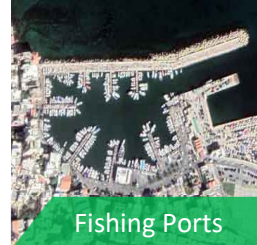
- Design of master plan. (2010 - 2011)
- Design of a new Fishing Port (breakwater, quay walls, platforms, lighting and water supply, fishermen rooms). (2016)
- Design of the first phase of the main breakwater works (Accropodes blocks, dredging.). (2017)

• **DORA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design for basin dredging. (2007)
- Design and Supervision of Basin dredging. (2008 - 2010 - 2012)
- Design of Main breakwater extension. (2010)
- Design and Supervision of complete rehabilitation works (1200m of new quay walls and piers, rocky protection at entrance, new fishermen rooms, new fish market, new fishermen syndicate headquarter, lighting and water supply, slipways, reclaimed areas, RC seawall and platforms, hoist). (2012 - 2013 - 2014 - 2015 - 2016 - 2017)
- Design of a Fishing Port. (2017)







Fishing Ports

• **JOUNIEH FISHING PORT (LEBANON – CLIENT : DGLMT)**

- Design and Supervision of basin dredging. (2008)

• **DBAYE FISHING PORT (LEBANON – CLIENT : DGLMT)**

- Bathymetric surveys of basin. (2003)
- Design of basin dredging. (2009)

• **DAR EL MREISSE FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of Main entrance Protection using Accropodes blocks. (2008 - 2009)
- Supervision of Execution Works. (2009)
- Overall mass plan of the new port (Vertical concrete breakwater and Accropodes blocks). (2012)
- Design of the first phase of the breakwater works (Underwater concrete blocks with RC walls, platforms.). (2017)

• **MANARA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Detailed Design of a new Fishing Port (Breakwater, quaywalls, platforms, fishermen rooms). (2014)

• **DALIEH FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of new cranes foundations and slipway rehabilitation works. (2008). Works executed in (2008)
- Design of Boats parking structure and port rehabilitation works. (2009 – 2010).
- Design and Supervision of a new port (new main breakwater with Accropodes armoring, quaywalls, slipway, Fishermen rooms, Fishermen syndicate building, lighting and water supply, basin dredging, slipway...). (2011 - .... - 2017)

• **HANTOUCH FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of temporary protection using Accropodes concrete blocks with basin dredging. (2008 - 2009)
- Design and master plan of a new Port. (2008 - 2009 - 2010)

• **OUZAI FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- BOQ and method statements for steel and precast concrete pontoons. (2006)
- Design of Basin dredging (2009 - 2010) and Supervision of dredging Works. (2010)

• **SAIDA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of works related to the basin dredging, fishermen rooms and waste water treatment system rehabilitation, facilities for tourists. (2004 - 2006). Works executed in (2006)

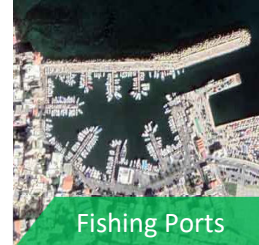
• **SARAFAND FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Bathymetric surveys. (2003)
- Design of Basin Dredging. (2009)
- Design and Supervision of basin dredging. (2010)

• **TYR FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of quay walls, pontoons. (2006 - 2007).
- Design of basin dredging and opening of existing conducts. (2008)
- Design of rehabilitation works related to damaged concrete breakwater head. (2008 - 2009)
- Design and Supervision of execution works related to the complete rehabilitation of the port: New precast concrete quay walls (L=260m), RC platforms, piers, basin dredging, existing breakwater rehabilitation with precast concrete Accropodes blocks armoring and new RC crown wall. (2010 - 2011 - 2012)





Fishing Ports

• **NAQOURA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**

- Design of basin dredging. (2008). Works executed in (2009)
- Design of 5T boat winch. (2008). Works executed in (2009)
- Overall master plan. (2011)
- Design of a new Fishing port (main breakwater with Accropodes armor, quay walls, RC platforms, basin dredging, fishermen rooms). (2014)

• **UMM SUQEIM 1 FISHING PORT (UAE – CLIENT : NAKHEEL – CLIENT : MEI)**

- Design of marine infrastructure (Two variants with rocks armoring and precast concrete Accropodes blocks and a third variant based on caissons solution). (2004)

• **UMM SUQEIM 2 FISHING PORT (UAE - CLIENT : NAKHEEL – CLIENT : MEI)**

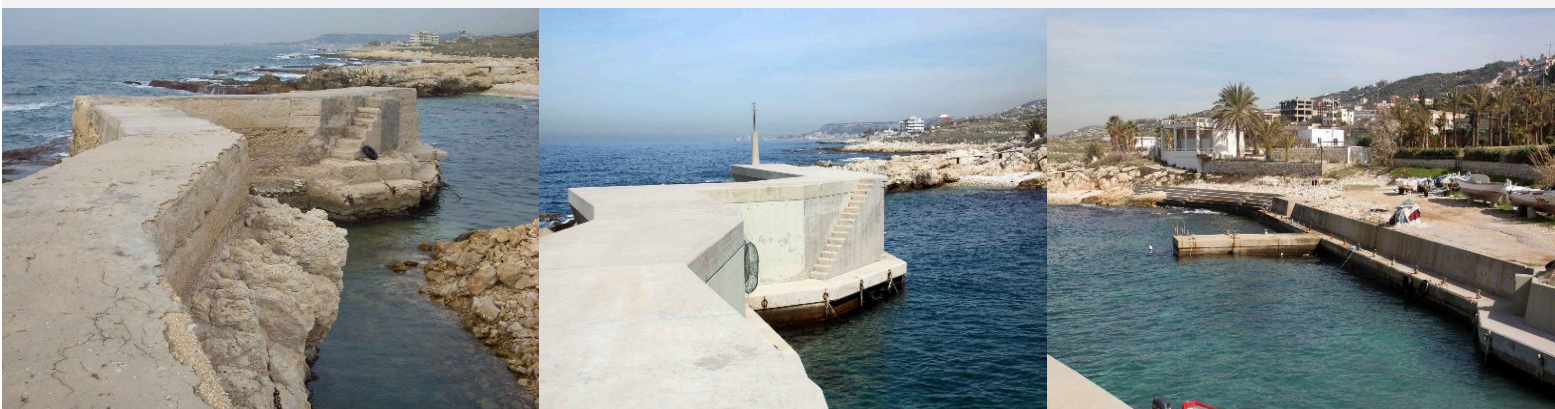
- Design of marine infrastructure (Two variants with rocks armoring and precast concrete Accropodes blocks and a third variant based on caissons solution). (2004 - 2005)

• **JUMEIRAH FISHING PORT (UAE - CLIENT : NAKHEEL – CLIENT : MEI)**

Design of marine infrastructure (Two variants with rocks armoring and precast concrete Accropodes blocks and a third variant based on caissons solution). (2004 - 2005)



CHEKKA FISHING PORT

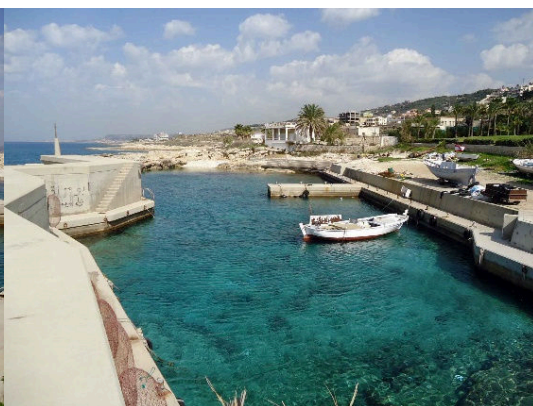


BERBARA FISHING PORT

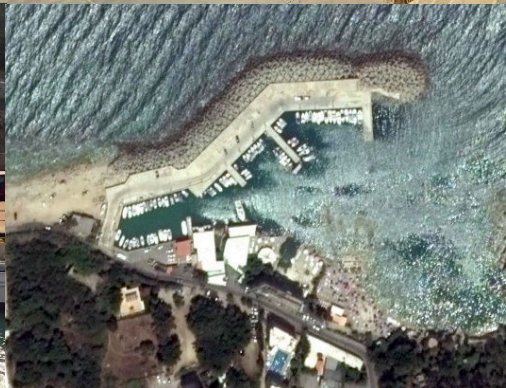
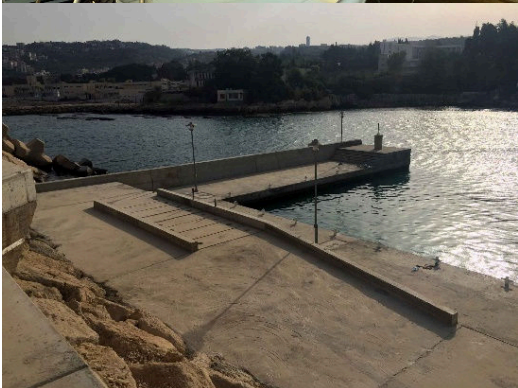
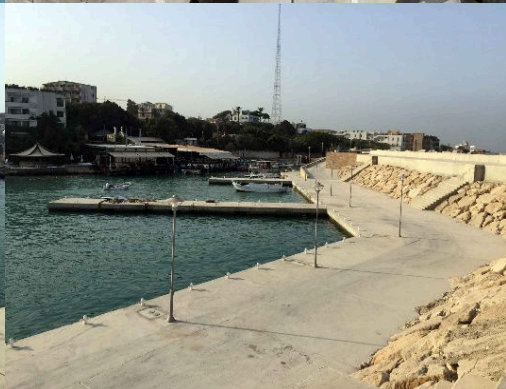
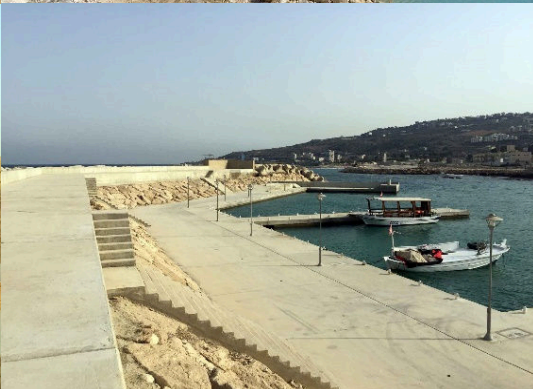
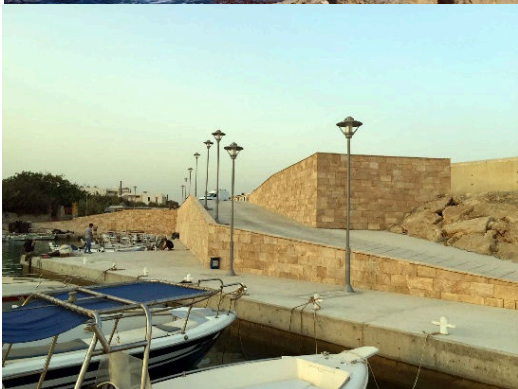
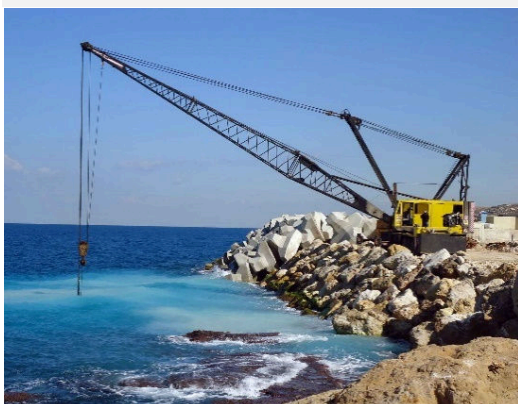




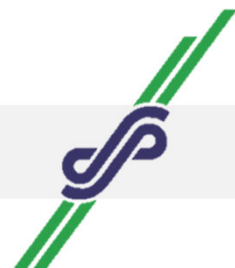
Fishing Ports



BERBARA FISHING PORT



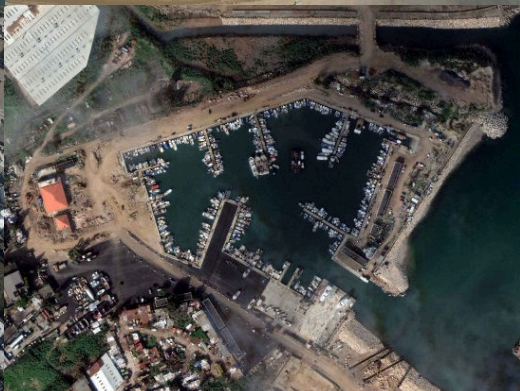
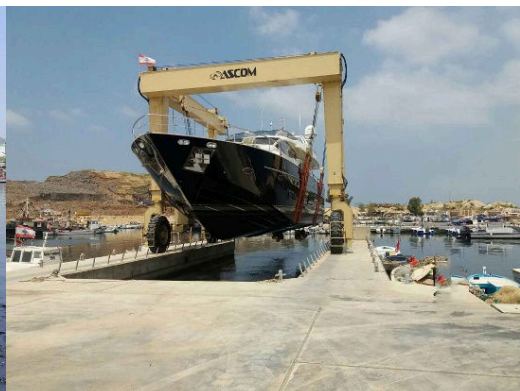
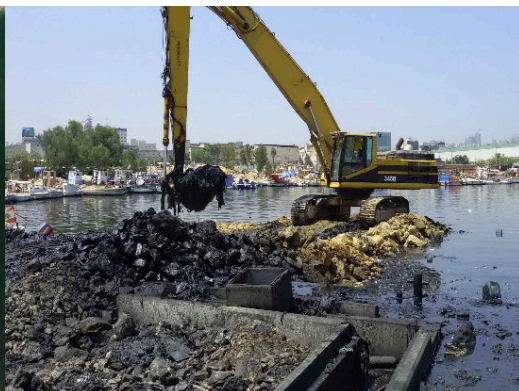
AMCHIT FISHING PORT







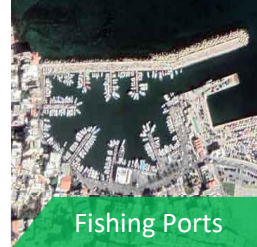
Fishing Ports



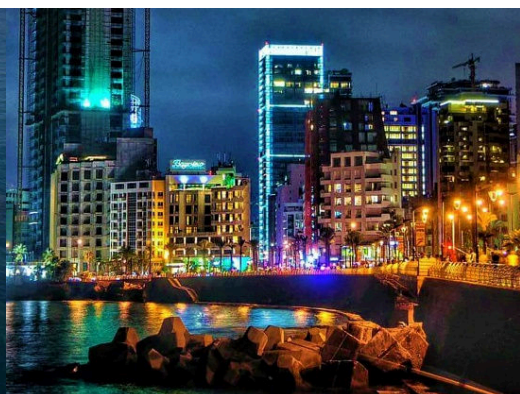
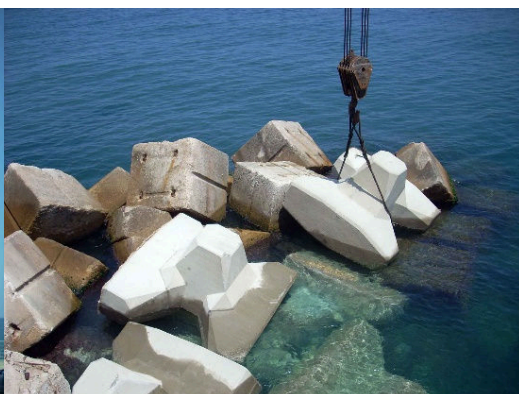
DORA FISHING PORT



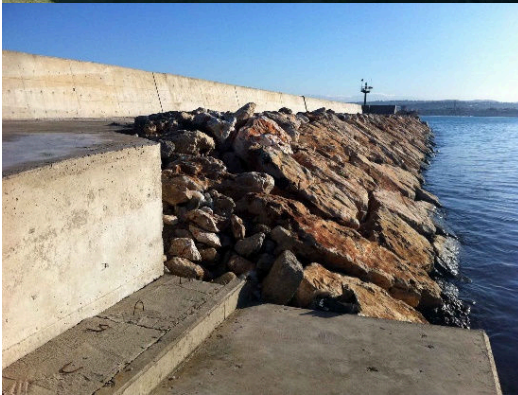
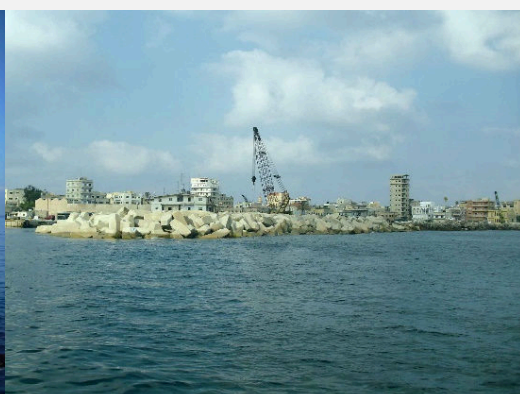
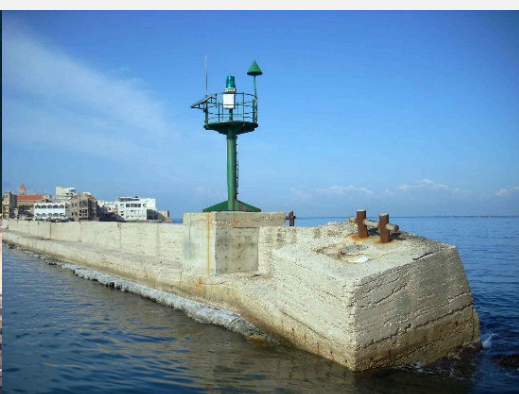
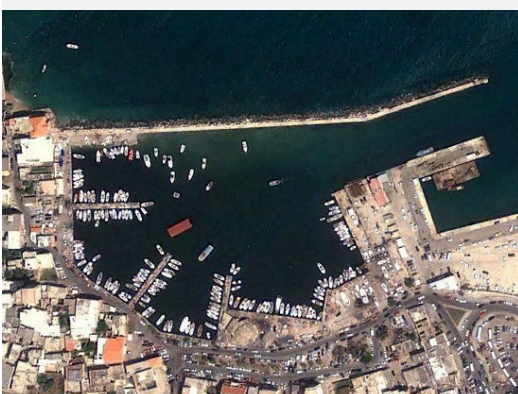




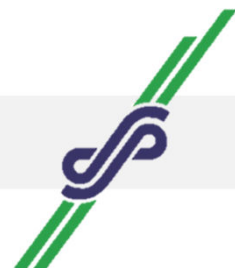
Fishing Ports



DORA FISHING PORT



TYR FISHING PORT







## Marinas

### • TRIPOLI MARINA (LEBANON)

- Design of marina (Breakwaters, crown walls and platforms, quaywalls, pontoons, slipway). (2014)

### • ANFEH DEVELOPMENT PROJECT (ANFEH • LEBANON)

- Design of marina (Breakwater, crown walls and platforms, quaywalls). (2018 - 2019)

### • FLORIDA BEACH HERY (HERY • LEBANON)

- Design of basin dredging. (2009 - 2010).
- Design and Supervision of sand dredging works in and outside the marina. (2011 - 2012)

### • HERY MARINA (HERY • LEBANON)

- Design of marina (Breakwater, quay walls, pontoons). (2014)

### • BRANDARIS MARINA (HAMAT • LEBANON)

- Design of marina (Breakwater, quay walls, pontoons). (2015)

### • BONITA BAY BATROUN (BATROUN • LEBANON)

- Preliminary design of a pontoon supported on piles. (2008).

### • BERBARA HIDEAWAY MARINA (BERBARA • LEBANON)

- Technical consultancy, BOQ pricing and method statement for contractor. (2006).
- Design of additional protection of the existing vertical breakwater using Accropodes blocks. (2013).

### • ASSEILY MARINA (AMCHIT • LEBANON)

- Design of marina (Breakwaters, crown walls and platforms, quay walls, pontoons, slipway). (2012 - 2013)

### • BYBLOS MARINA (BYBLOS • LEBANON)

- Design of island marina (Breakwaters, crown walls and platforms, quay walls, pontoons, slipway). (2014)

### • KASSAR MARINA (AMCHIT • LEBANON)

- Design of marina and Decree preparation (Breakwaters, RC crown walls and platforms, quay walls, pontoons, slipway). (2011)

### • BYBLOS SUD VILLAGE (BYBLOS • LEBANON)

- Design of floating breakwater (2008 - 2009 - 2010 - 2011 - 2012) and works supervision. (2011)

### • BASSIL MARINA (HALATE • LEBANON)

- Design of marina and Decree preparation (Breakwater, quay walls, pontoons). (2013 - 2014)

### • HALATE SUR MER MARINA (HALATE • LEBANON)

- Preliminary design of main breakwater rehabilitation and pontoons. (2010)

### • HAT MARINA (HALATE • LEBANON)

- Design of marina and Decree preparation (Breakwater, quay walls, land reclamation). (2014)
- Design and Supervision of RC coastal protection. (2014 - ... - 2017)







- **SAFRA MARINA (SAFRA • LEBANON)**

- Design of marina (Breakwater, quay walls, pontoons, slipway). (2010 - 2011 - 2012)

- **DOUMET MARINA (NAHR IBRAHIM • LEBANON)**

- Design of marina and Decree preparation (Concrete breakwater). (2010 - 2011 - 2012)

- **KYE RESORT MARINA (TABARJA • LEBANON)**

- Design of marina (Breakwaters, RC crown walls and platforms, quay walls, pontoons, slipway, bridges.). (2019)

- **ATCL MARINA (KASLIK • LEBANON)**

- Design and Supervision Works of main breakwater armor layer. (2015 – 2016)

- **ZOUK MARINA (ZOUK • LEBANON)**

- Design of marina and Decree preparation (Breakwaters, RC crown walls and platforms, quay walls, pontoons). (2017)

- **KFARYASSINE MARINA (KFARYASSINE • LEBANON)**

- Design of marina and Decree preparation (Breakwaters, RC crown walls and platforms, quay walls, pontoons, slipway.). (2014)

- **SAYFCO MARINA (ZOUK • LEBANON)**

- Design of marina (Breakwaters, RC crown walls and platforms, quay walls, pontoons, slipway). (2014)

- **TROPICAL BEACH AT ZOUK MOSBEH (ZOUK MOSBEH • LEBANON)**

- Preliminary design of detached breakwater with touristic facilities (Restaurant, bungalows on piles). (2008)

- **HOLIDAY BEACH MARINA (DBAYEH • LEBANON)**

- Design of basin dredging. (2010)

- **SOFIM MARINA (DBAYEH • LEBANON)**

- Design of marina (Breakwaters, RC crown walls and platforms, quay walls, pontoons, slipway, bridges). (2017)

- **CITY MARINA (NEW JDEIDEH • LEBANON)**

- Design of marina and Decree preparation (Breakwater, quay walls, pontoons...). (2014)

- **DALFA MARINA (MANARA • LEBANON)**

- Design of marina and Decree preparation (Underwater quay walls, RC platforms...). (2016 - 2017)

- **MOVENPICK MARINA (RAM LET EL BAYDA • LEBANON)**

- Design and Supervision of rehabilitation works (breakwater, RC crown walls, slabs on grade...). (2015 - 2016)

- **KOBBEH MARINA (NEEMEH • LEBANON)**

- Design of marina and Decree preparation (Breakwater, quay walls, pontoons, slipway). (2011 - 2012)

- **NEEMEH MARINA (NEEMEH • LEBANON)**

- Design of marina and Decree preparation (Breakwater, quay walls, pontoons, slipway). (2014)







Marinas

- **JERDI MARINA AT JIEH (JERDI • LEBANON)**

- Conceptual design of Marina. (2008)

- **RESTHOUSE TYR (TYR • LEBANON)**

- Design of basin dredging. (2010 - 2013)

- **SARAYA AQABA (AQABA • JORDAN)**

- Design of diaphragm walls, submerged breakwaters, marine protection for lagoon banks, beach stability, geotextile, sediment transportation, pontoons, piling and sheet piling in collaboration with french consultant. (2006 - 2007 - 2008 - 2009 - 2010 - 2011)

- **AL MARJAN ARTIFICIAL ISLAND (UAE)**

- Technical consultancy, BOQ pricing and method statement for contractor. (2005)

- **AL SEEF AND BANIAS ROADS MARINA PILING (UAE)**

- Technical consultancy, BOQ pricing and method statement for contractor. (2005)

- **MARINA AL FAJER (JUMEIRAH • UAE)**

- Technical consultancy, BOQ pricing and method statement for contractor. (2006)

- **NAJMAT ABU DHABI - AL REEM ISLAND • (UAE)**

- Technical consultancy, BOQ pricing and method statement for contractor. (2006 - 2007)

- **QATAR QUAYWALLS (QATAR)**

- Technical consultancy, preliminary design of a quaywall variant with BOQ for Contractor. (2006)

- **C11 ISLAND - (DUBAI UAE - CLIENT : ACI ENGINEERING)**

- Conceptual design of marine infrastructure of the C11 Island (Including marinas concept, floating and piles supported pontoons, concrete quay walls... (2008 - 2009)

- **FORUM EL DJAZAIR MARINA (SIDI FREDJ • ALGERIA – CLIENT : CCC / Consolidated Contractor Company)**

- Conceptual design of Marina. (2017 - 2018 - 2020)

- **MARASSI MARINA (AL-ALAMAYN • EGYPT – CLIENT : HOMAN Group / Owner : EMAAR)**

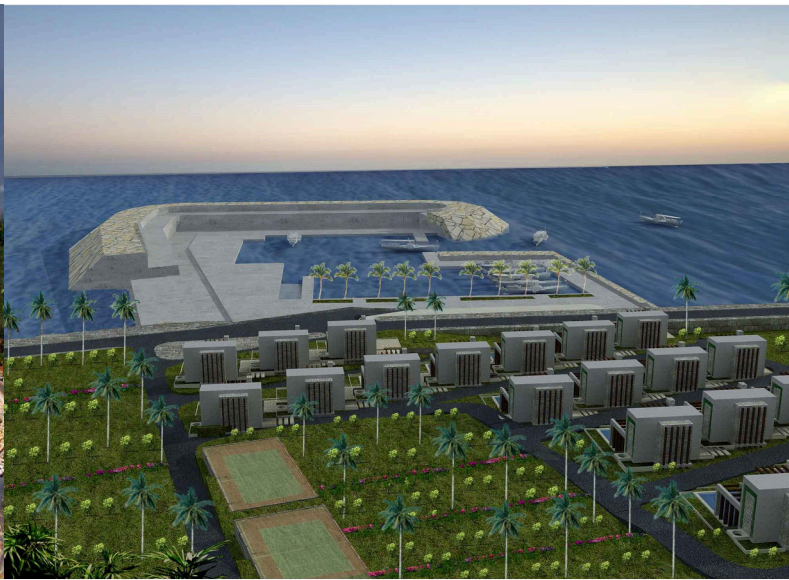
- Design review of the Outer Marina, technical assistance and consultancy for the Contractor. (2020 - 2021)







Marinas



ASSEILY MARINA



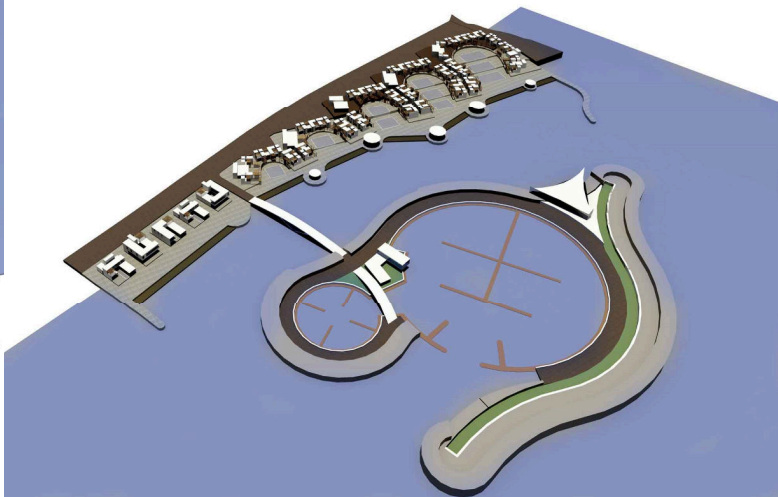
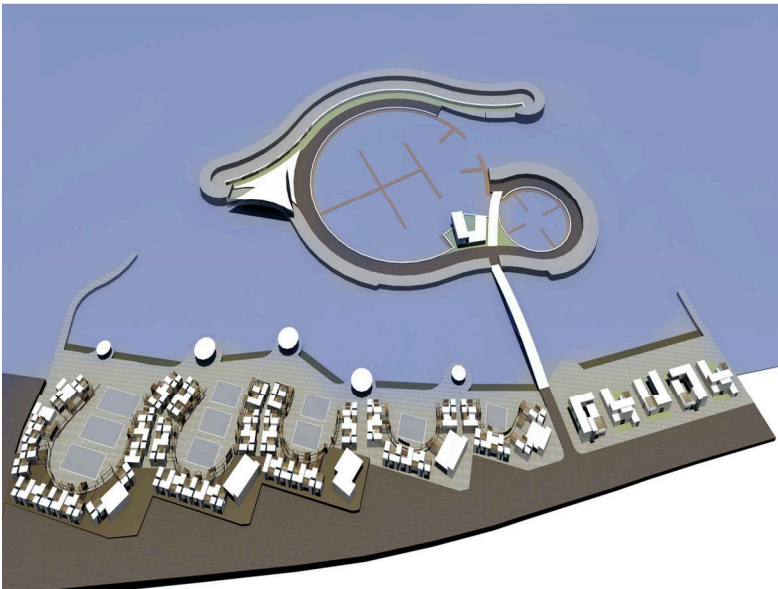
SAYFCO MARINA



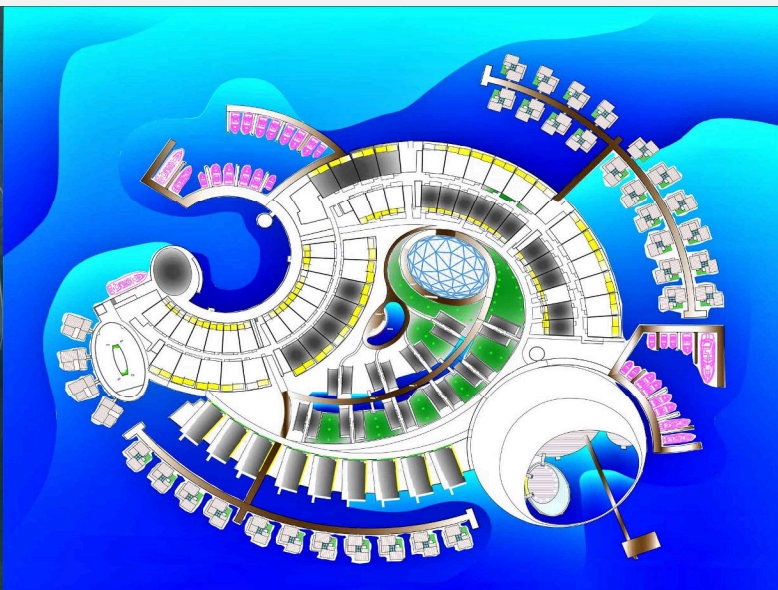




Marinas



NEEMEH MARINA



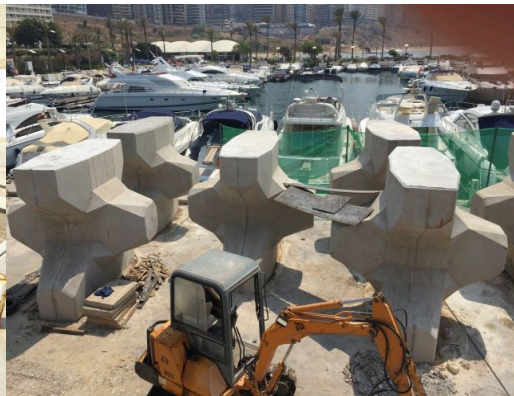
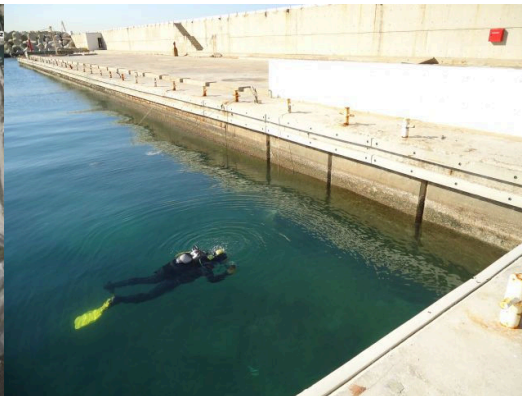
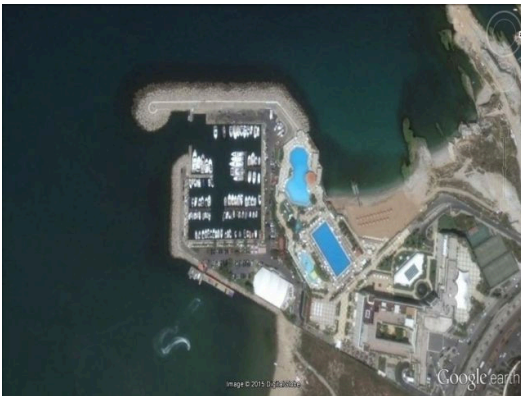
C11 ISLAND MARINA







Marinas



MOVENPICK MARINA



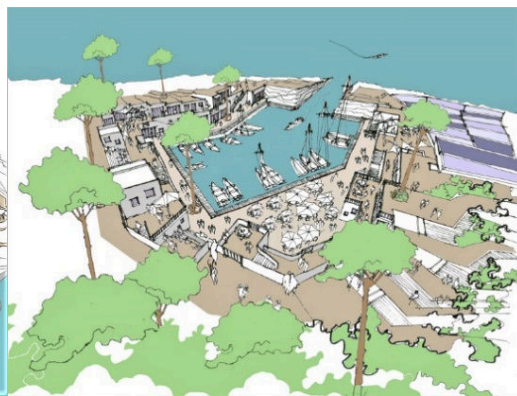
KYE MARINA







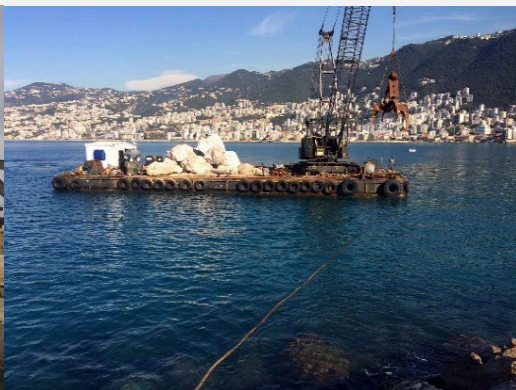
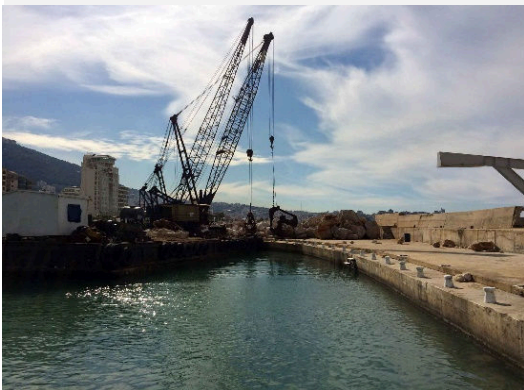
Marinas



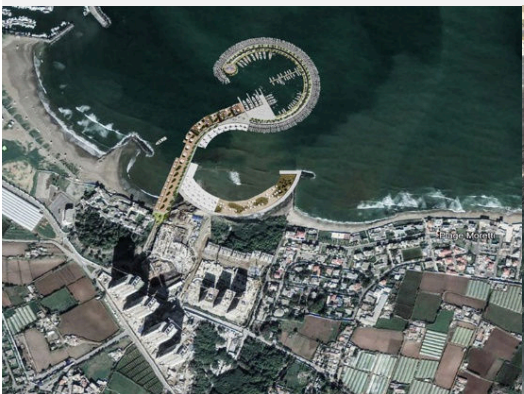
ANFEH DEVELOPMENT PROJECT



BYBLOS MARINA



ATCL MARINA



FORUM EL DJAZAIR MARINA







## Naval Bases

- **LEBANESE NAVY MARINE BASE (TRIPOLI • LEBANON - CLIENT : LAF)**

- Supervision of dredging works and debris removal from basin. (2011)

- **LEBANESE NAVY MARINE BASE (AMCHIT • LEBANON - CLIENT : LAF)**

- Preliminary Design of a marine base (Breakwaters, quay walls, RC crown wall, platforms, slipway). (2013)

- **ISF MARINE BASE (DBAYE I LEBANON – CLIENT : ISF)**

- Preliminary design of a marine base (Breakwaters, quay walls). (2007).
- Detailed design of the marine base (Breakwaters, quay walls, RC crown wall and platforms, slipway). (2012)

- **SHARJAH COAST GUARD BASE (UAE)**

- Technical Consultancy, BOQ pricing and method statement for contractor. (2005)

- **BAYA COAST GUARD BASE (UAE)**

- Technical Consultancy, BOQ pricing and method statement for contractor. (2005)







## Coastal Protections

- **PROTECTION OF NAHER EL KEBIR RIVER BANKS (LEBANON – CLIENT : MPWT / DGLMT)**
  - Design and Supervision of river bank protection with sloped rocky protection, R.C. platforms and dredging of river entrance. (2012 - 2013)
- **TALL HAYAT COASTAL PROTECTION (AKKAR • LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of groynes and detached breakwaters for the coastal protection of nearshore houses. (2016)
- **COASTAL PROTECTION OF PLOT N126-127 (BEDDAWI • LEBANON – CLIENT : SOLVOCHEM)**
  - Design of a rocky coastal protection (L=270m). (2013)
- **COASTAL PROTECTION OF THE RECLAIMED LAND FOR THE WWTP AT TRIPOLI (LEBANON)**
  - Review of the armoring stones concept and design (L=900m). (2004 - 2005)
- **COASTAL PROTECTION OF THE RECLAIMED LAND FOR THE WASTE DISCHARGE AT TRIPOLI (LEBANON)**
  - General guidance for the Contractor in charge of executing the coastal protection (Rocky slopes, land reclamation and retaining wall). (2006)
- **PROTECTION OF SOUTHERN SANDY BEACH AT TRIPOLI (TRIPOLI • LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of a stones seawall as coastal protection (L=260m). (2006)
- **GROYNE & QUAY WALL AT SOUTHERN SANDY BEACH / TRIPOLI • LEBANON (CLIENT : MPWT / DGLMT)**
  - Design of a Groyne (with rocky protections) and a quaywall @-3.00m with precast concrete blocks. (2006)
- **COASTAL PROTECTION AT EL MINA CORNICHE (TRIPOLI • LEBANON – CLIENT : SOTEG)**
  - Design of a rocky coastal protection (L=300m). (2014)
- **COASTAL PROTECTION OF MARSATI SCHOOL (BATROUN • LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of a coastal protection with Accropodes blocks for the maritime school at Batroun. (2019 - 2020)
- **EDDEH RESIDENCE COASTAL PROTECTION (AMCHIT • LEBANON – CLIENT : EDDEH)**
  - Design of a rocky coastal protection for nearshore chalets. (2014)
- **BYBLOS BEACH VILLAGE COASTAL PROTECTION (BYBLOS • LEBANON – CLIENT BBV)**
  - Design and Supervision of a rocky coastal protection for nearshore apartments. (2014 – 2015)
- **SEAWALL FOR LE PECHE RESTAURANT (MAAMELTEIN • LEBANON – CLIENT : AQUAMARINA)**
  - Design of a RC seawall for the protection of Le Pêche Restaurant (2013)
- **COASTAL PROTECTION OF DBAYEH HIGHWAY (LEBANON – CLIENT : MPWT / MPWT)**
  - Conceptual Design of a highway coastal protection (L=300m). (2014)
  - Design and Supervision of the marine protection works along 1500m of the coastal road (Accropodes Blocks, rocky protection, walkways, landscaping, lighting, road, bituminous coating...). (2016 - 2017 - 2018)
- **COASTAL PROTECTION FOR PLOTS 92 - 229 (ANTELIAS • LEBANON – CLIENT : AISHTI)**
  - Design and Decree preparation for rocky coastal protection. (2012 - 2013 - 2017)







Coastal Protections

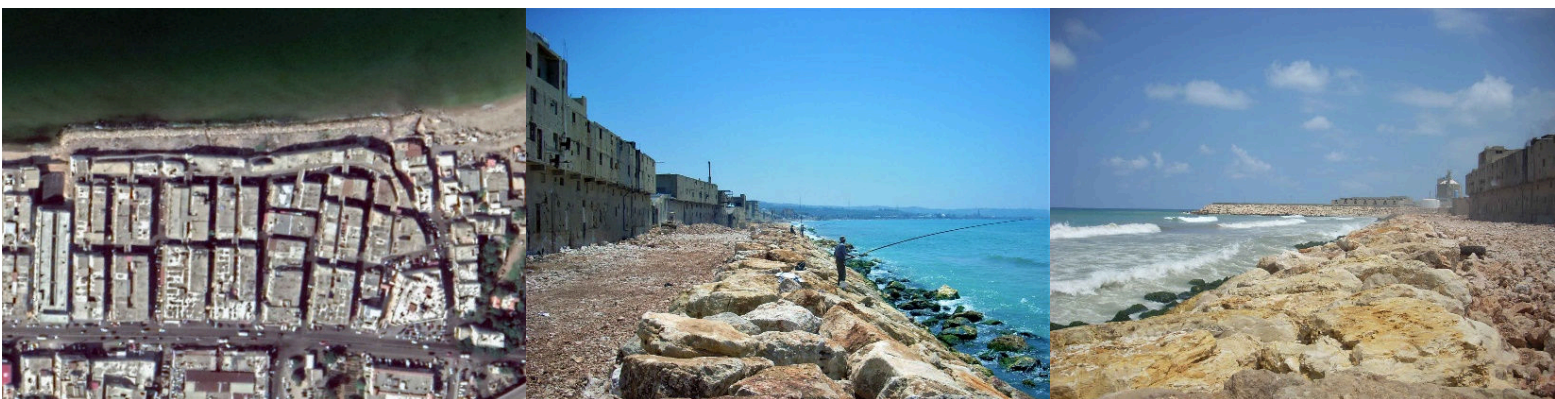
- **COASTAL AND FLUVIAL PROTECTION OF PARCEL N32 (NAHR IBRAHIM • LEBANON)**
  - Coastal and Fluvial protection of parcel N32 at Naher Ibrahim. (2012)
- **COASTAL PROTECTION OF SPORTING CLUB (BEIRUT • LEBANON)**
  - Coastal protection of underwater concrete and seawall. (2019)
- **COASTAL PROTECTION OF PLOT KHALDEH PLOT (KHALDEH – LEBANON)**
  - Design of a rocky coastal protection for the plot. (2012)
- **COASTAL PROTECTION FOR GHAZIEH INDUSTRIAL ZONE (LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of coastal protection - stones armoring - (L=500m). (2003 - 2004)
- **COASTAL PROTECTION FOR INDUSTRIAL ZONE AT GHAZIEH (LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of a rocky coastal protection for industrial buildings with land reclamation. (2006 - 2007 - 2008 - 2009)
  - Supervision of execution works. (2010)
- **COASTAL PROTECTION FOR TYR LIGHTHOUSE (LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of a rocky underwater reef protection for Tyr lighthouse. (2013)



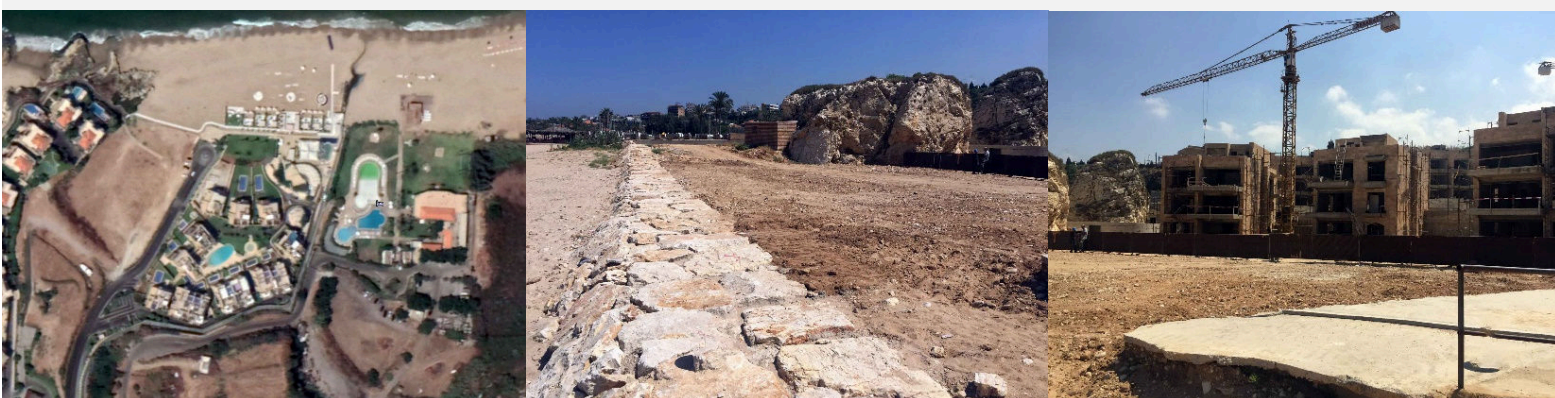
PROTECTION OF NAHER EL KEBIR RIVER BANKS







PROTECTION OF GHAZIEH INDUSTRIAL ZONE



PROTECTION OF BYBLOS BEACH VILLAGE



MISCELLANEOUS COASTAL PROTECTIONS





## WATERFRONTS

- **REC NOR (LEBANON - CLIENT : Chamber of Commerce of Tripoli and North Lebanon)**
  - Conceptual Design of a Land reclamation from Tripoli to Klayaat at Northern Lebanon, covering an area of 11,700,000m<sup>2</sup> along a coastal length of 20km, including the extension of the Tripoli port container terminal, a LNG / oil and gas jetties/ zone, industrial, general cargo and mineral terminals zone, and the extension of the Klayaat Airport. (2019 - 2020)
- **KALAMOUN WATERFRONT (LEBANON – CLIENT : MPWT / DGLMT / KALAMOUN MUNICIPALITY)**
  - Design of for reclaimed area, coastal protection and rehabilitation of the existing breakwater (with rocky protections, recreational and sportive facilities, landscaping, walkways... (2006 - 2007 - 2008 - 2009)
- **WATER TAXI ALONG LEBANESE COAST (LEBANON – CLIENT : LEBANESE MARITIME COMPANY)**
  - Conceptual Design of a water taxi system along the Lebanese coast. (2011)
- **BYBLOS SUD VILLAGE (BYBLOS • LEBANON – CLIENT : TPD)**
  - Waterfront Design including floating pontoon. (2008 - 2009 - 2011 - 2013)
- **KALANI RESORT WATERFRONT (HALAT • LEBANON – CLIENT : KALANI)**
  - Design and Supervision of waterfront: rocky riprap / concrete bleachers coastal protection, swimming pools... (2014 - 2015 - 2016 - 2017 - 2018)
- **JOUNIEH WATERFRONT (JOUNIEH • LEBANON – CLIENT : MPWT / DGLMT)**
  - Conceptual Design of Jounieh waterfront along 4km with creation of a sandy beach (1600m), coastal walkways, public spaces, landscaping, marinas, coastal protections, recreational areas, bleachers... (2019 - 2020)
- **TROPICAL BEACH RESORT WATERFRONT (NAHR EL KALB • LEBANON – CLIENT : TROPICAL BEACH)**
  - Conceptual Design of waterfront and beach development: detached breakwater, sandy beach, small berths, wooden bungalows on piles... (2008)
- **DBAYEH WATERFRONT (DBAYEH • LEBANON – CLIENT : MPWT / DGRB)**
  - Design and Supervision of the rehabilitation works related to the heavily damaged rocky riprap along existing Dbayeh highway (L=1,359m) / Protection with concrete Accropodes Blocks, infrastructure (Electrical supply, pipes, manholes, lighting, storm water system, walkway...) (2016 - 2017 - 2018)
  - Conceptual design of phase 2: Public spaces, bleachers, landscaping, recreational areas, public beach, kiosks, car parking... (2018 - 2019)
- **LINOR WATERFRONT (ANTELIAS • LEBANON – CLIENT : PRIVATE)**
  - Conceptual design of a waterfront including a total reclaimed area of 1,225,000m<sup>2</sup> (Residential, villas, retail, offices, public spaces, recreational areas, coastal areas, waterways and channels, marina, fishing port...). (2020)
- **SAIDA WATERFRONT (SAIDA • LEBANON – CLIENT : MPWT / DGLMT)**
  - Design of a new waterfront for Saida sandy beach, located between the maritime castle and the sport stadium, along 2200m; Assessment of the actual situation and erosion phenomenon of the beach, Design of new L,T and I shapes rocky groynes and tombolos with sandy dredging and beach artificial nourishment; walkways, public spaces, landscaping, lighting, bleachers... (2018)
- **SARAYA AQABA (AQABA • JORDAN – CLIENT : PRIVATE)**
  - Design of submerged breakwaters for the lagoon protection, ATONs, water taxi berthing configuration and navigation within the lagoon, quay walls and shore protection... (2006 - 2008)
- **MARASSI NORTH BEACH (AL-ALAMAYN • EGYPT – CLIENT : HOMAN Group / Owner: EMAAR)**
  - Design review and technical assistance for the contractor / artificially nourished beach. (2020 - 2021)

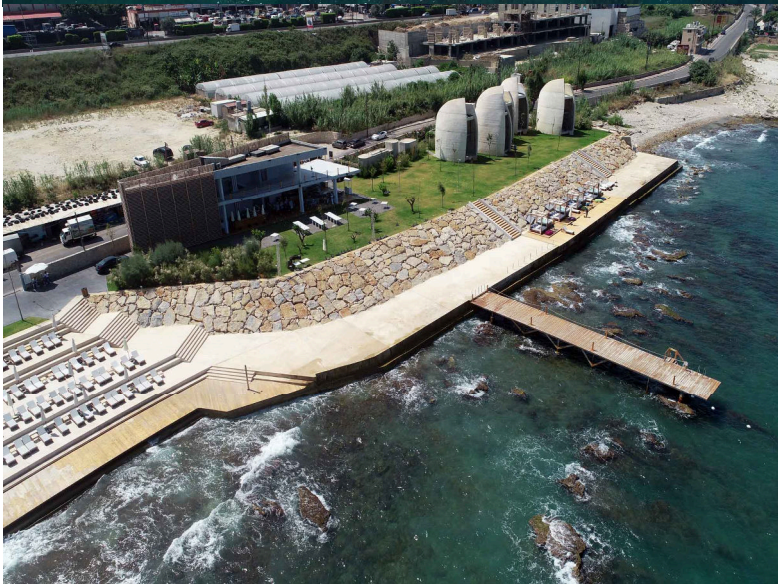
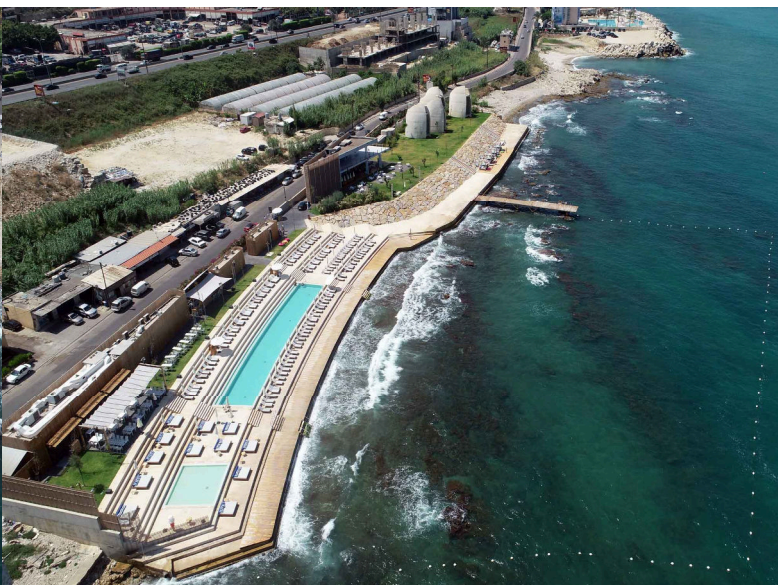




## WATERFRONTS



Waterfronts

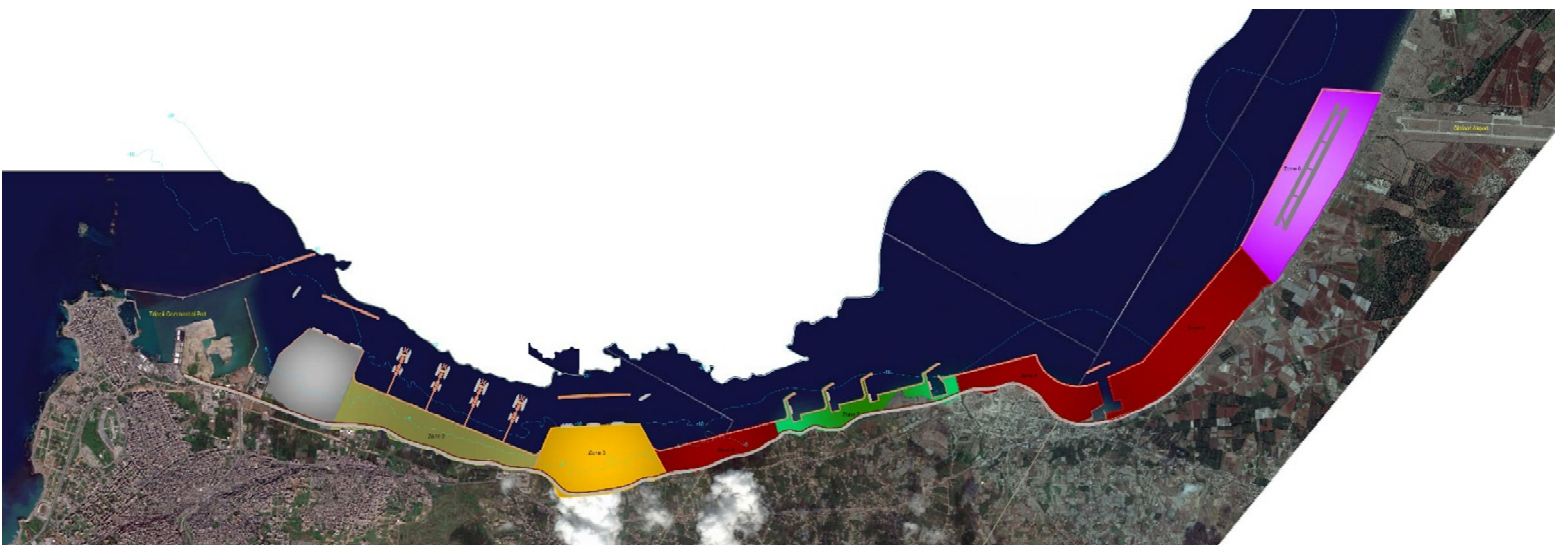


KALANI RESORT

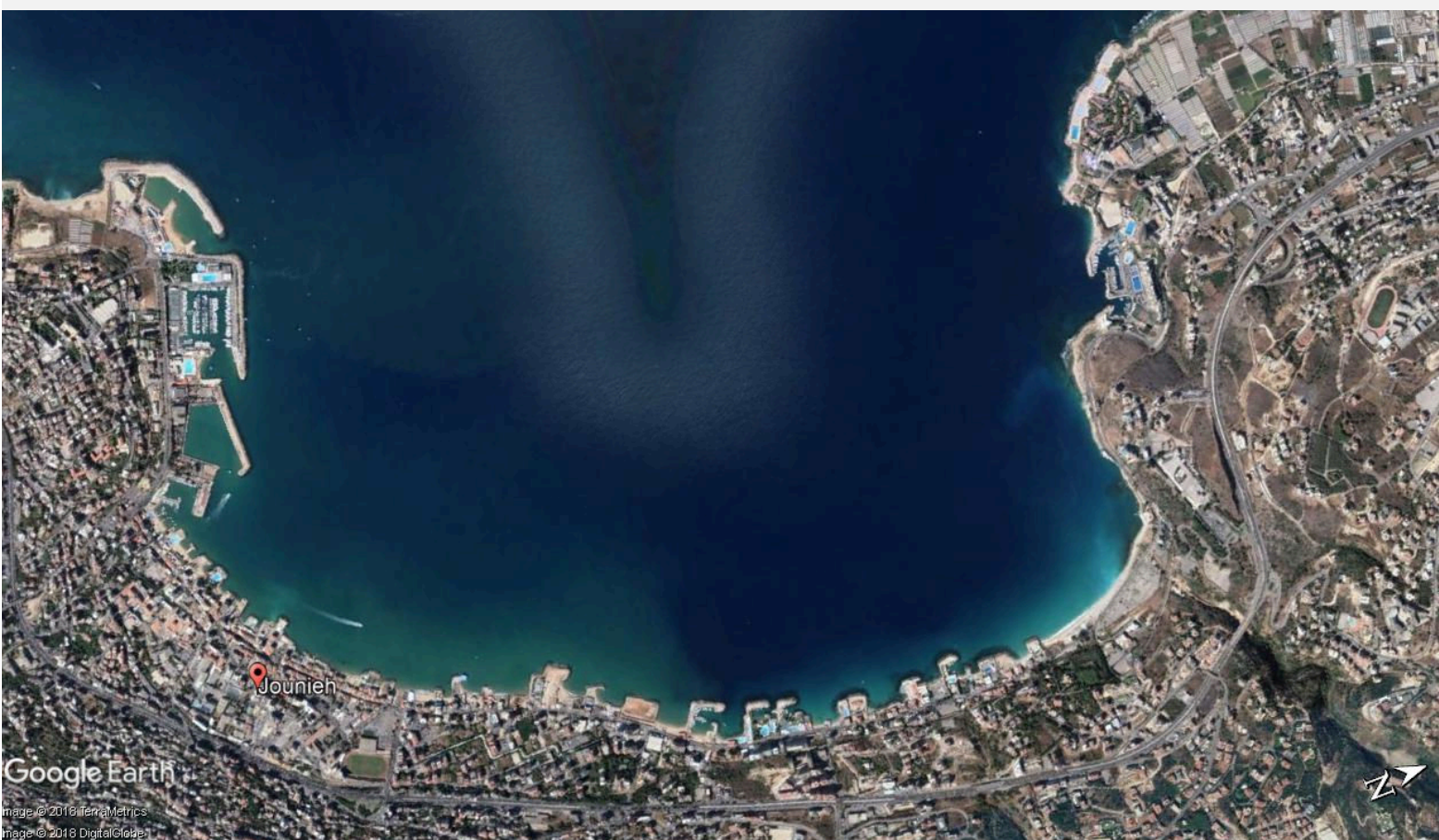




## WATERFRONTS



RECNR

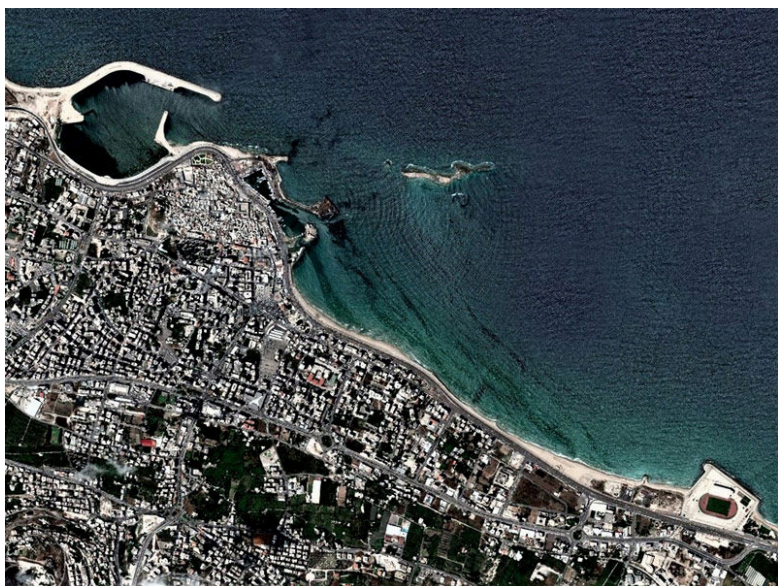


JOUNIEH WATERFRONT





## WATERFRONTS



Ministry  
Of  
Public Works and Transport  
Directorate General of Land and Maritime Transport  
Saida Beach Protection and Nourishment

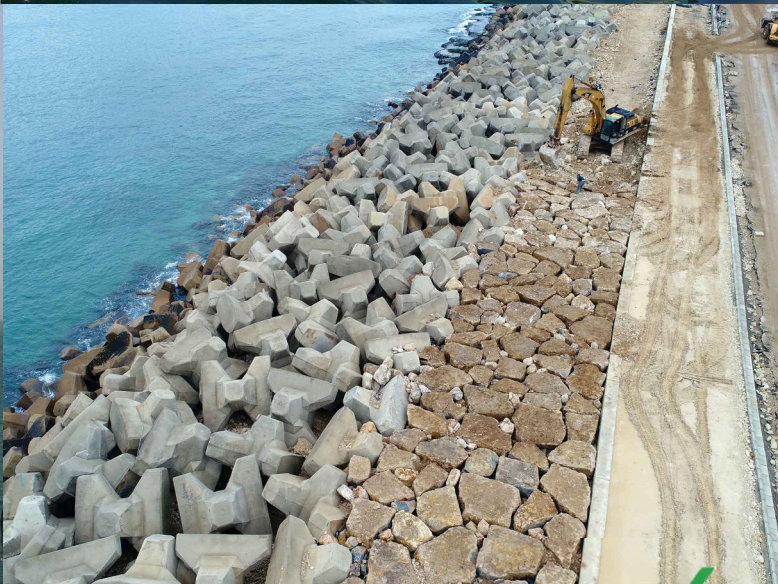


SAIDA WATERFRONT





## WATERFRONTS

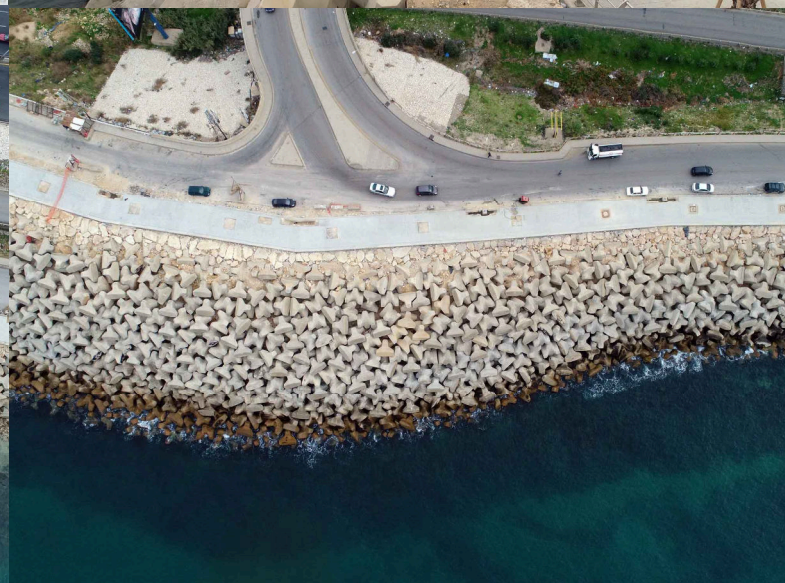
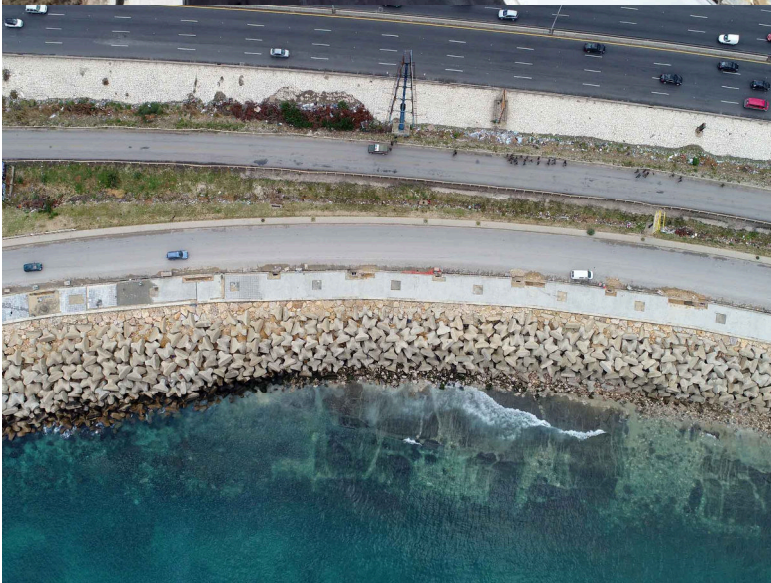
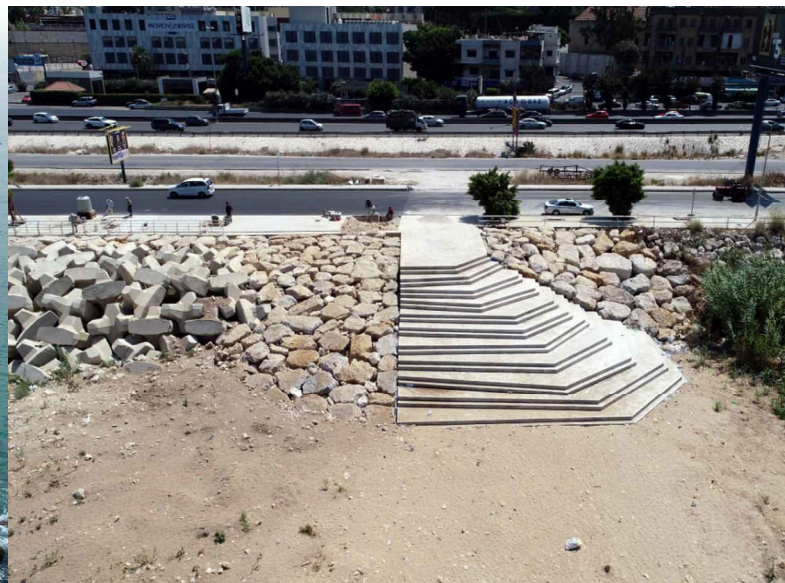
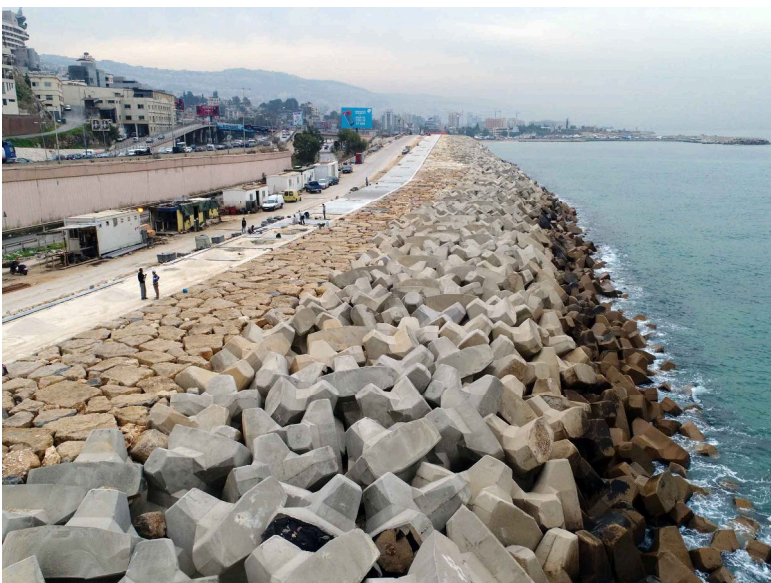


## BYBLOS BEACH VILLAGE





## WATERFRONTS

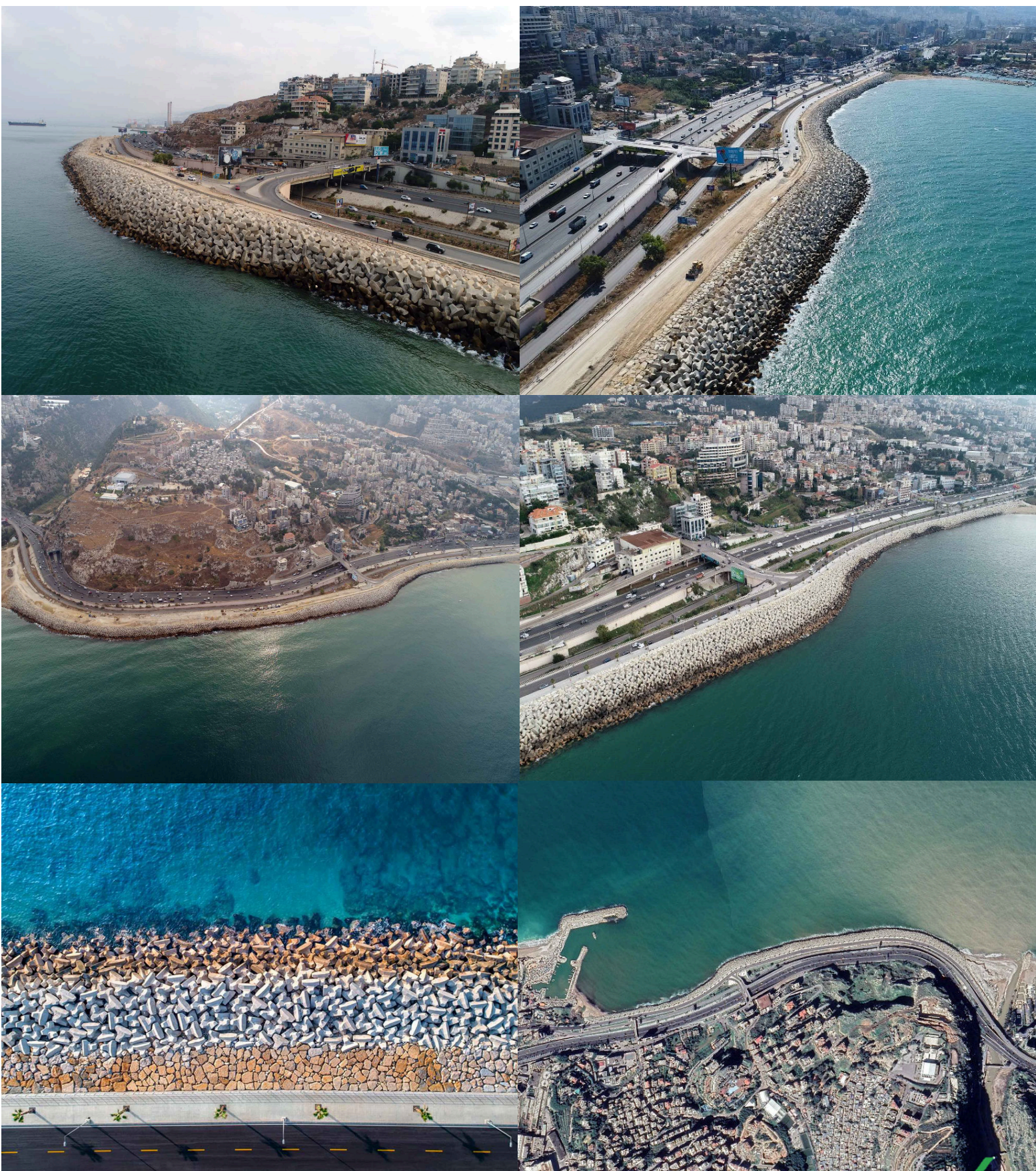


DBAYEH WATERFRONT





## WATERFRONTS



DBAYEH WATERFRONT

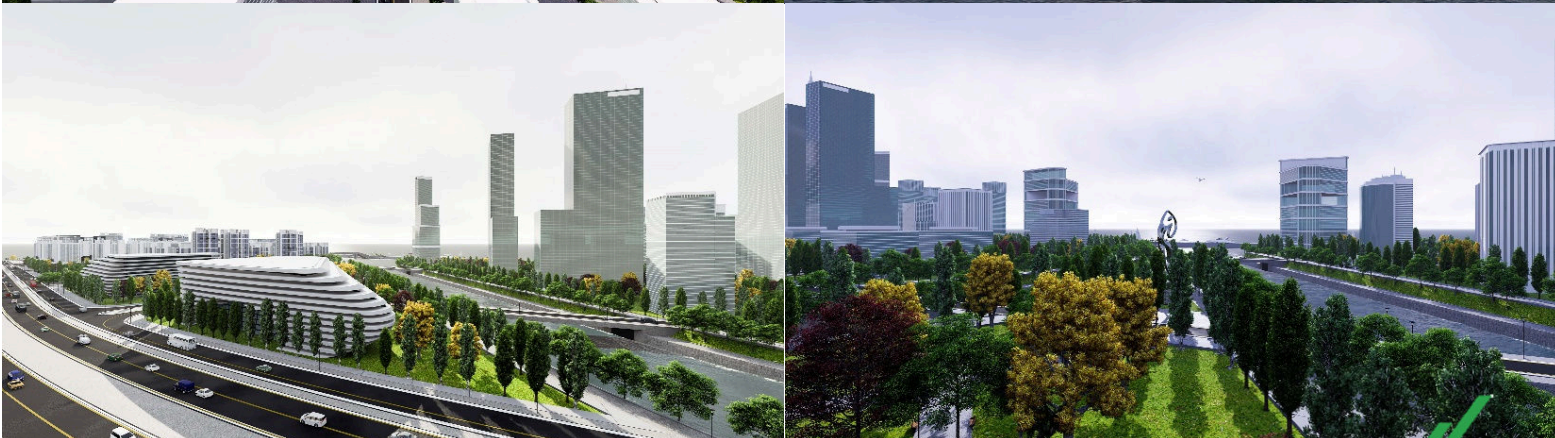
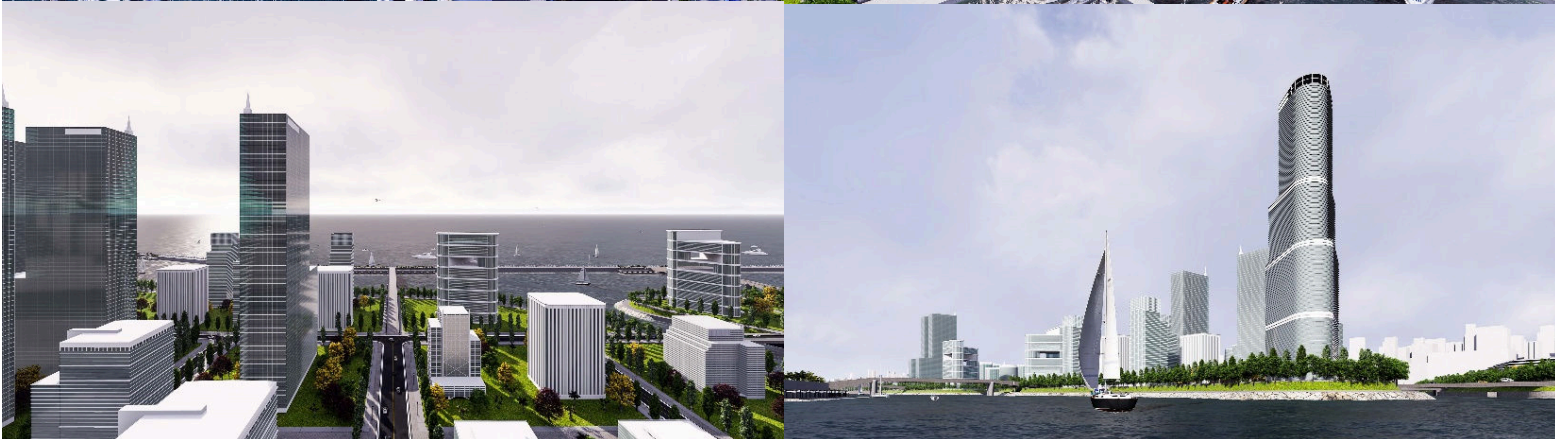
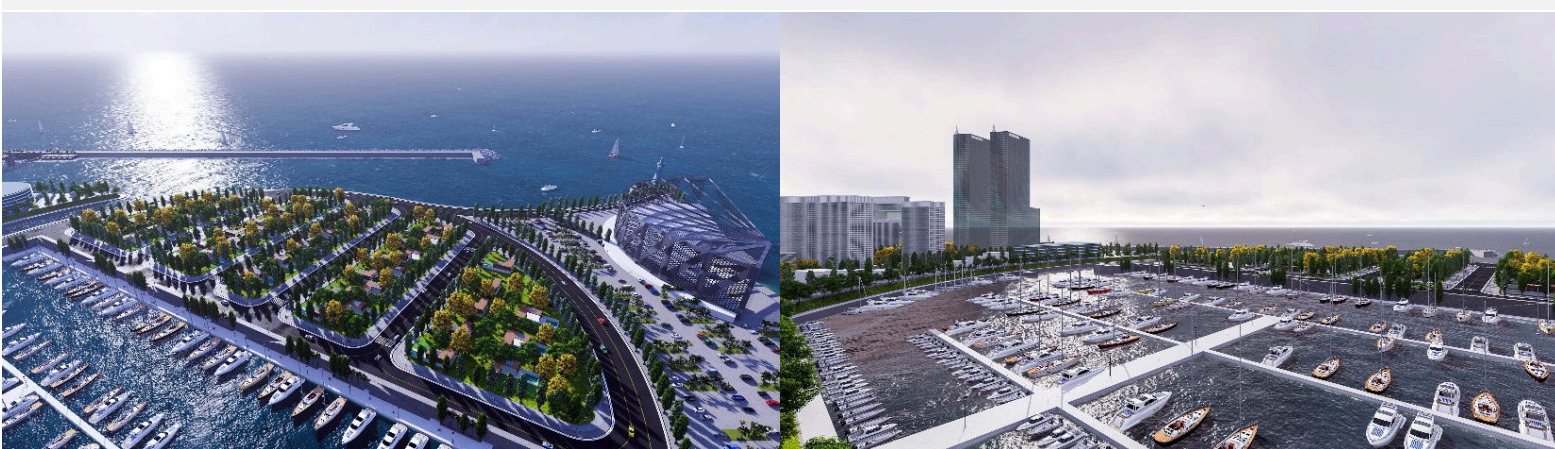




## WATERFRONTS



SARAYA AQABA



LINOR WATERFRONT







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)







## SUBSEA PIPELINES

- **PIPELINE (GAS) AT SYRIA (CLIENT : MARCONTRACTING)**
  - Design review and stability calculation note. (2010)
- **PIPELINE (FUEL) AT TRIPOLI (LEBANON – CLIENT : FALCON CO.)**
  - Design and decree preparation. (2009)
- **PIPELINE (FUEL) AT SELAATA (LEBANON – CLIENT : IAPCO)**
  - Design and decree preparation. (2013-2006-2007-2008)
- **IPT PIPELINE (FUEL) (LEBANON • AMCHIT CLIENT : IPT)**
  - Decree preparation for pipeline and maritime domain occupancy. (2017)
- **LEBANON ENERGY PIPELINE (FUEL) (LEBANON • AMCHIT – CLIENT : LEBANON ENERGY SAL)**
  - Decree preparation for pipeline and maritime domain occupancy. (2017)
- **UNIVERSAL GAS PIPELINE (FUEL) (LEBANON • AMCHIT – CLIENT : UNIVERSAL GAZ)**
  - Bathymetric survey, relocation of buoys and pipeline. (2013)
  - Decree preparation for pipeline and maritime domain occupancy. (2017)
- **WARDIEH HOLDINGS PIPELINE AT BAUCHRIEH (LEBANON – CLIENT : WARDIEH HOLDINGS)**
  - Decree preparation for pipeline and maritime domain occupancy. (2017)
- **TOTAL LIBAN PIPELINE AT BAUCHRIEH (LEBANON – CLIENT : TOTAL LIBAN SAL)**
  - Decree preparation for pipeline and maritime domain occupancy. (2017)
- **UNITERMINALS PIPELINE AT BAUCHRIEH (LEBANON – CLIENT : UNITERMINALS SAL)**
  - Decree preparation for pipeline and maritime domain occupancy. (2017)
- **MEDCO PIPELINE AT DORA (LEBANON – CLIENT : GEORGES CHAMMAS SAL CO.)**
  - Design of a pipeline for MEDCO. (2008 - 2009)
  - Decree preparation. (2014)
- **UNIGAZ PIPELINE AT BORJ HAMMOUD (LEBANON – CLIENT : UNIGAZ SAL)**
  - Decree preparation. (2012)
- **CORAL OIL PIPELINE AT BORJ HAMMOUD (LEBANON – CLIENT : CORAL OIL COMPANY)**
  - Decree preparation. (2010 - 2011)
  - Bathymetric survey and relocation of mooring buoys. (2014)
  - Tanks surveying. (2014)







## DREDGING

- **DREDGING AT NAHER EL KEBIR 1 (LEBANON – CLIENT : MPWT / DGLMT)**
  - Topographic and bathymetric survey, design. (2011)
- **DREDGING AT NAHER EL KEBIR 2 (LEBANON – CLIENT : MPWT / DGLMT)**
  - Topographic and bathymetric survey, design and supervision . (2015 - 2016)
- **DREDGING AT TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : OEPT)**
  - Topographic and bathymetric survey (1,900,000m2), design. (2015 - 2016)
- **DREDGING AT ATCL MARINA (LEBANON – CLIENT : ATCL)**
  - Topographic and bathymetric survey, design. (2013)
- **DREDGING AT RESTHOUSE TYR (LEBANON – CLIENT : MPWT / DGLMT)**
  - Topographic and bathymetric survey, design. (2010 - 2013)
- **DREDGING AT ZOUK POWER PLANT (LEBANON – CLIENT : EDL)**
  - Topographic and bathymetric survey, design. (2009 - 2013)
- **DREDGING AT DORA FISHING PORT (LEBANON – CLIENT : MPWT / DGLMT)**
  - Topographic and bathymetric survey, design and supervision. (2010 - 2011)
- **DREDGING FLORIDA BEACH MARINA (LEBANON – CLIENT : FLORIDA BEACH)**
  - Topographic and bathymetric survey, design. (2010)
- **DREDGING AT ATCL MARINA (LEBANON – CLIENT : ATCL)**
  - Topographic and bathymetric survey, design. (2013)
- **DREDGING AT JIEH POWER PLANT (LEBANON – CLIENT : EDL)**
  - Topographic and bathymetric survey, design. (2010 - 2011 - 2012)
- **DREDGING AND WRECKS REMOVAL FROM TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : OEPT)**
  - Topographic and bathymetric survey, design and supervision. (2010 - 2011)
- **DREDGING AT HOLIDAY BEACH MARINA (LEBANON – CLIENT : HOLIDAY BEACH)**
  - Topographic and bathymetric survey, design. (2012)

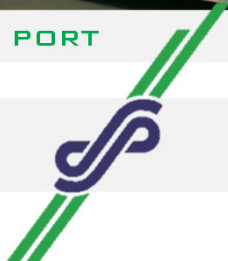




DREDGING

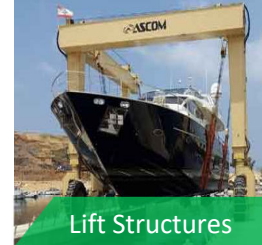


DREDGING AND WRECKS REMOVAL FROM TRIPOLI COMMERCIAL PORT





## LIFT STRUCTURES



- **FLOATING DOCK AT TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : OEPT)**

- Design of all facilities for a DBOT floating dock at OEPT (L= 170m / Lifting capacity 8,000 DWT)
- Quaywall (Concrete PCB / Gravity QW) @ -14.00m
- Dredging works for basin and access channel @ -10.00m
- Topographic and bathymetric survey (40,000m<sup>2</sup>). (2017 - 2018)

- **100T HOIST AT DORA FISHING PORT (LEBANON – CLIENT : DGLMT)**

- Design and supervision. Refer to Dora Fishing Port works. (2012 - ... - 2018)

- **5T JIB CRANE AT NAQOURA FISHING PORT (LEBANON – CLIENT : DGLMT)**

- Topographic and bathymetric survey, design and supervision. (2009)



JIB CRANE AT NAQOURA FISHING PORT



100T HOIST AT DORA FISHING PORT

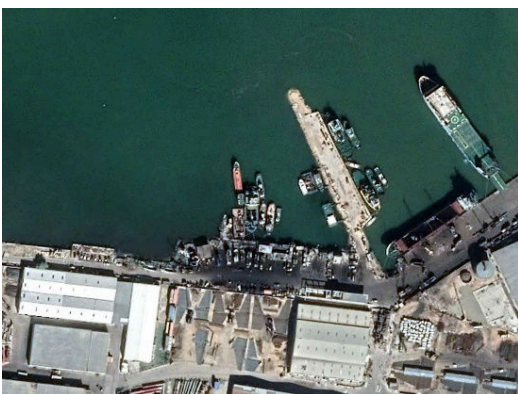




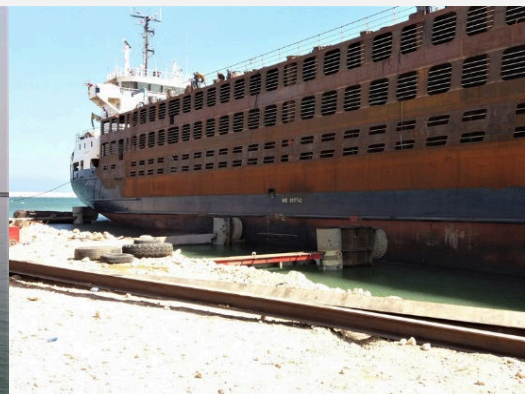
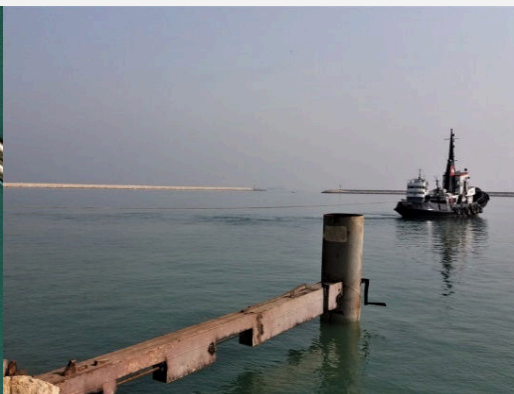
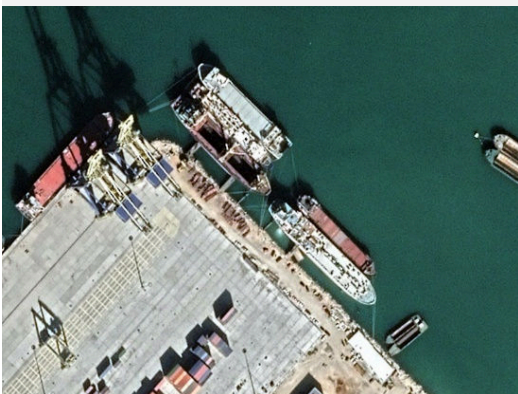
Mooring structures

## MOORING STRUCTURES

- **MOORING DOLPHINS AT TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : POTA)**  
Design and supervision of 2 mooring dolphins for tug boats. (2009)
- **MOORING AND BREASTING DOLPHINS AT TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : POTA)**  
Design of 3 mooring dolphins for tug boats. (2010)
- **MOORING PILES AT TRIPOLI COMMERCIAL PORT (LEBANON – CLIENT : POTA)**  
Design and supervision of 9 mooring piles for ships under maintenance. (2017)



MOORING DOLPHINS AT TRIPOLI COMMERCIAL PORT



MOORING PILES AT TRIPOLI COMMERCIAL PORT







## ENVIRONMENTAL IMPACT ASSESSMENT / EIA

- **JOUNIEH CRUISE PORT (LEBANON – CLIENT : DGLMT)**  
EIA (SEATEC JV SES). (2017)
- **ANFEH FISHING PORT (LEBANON – CLIENT : DGLMT)**  
EIA (SEATEC JV SES). (2019)
- **IPT TERMINAL (LEBANON – CLIENT : IPT)**  
EIA (SEATEC JV SES). (2019 - 2020)
- **LEBANON ENERGY TERMINAL (LEBANON – CLIENT : LEBANON ENERGY)**  
EIA (SEATEC JV SES). (2019 - 2020)
- **BELLE MER RESORT (LEBANON – CLIENT : PRIVATE)**  
EIA (SEATEC JV SES). (2019 - 2020)
- **NAJI BEACH RESORT (LEBANON – CLIENT : NAJI BEACH)**  
EIA (SEATEC JV SES). (2019 - 2020)
- **AISHTI OUTDOOR AREA (LEBANON – CLIENT : AISHTI)**  
EIA (SEATEC JV SES). (2018 - 2019)

**MPWT**  
**DGLMT**  
**DGRB**  
**POTA**  
**EDL**

: Ministry of Public Works and Transportation  
: Directorate General of Land and Marine Transportation  
: Directorate General of Roads and Buildings  
: Port Of Tripoli Authority  
: Electricité Du Liban





**SEATEC** SARL

*We understand the language of Waves*

**THE END**

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