



**Strengthening the Scientific Foundation of Water Quality Programs**

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<b>Dissemination Level</b>		
<b>PU</b>	Public	<b>X</b>
<b>PP</b>	Restricted to other program participants (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the Consortium (including Commission Services)	

A project information leaflet was prepared at the beginning of the project. 100 copies were printed in April 2010 and the leaflet was distributed during the kick-off seminar to inform the participant about the project's tasks, goals and participants. The leaflet was also given to all the participants during the filling of the questionnaire and to various organisations and interested parties.



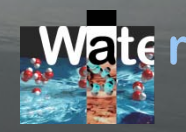
**LIFE-WATER**  
**Strengthening the Scientific Foundation of**  
**Water Quality Programs**

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## Strengthening the scientific foundation of water quality programs

WATER is the result of a joint effort of the Cyprus Department of Environment, ATLANTIS Consulting Cyprus and Frederick University and aims to promote water quality protection through the strengthening of the scientific foundation of water quality management programmes. Through the project, the Department aspires to produce state of the art tools for the management of water quality at catchment scale. The major technical objective of the project is to establish and implement detailed, distributed dynamic simulation models in terms of a dynamic water budget, resulting from the natural climate driven hydrological cycle, anthropogenic demand, and allocations, resulting in criteria of water availability and quality. BASINS4 and associated models (HSPF, Aquatox, etc) will be used from this purpose in conjunction with ARCVIEW/ ARCGIS. A key aspect of the project is the introduction of Total Maximum Daily Loads (TMDLs) as the key mechanism for guiding water quality management decisions.

The overall goal of the project is to strengthen the scientific foundation of water management programmes, including criteria development for pollutants of high potential impact on environmental quality and biodiversity. As such the project will establish and demonstrate an innovative set of methods and tools for the design and implementation of programmes for the preservation of high environmental quality and good ecological status of water bodies.

In particular the proposed tools will increase the scientific basis for constructing, communicating and evaluating water management plans and measures. Further the project will help to establish Policy, Scientific and Technical integration between programmes for the development of water quality standards and criteria and regulations relevant to pollution prevention such as the issuance of emission permits and implementation of EIAs.

### In summary, key elements of the project are the following:

- Introduces carrying capacity considerations in water quality management planning. Carrying capacity assessments will be driven by a set of water quality criteria that will aim to ensure good ecological status and high environmental quality and to maintain the water body functions.
- Facilitates water management decisions through scientifically verified maximum allowed pollutant load
- Facilitates the allocation of allowable pollutant loads through a well verified and transparent scientific process
- The project will build a dynamic water quality management system that will facilitate the continuous monitoring and updating of water quality plans and measures
- Specific target of the project is the preparation of a quality management plan for the Larnaca Salt Lake

## Necessity of the Project

The project targets the problem of ensuring the good ecological status of water bodies in Cyprus. In general it aims to create the capacities and tools to facilitate the design and monitoring of cost efficient water quality management programmes and measures.

Water systems in Cyprus are facing increasing pressures both from human induced activity and natural weather / hydrological changes. Water availability has in recent years been the most pressing issue due to the ongoing drought. A significant portion of aquifers are facing depletion and or water quality problems, with saline intrusion being a major concern. At the same time urban non point pollution has been one of the main sources of pressure and, though the implementation of directive (91/271/EEC) will help to minimize urban pollution impacts, such pressures will likely continue to exist.

Agriculture is a major contributor to non-point pollution regarding nutrients, BOD and biocides, while it is putting tremendous pressure on water availability. Measures for the control of non-point pollution such as the code of good agricultural practice help to reduce pressures from agricultural pollution. However such measures concentrate on the implementation of prescribed pollutant control measures, usually homogeneously in applicable activities, and do not extend to wider policy level control. The severity of measures also is not directly linked to integrated impact of benefit analysis thus efficiency and cost effectiveness are not ensured.

The proposed project aims exactly at producing the necessary capacities for facilitating the design and control of such policies and measures in one integrated management tool. The project will thus enhance the scientific basis of water quality management and will contribute towards the preparation of cost effective policies and measures.