

WATER RESOURCES OF CYPRUS

BY

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Project Report

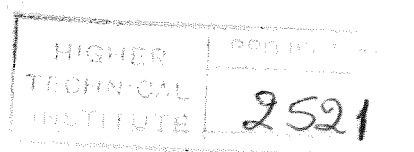
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CHAPTER 1

1.1 INTRODUCTION

Since the beginning of civilisation human settlements were located in areas of easy access to water such as streams, natural springs and eventually in areas where drinking water could be drawn from shallow wells. This was the case also with Cyprus. This shows the importance of water to the survival of humans and to the economy of each community.

In our days water is very important to all countries especially to those who have problems with it. One of those countries is Cyprus.

Cyprus is the third in size island in the Mediterranean Sea with an area of 9251 sq. km. The most prominent physiographic features of the Island are the two mountain ranges, that of the elongated Kyrenia Range - Pendadactylos - extending along the northern coast of the island with its highest peaks around 1000m high and the rounded mass of Troodos mountains occupying the southwestern part of the island with its summit at the height of 1950m above sea level.

Cyprus has a semiarid Mediterranean climate with mild rainy winters and dry hot summers. Rainfall by 90% occurs from November to March, while the remaining 10% occurs from April to September.

All water resources the island has are replenished only by precipitation.

These resources are limited in quantity because precipitation upon which are depended on is low (only 500mm) and the evaporation very high (80%) due to the long sunshine, the dryness and the continuous movement of the air.

The yearly average precipitation of Cyprus is 500mm which is not evenly distributed, ranging between 200mm in the eastern plains and 1000mm on the Troodos mass. Unequal distribution of rainfall results in poor crops in low rainfall results areas whereas in the mountainous regions the forests use part of the rainfall for their growth with the remaining water being transported by steep rivers and the lost to the sea.

As it can be seen a major water problem is rised. This problem has to be sovled because the economic development of Cyprus and the attainment of high living standards of its people are closely related to the availability of fresh water needed for drinking, for agriculture, for industry and tourism. The problem gets bigger every day because the needs are increased and the rainfall decreases every year.

After the independence each government saw the importance of solving this problem and therefore created a certain water policy. This policy covered both the present and the future. First Archbishop Makarios with his government sets targets for the development of water resources. All governments after Archbishop's Makarios government followed the same policy.

For the completion of this policy many projects were carried out in order to solve the water problem. The work done so far is important. Many large dams were constructed and their capacity increased from 6.1 MCM in 1960 to 297 MCM today. Some of the most important dams are Kouris Dam with capacity of 115 MCM, Evretou Dam with 24 MCM, Kalavastos Dam with 17 MCM, Asprokremmos Dam with 52.4 MCM, Dhypotamos Dam with 13.7 MCM, Lefkara Dam with 13.8 MCM and Yermasoyia Dam with 13.5 MCM.

But the government doesn't stay only to these. She looks ahead and therefore

has already plan the steps to be followed in the future. These steps include the construction of several dams, the reduction of the evaporation from the dams, the artificial enrichment of ground water, the reuse of sewage water, the desalinization of sea water, the import of water from neighbour countires, the artificial precipitation, the use of water in the most economic way, the correct management the public awareness campaigns and water conservation measures.

Finally if we make a water balance table we can see that there is a small deficit. From the 900 MCM which is the mean annual water crop, 67% is surface runoff and 33% groundwater. On the other hand we have 37% as losses to the sea, 30% pumpage and flow from springs, 21% mean annual yield of the dams and 17% as diversions for spate irrigation from the streams. This results to a small deficit of the order of 5% which is due to overpumping.

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