

**PROJECT TITLE**

Water Supply for the islands of Corfu and Paxoi: Studies of Dams, Central aqueduct, Water Treatment Plants, Desalination Unit, Tender Documents, Leakage Study, Environmental Studies

**LOCATION**

Kerkyra (Corfu) island, Greece

**CLIENT**

Ministry for the Environment, Planning and Public Works – Directorate D6

**DESCRIPTION**

The aim of the project is to provide a solution to the acute water supply shortage for the islands of Corfu and Paxoi, Greece. It is aimed to provide a quantity of 8,9 Mm<sup>3</sup> of water annually to supplement currently available water supplies. The projected peak population to be served in August 2039 includes 128.000 permanent residents and 130.800 tourists.

In the Northern and Central parts of the island the project includes (i) the 50 m high embankment dam on the Melissoudi river creating a 6.3 Mm<sup>3</sup> reservoir, (ii) an intercatchment water transfer scheme to supplement inflows to the Melissoudi reservoir including a concrete diversion dam, a 730 m long tunnel and a 600.000 m<sup>3</sup> flow regulation reservoir created by a 14m high embankment, (iii) a water treatment plant with a capacity of 42.000 m<sup>3</sup>/day, (iv) a reverse osmosis plant for treating brackish groundwater with a capacity of 12.600 m<sup>3</sup>/day.

In the Southern part of the island the project includes (i) a 25m high embankment dam on the Mesogi river creating a 1.2 Mm<sup>3</sup> reservoir, (ii) a water treatment plant with a capacity of 6.000 m<sup>3</sup>/day, (iii) a reverse osmosis plant for treating brackish groundwater with a capacity 2750 m<sup>3</sup>/day.

A total of 62.4 km of main aqueducts throughout the island are also included. The system of main aqueducts includes five pumping stations with installed capacities of 2200 kW, 1000 kW, 800 kW, 135 kW and 90 kW plus smaller in-line booster pumping stations. For the island of Paxoi a seawater desalination plant with a capacity of 540 m<sup>3</sup>/day has been provided.



*Proposed works*

A full hydrological study has been carried out in relation to the above works. Existing groundwater supplies have been investigated in terms of both quality and quantity. An Environmental Impact Assessment Study has been completed. The first part of a water network leakage study for the island's main city (permanent population 50.000 plus 27.000 tourists in August) has been completed, including:

- preparation of digitised network maps,
- field testing of network valves,
- development of a calibrated network hydraulic model,
- preparation of specifications for network instrumentation,
- preparation of specifications for leak detection equipment,
- preparation of requirements for the second part of the network leakage study.

The hydrological study, leakage study, EIA study and preliminary design of the works are complete. Final design and tender document preparation have been carried out through the second contract completed in October 2009.