

# MEDIAES

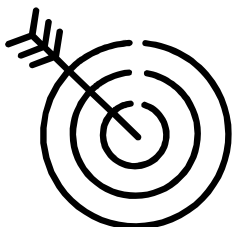
**The people living in the Southern part of Evia Island in Greece have been facing water shortage problems for quite some time. This morning, they wake up to find out that their taps don't work...**

**The scenario in brief:** The problem of water in Evia Island can be described simply: There is not enough water to meet the human, agricultural and environmental demands! Although the island is generally characterised by mild Mediterranean climate, during the last years successive long periods of draught have decreased the quantity of water in the island. On the other hand, the growing demand from agriculture, industry and tourism has put even more stress on the limited water resources.

This morning the mayor had to “cut off” the water supply of the whole area.

Same day, a public consultation is organised at the town hall with the participation of the major water user groups, so as to reach a resolution. The different user groups defend their arguments in order to acquire enough supply to meet their group's demands.

**The participants have to decide on some restricting measures today, otherwise the water will be “cut” on a daily basis for 3-4 hours!!!**



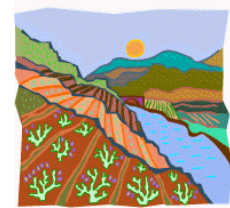
**The goal of the Role play:** The participants, representing the major water user groups must decide on a concrete proposal to deal with the water shortage problem, after taking into account all competing interests of users and after examining all alternatives. Their JOINT decision should be based on the common good and interest of ALL.

## The facts of the scenario:



Options for increasing water supply include *pumping groundwater, recycling from wastewater treatment plant, sea water desalination, drying the neighbouring wetland* (Distos Lake) and use its water for agriculture, or *water transfer by tanks*, from other neighbouring parts of the country. The construction of a *dam* is also an option for the Government, which seems not to be able to afford it at this stage.

Agriculture has benefited over time from an ample allocation of water at extremely low prices. The agricultural section accounts for approx. 80% of the overall water consumption! (the rest goes to industry, tourism and domestic uses).



Most farmers cultivate cotton and grain which are water demanding crops, and also olive trees, vegetables, and fruits, which have lower water demand.

Drip irrigation system can save up to 80% of water compared to other watering methods, because in this case no water is lost as runoff, deep percolation or evaporation.



- ✦ The neighbouring lake of Distos is mainly fed by agricultural run off and rain drainage. With the loss of wetlands in the region the lake has become a critical habitat for wildlife and an important sanctuary for migratory birds.



The management of water is currently, entirely in the hands of the public sector (local authorities, through the water company). The infrastructure developed over the last century is unsafe, with aging pipes and treatment facilities. The losses in water from the old supply system in the region are estimated to be 25%!

Although recycled water resulting from a sewage treatment plant is very rich in nutrients and can be used for agriculture, most people are biased against it. Once properly treated this water can be used to recharge aquifers i.e. by percolation. Currently, the wasted water is recycled through and the resulting effluents are thrown to the sea.

The desalination of sea is a method widely used especially in very small dry islands that have no other option to obtain water. This is a very expensive, energy-intensive method.





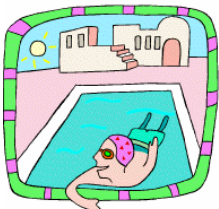
The island is rich in bauxite which is converted to aluminium and then exported. For the production of 1 tone of Aluminium (from 2,2 tones of bauxite) 230kg of petrol and 6 tones of water are consumed!! Aluminium industry is therefore considered very high energy demanding, not to mention the water consumed in the process...



Bauxite has been extracted last 50 years. Of course Aluminium is a precious material but the excavations have altered dramatically the landscape since the deforestation of a wide mountainous area, with rare wild habitat and natural beauty. No plans for its restoration exist.

The industry sector is requesting the government to co-fund the construction of a dam and a hydroelectric plant in the only big river of Evia, on the basis that the industry itself will use the energy from the plant. Of course this will diminish the water available to the regions downstream.

Pumping groundwater is a relatively low cost method for obtaining water, but the underground water level of the area has dropped and is now threatened by sea intrusion.



Although the area is considered rather dry, most hotels have extended golf courses, which consume a lot of water for irrigation. Every hotel in the region has swimming pool and almost none has installed a water recycling system.



Many small islands of Aegean without any water resources are supplied with water via tanker ships, especially during the dry months of the summer, when the demand rises due to tourism.

↳ Population is not expected to rise in Evia over next decades.

## **Group 1**

### **The residents of the city**

*We know of the extended draught period but had never imagined that things have worsened so much. We are out of water??? How can this be? Can't we pump more? Or can't we bring it from somewhere else? Really, will the water resources of the planet end someday? Isn't it an inexhaustible resource?*

*Anyway, we must find a solution to this problem today because it's unacceptable that the Water Company considers cutting off the water supply for so many hours a day!*

## **Group 2**

### ***The farmers of the wider region***

*Most of us currently cultivate cotton, grain (water consuming crops), as well as olive trees, and vegetables. The extended draught has put at risk our crops and we need now a lot of water to save them. The installation of a drip irrigation system, which would save a lot of water, is rather expensive for us...*

*Of course we argue for our demands; however we won't accept postponing the solution. Altogether we have to reach a plan today, even if it is a compromise because cutting off the water supply on a daily basis will dry all our crops!*

## **Group 3**

### **The local Water Company**

*We manage the available water resources, the water treatment and the wastewater treatment plant of the area as well as the maintenance of the distribution system of the area (pumps, etc). The long draught has diminished all available deposits, so now we look into any EMERGENCY option that will secure water for this difficult period. In the meantime we have to think of a more temporary solution to provide enough water for all residents.*

*If no decision is taken we will have no option but to “cut off” water supply for 3-4 hrs on a daily basis, in order to economise.*

## **Group 4**

### **The Environmentalists**

*Obviously, our primary arguments are in favour of the interests of the people of the community; however, we will fight against any option that puts even more stress to the already heavily degraded environment.*

*We strongly believe, that the final decision should bear in mind that enough water should remain in the environment (underground, streams, wetlands) to protect biodiversity and the wildlife habitat.*

## **Group 5**

### **The Government representatives**

*Our participation in this meeting was unavoidable, but we are reluctant regarding supporting one option or the other because we do not wish to dissatisfy any of our voters.*

*Of course if we manage to resolve this dispute we will receive all the credit... but if things get too difficult we may postpone the decision or try to pass the responsibility to the Mayor, in order for us not to bear any political cost.*



## **Group 6**

### **The Hoteliers**

*We expect a lot of tourists this summer and we cannot risk in no way having not enough water to meet their needs. Of course most of our hotels have big water pools and also golf courses, consuming in this way a lot of water, but we pay for it! And in any case this water is much less than the quantity consumed by the farmers...*

*Today we support strongly our demands; however we have to come up with a resolution, even if it is a compromise, because cutting off the water supply on a daily basis will be disastrous for our business!*

## **Group 7**

### ***The Industry representatives***

*We extract bauxite and convert it to aluminium through a very expensive process that demands a lot of petrol. That's why we have been pressing the government to co-fund with us the construction of a Dam and a hydroelectric plant on the north of the island, in order for us to use the energy produced in this way. The water collected in the reservoir will be available for all residents, cover the needs of farmers, hoteliers etc.*

*We argue for our demands today; however we won't accept postponing the solution. Altogether we have to come have to reach a plan today, even if it is a compromise because cutting off the water supply on a daily basis will result to loss of millions of Euros!*

## **Group 8**

### ***The Mayor and the municipal council***

*We have a primary duty to ensure that ALL residents of the region have enough water to meet their basic needs. Of course we have an interest in promoting the economic development of our island (in terms of agriculture, tourism and industry). And finally we have the power to coordinate the actions of the major water user groups and to enforce limits and restrictions, when necessary. In other words, whatever decision we reach today, we will make sure it is implemented fairly.*

## **Instructions & Rules for the Role Play game:**

1. The moderator reads out to the participants the Scenario and distributes the cards, and the facts of the Scenario. These FACTS are true for this case and known by all groups.
2. Participants are assigned their ROLES (Water User Groups 1-8). This can be done by drawing pots or by preference. If the participants propose another Group of stakeholders this may be included as well. Members of the Groups discuss and analyses their views and prepare their arguments, depending on the Group's interests. EachGroup is welcome to "fill in" the gaps of the scenario with its own characteristics and goals, as Water Users. Also the Groups should try to predict the arguments of the other Groups and prepare to answer back to them.

*However each Group should think of possible alternatives and be prepared to negotiate for the most appropriate resolution that will satisfy everybody. Although each Group has specific interests, during the role play they may change their views, based on prioritising the justifications of all other Groups.*

3. Each Group begins by describing to the floor the Group's characteristics. They present the needs in water of their Group in terms of quality and quantity, and propose a solution to face the current water shortage.

*They are encouraged to present the moral justification of the Group they are representing. However, this should be done in a democratic way and certainly not by provocative conflicts with the other Groups.*

4. The floor will be open to all participants for them to give input to the discussions. They should *make proposals* on the best potential course of action. (The moderator may guide the discussions, keeping track of time).
5. During the last part of the role play, the municipal council, chaired by the Mayor will have an open discussion on the views expressed so far and try to reach a fair decision.

***In general it is preferable to come up with a clear, positive and as much as possible, realistic decision, taking into account EVERY Group's interests. The result should lead to hope, and not disappoint the major water user groups.***