

# **CYPRUS-Water Resources**

## **Planning and Climate Change Adaptation**

### **Summary**

Cyprus is the third largest island in the Mediterranean Sea, with an area around 9251 Sq Km, population around 754. 000, and annual precipitation around 503 mm. During the last century it was observed that the climate changed with precipitation reducing at a rate of 1mm per year, where the temperature increased by 0,5°C. The reduction in precipitation and the increase of the temperature had an adverse impact on the availability of the natural water resources which were reduced by 40% from the estimates made in 1970 at the preparation of the Cyprus Water Master Plan. Extreme climatic phenomena especially droughts are more frequent than before, with droughts causing water shortage and scarcity, with adverse effects on the economy, on the social life and on the environment. Cyprus has developed and implemented a national Water Master Plan, which was prepared in the 1970's, based on the meteorological data available at the time. After implementing the plan it was realized that the available water resources were by 40% less than originally estimated causing a water crisis. The water crisis caused by the climate change forced the Government to revise the water management plan, which envisaged the introduction of seawater desalination by the years 2005-2010 by introducing seawater desalination early in the 1997's, by accelerating the construction of the domestic effluent reuse projects, by intensifying the implementation of water demand measures, and proceeding with the re-evaluation of the water demand and the available natural water resources.

Cyprus has ratified both the Climate Change Convention of 1992 and the Kyoto Protocol and has prepared a National Strategic Plan for fulfilling its obligations, although they are not yet specifically defined because Cyprus is not included in the List A of the Kyoto Protocol. Cyprus has set up an Ad-Hoc Committee on Climate Change and is now active in the selection of the strategy and of the measures to reduce/stabilize the emission of the Green House gases to the atmosphere. However the Committee is not concerned with climate change adaptation measures.

Because of the climate change and the immediate impact on the reduction in the availability of the natural water resources, the Government of Cyprus has set up a Drought Management Committee with the responsibility of implementing measures of mitigating the adverse effects from drought and mainly to mitigate water scarcity problems. In parallel to this, realizing the need for additional water the Government decided to introduce seawater desalination for augmenting the water availability and increasing the reliability of water supply from the existing Government Water Projects. The Drought Committee is not a permanent committee but an Ad-Hoc one and is energized when Drought Occurs.

Since there is great probability that the Cyprus climate change will continue and that because of the Global Warming the level of the sea surrounding the island shall continue to rise with adverse effects on the coastal aquifers and the extend of the coastal lands, the need for a Strategic Plan for mitigating the climate change effects and for adaptation measures is a must. Cyprus has great experience on mitigating adverse effects due to water scarcity, one of the adverse effects of climate change and this can be shared with other countries. The roundtable discussion during the Athens Conference offers an opportunity for the exchange of experience and know-how and every effort must be made by all participants for a successful fruitful conference. The roundtable conference should be the beginning for thorough discussion of the important issues related to climate change, precipitation, temperature, seawater rising, the cause of extreme climatic phenomena, their effects on the control and availability of the natural water resources, the suitable measures for avoiding/minimizing the climatic change in accordance with the Kyoto Protocol, the measures to mitigate the adverse effects and the consideration of adaptation policies for facing the impacts of climate change.

The important points/issues to be discussed at the roundtable must the practical tools to enable the participants and the national representatives to evaluate the climate change, to evaluate the adverse and beneficial or other effects and what are the effective measures to mitigate the after effects. This shall enable the Mediterranean countries to prepare their national strategy plans for mitigating the adverse effects caused by the climate change phenomenon.