

# **WATER SUPPLY FOR THE TOWNS HERAKLION AND AG. NIKOLAOS FROM APOSSELEMIS DAM, ISLAND OF CRETE**

## **Country**

GREECE

## **Location**

Island of Crete

## **Client**

Ministry of Public Works  
and Environment

## **Financing**

European Cohesion Fund

## **Project Cost**

287.6 M EUR

## **Overall consulting services**

3,124,000 EUR

## **Services of ENB**

656,000 EUR

## **Project Duration**

10/2000 - 5/2006

## **Associated Firms**

HYDROEXIGIANTIKI"  
Lazaros Lazaridis &  
Partners Ltd,

CABINET MACHAIRAS  
S.A.,

G. KAFETZOPOULOS D.  
BENAKIS - I. PRINTATKO  
& Partners Ltd,

GEOMECHANIKI Ltd,

SOTIROPOULOS &  
PARTNERS Ltd,

GEOLOGIKI YPOSTIRIXI.

## **Project Description**

The management of the water resources of the Aposselemis River basin and of the Lassithi Plateau basin in the island of Crete has the objective of reinforcing the water supply system for the towns of Heraklion, Agios Nikolaos etc.

The water supply for the town of Heraklion and the coastal tourist zone until the town of Agios Nikolaos in the island of Crete is highly problematic because of the lack of water in sufficient quantity and satisfactory quality in the whole region. This serious problem affects the tourist and socio-economic development of the region (264,000 inhabitants and 126,000 tourists served) and will be solved by the creation of the earth dam and reservoir on the Aposselemis river and the treatment, storage and transfer of the treated water in combination with the rational exploitation of the existing groundwater resources as well as by the execution of a programme for reducing water losses in the existing distribution networks.

The Project comprises :

- The transfer of waters from the Lassithi plateau to Aposselemis. Lassithi plateau works lie within two Natura 2000 areas (GR4320002 & GR4310006) and appropriate environmentally friendly approach has been followed.
- The construction of a dam and related works (earth dam, H=56.0 m, V=27,000,000 m<sup>3</sup>).
- A transfer conduit from the dam to the water treatment station (L=6,775 m, DN=1,100÷1,200 mm) including tunnels (total length 3,680 m).
- A water treatment station for 110,000 m<sup>3</sup> per day.
- The transfer conduits from the water treatment station to the town of Heraklion (L=29.100 m, DN=500÷1,100 mm), and to the town of Agios Nikolaos (L=32,370 m, DN 500 to 600 mm) including tunnel 800 m long and a pumping station.

## **Services**

Technical Assistance of the project, in particular :

- Study for the management of the water resources of the Aposselemis River basin and of the Lassithi Plateau basin including the Management study of the Aposselemis Reservoir Biotope.
- Additional geological and hydrogeological studies.
- Checking of the previous studies.
- Financial Proposal to the EU and monitoring reports to the EU.
- Environmental impact assessment studies (Natura 2000).
- Evaluation of results and water analyses.
- Leakage control programmes.
- Modification of the plans and Tender Documents concerning the Aposselemis Dam.
- Checking and evaluation of the complementary investigations.
- Revision of the design of the Lassithi plateau to conform with new findings of the investigations as well as to the NATURA terms and of the aqueducts downstream of the dam.