# Environment

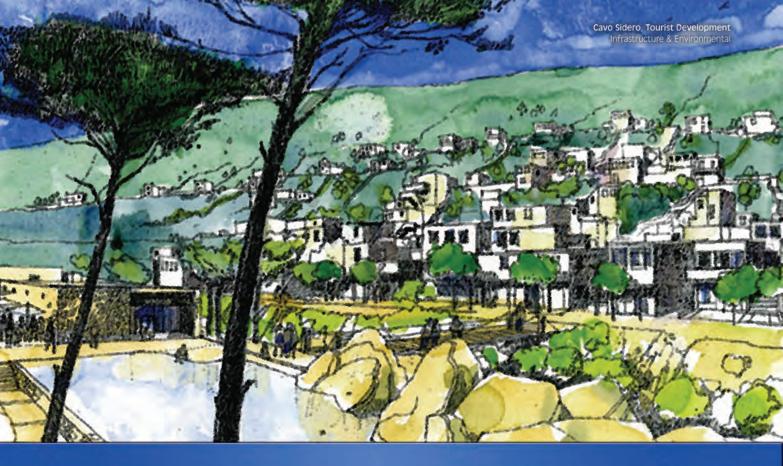
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Landscaping and Parks, Environmental Protection Environmental Impact Assessments, Energy Saving Bioclimatic Systems, Contamination Prevention, Ground Protection and Mitigation Measures

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# Environment

Landscaping and Parks, Environmental Impact Assessments, Energy Saving Bioclimatic Systems, Contamination Prevention, Ground Protection, Environmental Protection and Mitigation Measures & Water and Soil Pollution

LEEAD Consulting is highly involved in Environemental Projects, offering solutions for: Landscaping and Parks, Environmental Impact Assessments (EIA), Energy Saving Bioclimatic Systems, Contamination Prevention, Ground Protection, Environmental Protection and Mitigation Measures & Water and Soil Pollution

As leaders within our respective fields, we offer the following high quality services for your project:

**Environmental Studies** 

- Sustainable Design
- Environmental Assessments
- System Reliability
- Energy Conservation
- Systems & People Safety
- Environmentally Friendly Systems
- Automated operations, and user comfort
- Environmental Protection
- Water and soil pollution
- Solid, Industrial and Toxic Wastes Collection
- Treatment and Disposal

#### Cavo Sidero

Tourist Development, Crete, Greece

Infrastructure & Environmental

An integrated tourist development of 7,000 beds in 5 villages on a 2,600 ha. area at the northeastern tip of the island of Crete belonging to the 'Panagia Akrotiriani' foundation.

Services to Loyalward Ltd., the developer of the project, included strategic planning and project coordination, infrastructure design, and obtaining a series of environmental impact permits. Furthermore, full design and tender documents were prepared for about 5km of new internal roads.



#### Water and Soil Conservation, Tunisia

Surface Water Resources & Basin Development Schemes

Infrastructure & Environmental

The implementation of the project took place within the framework of the National Plan for Water and Soil. Conservation was made in the year 2000. The Plan reviews the use of surface water resources and integrated basin development schemes. The objectives of the project were to stop erosion by controlling flooding by the integrated management of the drainage basins, to use the quantities of water normally lost for the domestic, agricultural and other requirements of the local population, finally the protection of downstream infrastructure from flooding and silting of major works was included in this project.

It was applied to almost all regions of Tunisia and consisted of: construction of 275 hill side reservoirs of an average capacity of  $50,000m^3$  of water, construction of 300 flood control works by retention 600 works for aquifer recharge, anti-erosion protection works.

Technical Assistance Missions (agro-economists, rural engineers, sociologists) provided : Project management/monitoring / Financial management / Construction monitoring / Training / Creation of farmer's association / Ensure participation of women.



### Olive and Vineyard Registers (LIS)

Trifylia, Prefecture of Messinia, Greece

#### Environmental

The establishment of an Olive and Vineyard Register, as dictated by EU Regulations, is a mandate for continuing subsidizing of olive oil raising and wine. It is based on identification of all olive and vineyard parcels on ortho-rectified aerial images. All parcels had to be identified on the orthophotos and a declaration had to be filled by each cultivator.

The project was based on an integrated database-driven System for collecting, cross-checking and identifying all parcels using CAPI techniques (Computer Aided Photointerpretation) and extensive field work in co-operation with local recruitment. The total declarations for Trifylia alone were about 13,000 declarations and over 40,000 parcels positively identified.

In technical terms: Full geographical database under Microsoft Access/ Oracle 9i. / 2 major software applications using full ArcObjects, MapObjects in VB and .NET VB and C# / Topology controls using custom C++ / Assembly modules / Analogue print-outs (map-sheets), more than 40,000 batch-processed using Crystal Reports.



#### Pedio Areos Park

Rearrangement and Planning, Athens, Greece

Architectural Design & Landscaping

The rearrangement and planning of the Municipal 'Pedion Areos' Park is based mainly on the principles of respect of the site and its historical importance (since 1880) for the increase of the green areas and planting and also functionality and utility for the citizens. All the above are met by enhancing the historic monuments and sculptures by creating areas of historical interest, by minimization of tiling and cement flooring, the improvement of existing flora and planting new plants and trees (94,000) compatible with the local microclimate and an increase of the security devices to protect visitors from various hazards on a 24 hour basis. Moreover, a friendly and pleasant surrounding has been created for the visitors together with an improvement or creation of spaces for spots, leisure, entertainment and cultural events. There has been an upgrading and conversion the existing Park open air Theatre to a multi-functional space of an area of 3,000m<sup>2</sup>. A skateboard space has been designed as well as a mind track for running and a network of bicycle ways. A maze by Attica flora is to be created in the shape of the Minoan Labyrinth. Water features will provide a fresh and cooling feeling. An important point has been the provision of all kinds of facilities for the access of handicapped persons to all open and covered spaces of the park. The project was a 50% in collaboration with Meletitiki A. N. Tombazis Ltd.



#### Paute Region Rehabilitation, Ecuador

Technical Assistance, Emergency Response & Rural Development

Infrastructure, Environmental, Geotechnical & Supervision

Following a major landslide and the obstruction of the Paute River, severe flooding occurred in the outlying region thus causing major environmental and infrastructure damage. A major effort was undertaken by the Ecuadorian Government in restoring both environmental and normal living conditions. A multi-disciplinary team was formed to solve the complex issues involved. Major works and interventions included the stabilization of the front slope of Cerro Tamuga, training of the river Paute (with the construction of 5 grade control structures and bridges, sanitation works and latrines, 400 houses, 20 community buildings, programs of land rehabilitation and soil conservation, reforestation projects, irrigation systems and support to the production and training.

Design and supervision of Paute river training and related works for flood control, participation in geotechnical studies, community development projects (houses, schools, etc.), establishment of a Geographical Information System (GIS), design and tender documents and supervision of construction of the slope stabilization works, were included.



## Niger Office and Rice Segou Operation

Rehabilitation Programme, Hydro-Agricultural Projects, Mali

#### Structural, Infrastructure, Environmental, Supervision

The project was implemented within the framework of the rehabilitation of the rice sector, depending on the Macina canal. The rehabilitation works involved the hydraulic restoration of the irrigation network, for a firm control of the water level in the rice fields in order to enable a rapid change towards intensive riceculture thus improving the farmers' living conditions and income. Services provided were:

- · Supervision of works during the entire project implementation
- Surveying and geotechnical investigations.
- The rehabilitation of irrigation Infrastructure: Macina primary canal (60km), distribution canals of Kokry and Boky, the main drainage network of Boky Were (20km) and the associated secondary and tertiary drainage networks.
- Construction of all civil engineering works related to the irrigation network (regulators, water intake and drainage works) and village infrastructures (wash- houses, etc.)
- Construction of the road network on each side of the Macina canal, Kokry and Boky Were distribution canals (total length 290km) and crossing structures (bridges, footbridges, culvert, etc.)









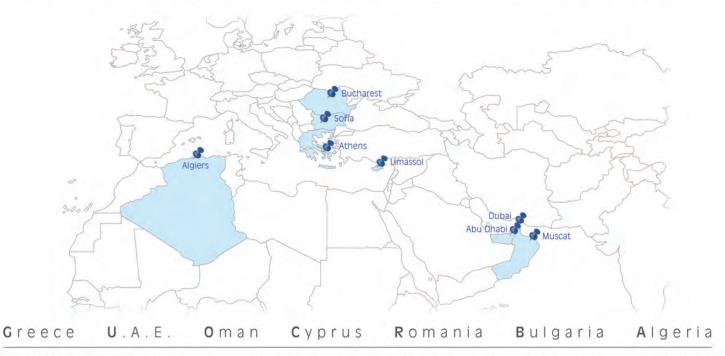


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