Port Infrastructure Design

- **Patmos Port Upgrade Works Study (2025):** This project involved the final design and tender documents for the upgrade of Patmos Port. Specifically, it covered:
  - The construction of a new commercial pier at Merikas Bay to serve cargo vessels and relocate commercial activities currently at Skala Patmos port.
  - The construction of a Public Power Corporation (PPC) fuel pier in the southern Merikas Bay for controlled and safe refuelling of the PPC facility.
  - The expansion of the existing Schengen zone with a pile-supported pier for alongside mooring of cruise ship tender boats, along with the reorganization of necessary building facilities.

  Client: Directorate of Port Infrastructure, General Directorate of Hydraulic, Port, and Maritime Works (GDHLKY), Ministry of Infrastructure and Transport.

- **Mandraki Port Improvement & Expansion Study, Nisyros (2024):** This project involved the final design and tender documents for the improvement and expansion of Mandraki Port, covering:

  - Construction of a new breakwater 150 m long with a composite cross-section and extension of the existing pier to a total 70 m, in order to create a protected basin for safe stern mooring of passenger/car ferries and a secure refuge for tourist and fishing vessels.
  - Completion of the outer armouring of the existing pier and construction of new armouring on the western section to ensure safe pier operations.
  - New coastal quays with a total length of 150m.
  - Construction of a new transverse pier (leeward mole) 80m long.
  - Construction/improvement of electromechanical networks for port lighting, firefighting, water and electricity supply to all vessels, and installations for oily waste and sewage removal from vessels.

  Client: Directorate of Port Infrastructure, Ministry of Infrastructure and Transport.

- **Mathraki Port Upgrading, Corfu islands (2023):** The subject of this project covers all the way from preliminary studies to final design supported by focused environmental investigations. Proposed infrastructure includes a main land-attached breakwater 400m long, part of which displays a composite cross-section with berthing facilities along its inner part. The sloping offshore part is provided with either natural or artificial armour units, while an outgoing spur is provided to help containing the abundant in the region seaweed. Its crest elevation lies at +5m. A secondary breakwater 240m long is also provided of similar construction and crest at +4.5m, displaying an inner quay along 130m. Additional berthing places are provided by short coastal quay walls. The required basin dredging covers an area of 3 hectares.

- **New Port of Paros, Phase A Works Final Design (2022):** The objective of this study was the construction of the new commercial port of Paros at Kaminaki. This aims to relocate commercial activities from Parikia port, thereby decongesting the urban area and establishing a commercial port away from residential areas. The project site is approximately 500m north of Piso Livadi on the eastern side of Paros Island, at Kaminaki. The designed works include:

construction of a northern breakwater (approx. 160m long) and a southern one (approx. 395m long), both with a crest elevation at +4.5m; an inner quay, located at the northern end of the study area, approximately 240m long, equipped with appropriate mooring bollards and fenders; embankments and heavy-duty paving for most of the port's land area totalling 17,000 m^2 with loading/unloading zone, inner storage area, administration etc. buildings, utilities, and parking space; dredging of the seabed in front of the quay to -6.8m from LAT. The design vessels include a 4,000 dwt (95m length) and a Ro-Ro cargo vessel (125m length) with alongside or stern mooring capability.

- **Lipsi Port Expansion – Ro-Ro Berth Construction at Kavi, Lipsi Port (2021):** This study, at final design and tender documents stage, involves a new berth to serve the Piraeus-Dodecanese ferry line at "Kavi," west of the existing pier. This location allows for a ship turning circle diameter close to 450 m. The berth features: a stern mooring frontage of approximately 60m; usable quay depth of -9.0m from Mean Sea Level; usable berth area for passenger and vehicle movement of approximately 3,000 m^2; superstructure at least +2.0m from MSL, with a wave absorbing quay wall designed to prevent wave overtopping; connection of the new berth to the existing one via a coastal quay with a sloped, natural rock armouring on the seaward side, with wave run-up calculations to ensure the road deck is not overtopped beyond accepted limits; works will be lit according to Navy Lighthouse Service guidelines, with provisions for firefighting and low-current systems (Wi-Fi).

- **New North Ro-Ro Quay & Road Connection, Keramoti Port, Kavala:** This study focused on the creation of a new northern roll-on/roll-off (Ro-Ro) quay at the Keramoti port facilities and its road connection to the provincial network.

- **Design of the bulk and container cargo pier of the port of Stylida, Greece (2014):** This project included the final design for the extension of port facilities, specifically:
  - 280m of quays for a cargo terminal, designed to berth 10,000 DWT cargo and container vessels, complete with necessary loading/unloading equipment (cranes), E/M equipment (lighting, water supply, and firefighting networks), and a railway connection to the port.
  - 360m of quays for fishing and recreational vessels, with associated E/M equipment (lighting, water supply, and firefighting networks).
  - Increase in port depth and expansion of the 1.6 km long navigation channel.

  Further studies required due to recent (2013) legislation included the development of a new seaplane base in the port area as well as the appropriate management of the dredged material following the results of their chemical analyses.

- **Extension of the commercial port of Paros, Greece:** This project involved the design of the extension of the passenger port of Paros in Parikia. Works included a new 95m long gravity quay for accommodating 20,000 DWT Ro/Ro vessels and a new 150m quay with low wave

reflectivity for yachts, for the Prefect of Cyclades. The study included geotechnical investigations and a wave penetration study using mathematical models.

- **Design of commercial port Moheli, Comoro isl**.*: This project involved the design of a new commercial port for Moheli Island in the Comoros, created by constructing 500m long rubble-mound breakwaters and piers, on behalf of the European Community.

- **Design and supervision of construction of the extension of the commercial port of Harper, Liberia: *** This project involved the design of the second phase of the port development, including a 150m extension of an existing jetty, the design of a new 200m long quay, and dredging, on behalf of the European Community. Our firm also provided supervision of its construction. The studies included geotechnical investigations, wave penetration studies, and assessments of the port development's effects on sediment transport.

- **Design of the extension of pier #6 in Thessaloniki, Greece: *** This project involved the design of quays for the extension of pier #6 to create a container and bulk cargo terminal. The works included 1,200m of quays constructed by caissons, gantry crane foundations, and storage facilities covering an area of about 360,000m^2 on extremely weak soil reinforced by geotextiles, on behalf of the Port Authority of Thessaloniki. The studies included detailed geotechnical investigations.

- **Design of the new port of Igoumenitsa, Greece**:* This project involved the design of quays for the passenger and cargo port of Igoumenitsa. The works included a new 760m quay, largely constructed by caissons, for accommodating 40,000 DWT Ro/Ro vessels, and 200,000m^2 of parking and storage facilities on extremely weak soil reinforced by 170,000m of gravel piles, on behalf of the Ministry of the Environment, Physical Planning and Public Works. The studies included detailed geotechnical investigations.

- **Design of the new port of Patras, Greece:*** This project involved the design of marine works for the passenger and cargo port of Patras. The works included a 2,240m long breakwater, 2,300m of quays constructed by caissons for accommodating 40,000 DWT Ro/Ro vessels, 500m of quays for accommodating cargo and container vessels, and a total of 700,000m^2 of parking and storage facilities on extremely weak soil reinforced by gravel piles, on behalf of the Ministry of the Environment, Physical Planning and Public Works. The studies included detailed geotechnical investigations.

- **Design of the new port of Alexandroupoli, Greece:*** This project involved the design of quays for the new port of Alexandroupolis. The works included a 1,200m extension of the existing main breakwater, a new 600m long secondary breakwater, land reclamation (using dredged material) for the development of approximately 600,000m^2, dredging of a 4,000m long access channel and the harbour basin, and the construction of 1,300m long quay walls for accommodating container vessels, bulk carriers, Ro-Ro, and general cargo vessels.

- **Design of Fast boat facilities at Amfiali Naval Station, Greece:*** This project involved the design of quays for accommodating Fast Boats at the Amfiali Naval Station. The works included a 130m long piled pier and a 90m long piled quay.

- **Design of Submarine quay at Salamis Naval Station, Greece:*** This project involved the design of a quay for the Salamis Naval Station. The works included an 85m long piled quay.

- **Design of 2nd phase of Zanzibar Port, Tanzania:*** This project involved the design of breakwaters and 530m long piled quay walls for accommodating 13,000 DWT general cargo vessels, Ro/Ro vessels, and container vessels, a 140m long piled jetty, a passenger terminal, and ancillary facilities.

- **Design of the Extension of Katakolo Port, Greece:*** This project involved the design of quays for the extension of Katakolo port to accommodate large cruise vessels (draft up to 9.5m). The works included the construction of a new 220m long quay, 9,000m^2 of land areas, and quay walls for mooring of fishing and pleasure craft.

**firm's staff experience*