

# **EXTENSIVE ABSTRACT OF THE HABITAT MANAGEMENT PLAN**

## **Summary of the evaluation of the habitat types in all the study sites**

From the Habitat Management Plan report which resulted from the mapping study of the Habitat Types of Natura 2000 sites, (Data forms of the conservation status for the habitat types of Annex I of the Habitat Directive 92/43), comes up that Gavdos Mediterranean Temporary Ponds found in excellent conservation state (A) while all the rest had been characterized to be in good conservation state (B).

Today, according to the data of our research, the trend is directed towards the degradation of the structure and the processes in the Falasarna ponds and in part of the Elafonisi/Chrysoskalittisa ponds, while in Kourna lake the condition seems to be steadily degraded without showing indications of further distortion. Therefore, it has to be stated that the last six-year period the conservation state has been degraded from B to C, for the ponds in Falasarna and Elafoniso/Chrysoskalittisa.

## **Threats and impacts by site**

### **Elafonisos/Chrysoskalittisa**

The anthropogenic impacts forced at the site that constitute a threat for the conservation of the Mediterranean Temporary Ponds are the following:

- I. Excavation, stirring and removal of the soil
- II. Soil compression because of the traffic (heavy vehicles)
- III. Expansion of the greenhouse cultivations and the irrigated lands
- IV. Overgrazing.

### **Gavdos**

The anthropogenic effects at the area which also commend a threat for the conservation of the Mediterranean Temporary Ponds are the following:

- I. Livestock watering
- II. Pollution and eutrophication of the ponds water
- III. Covering the ponds with stones
- IV. Perturbation from accidentally and unpredictable disasters

### **Kourna Lake**

The anthropogenic effects in the area which also contribute a threat for the conservation of the Mediterranean Temporary Ponds are the following:

- I. Eutrophication from the surface water that are rich in nutrients and come from the cultivated areas in the around area
- II. Surface water polluted from pesticides
- III. Intensification of the land use in the hydrological basin of the Kourna lake
- IV. Expansion of the shrubberies (*Vitex*)
- V. Overgrazing from geese
- VI. Extensive exploitation as water resource.

### **Falasarna**

The anthropogenic effects in the area which constitute threat for the conservation of the Mediterranean Temporary Ponds are the following:

- I. Eutrofication and pollution of the ground water table
- II. Disaster of the area from the deposit of wastes and sediments
- III. Direct and indirect effects from the construction and use of the greenhouses
- IV. Desiccation and handling (management) of the ground water table
- V. Pollution of the surface water through the drainage ditches
- VI. Overexploitation of the resources that enriches the ground water table

### **Omalos plateau**

The anthropogenic effects in the area which also constitute threat for the conservation of the Mediterranean Temporary Ponds are the following:

- I. Accidental disaster or pollution from the nearby roads
- II. Extensive use as water reservoir for the livestock watering
- III. Potential water resource for irrigation

## **Management and restoration measures**

### **Elafonisos/Chrysoskalitisa**

In the area of Elafonisos/Chrysoskalitsa the management objectives, the management and restoration methods correlated with the current anthropogenic effects and threats are mentioned in a brief way in the Table 5.1, which follows:

**Table 5.1.** Threats and relative management objectives and restoration methods of the area of Elafonisos/Chrysoskalitisa.

<b>Threats</b>	<b>Management objectives</b>	<b>Management and restoration methods</b>
Excavation, stir and removal of the fine soil	Decrease of the dangers through the briefing-information of the public	Contact with the local authorities  Contact and information of the owners of the greenhouses
	Practice and imposition of legal means	Request at the local and regional administrative authorities in order to practice a prohibition regulation, practically, for excavation and removal of the soil from the area of the Natura 2000 network
Soil compression, because of the traffic(traffic of heavy vehicles)	Decrease of the dangers through the briefing-information of the public	Contact and information of the owners of the greenhouses  Request at the local and regional administrative authorities in order to practice a prohibition regulation, practically, for excavation and removal of the soil from the area of the Natura 2000 network
Expansion of the greenhouse cultivations and the irrigated fields	Limitation of the effects from the potential polluted resources  Practice and imposition of legal means  Practice local land and property register	Request at the local and regional administrative authorities for practicing the land and property register  Request at the local and regional administrative authorities in order to practice a prohibition regulation, practically, for excavation and removal of the soil from the area of the Natura 2000 network  Interference in the planning of land uses in local level and proposal for limitation of the greenhouses in the region located eastward of the road
Overgrazing	Limitation the overgrazing in small degree	Construction for watering in areas outside the MTPs and ecological fencing of the habitat but allowed the grazing (open fencing)

## **Gavdos**

In the area of Gavdos the management objectives, the conservation and restoration methods related to the current anthropogenic effects and threats are reported in a brief way in the following **Table 5.2**.

**Table 5.2.** Threats and relative management objectives and restoration methods for the area of Gavdos.

<b>Threats</b>	<b>Management objects</b>	<b>Management and restoration methods</b>
Watering of flocks	Monitoring of the number of the flocks and livestock in every flock and of the consuming of water	Annual monitoring of the number of goats and sheep that use every system of a Mediterranean Temporary Pond (MTP)  Watering construction in areas outside the MTPs and ecological fencing of the habitat that will permit the grazing (open fencing)
Pollution and eutrofication of the pond's water	Monitoring of the number of the flocks in local level	Annual monitoring of the number of goats and sheep that use every system of a Mediterranean Temporary Pond (MTP)  Watering construction in areas outside the MTPs and ecological fencing of the habitat that will permit the grazing (open fencing)
Covering the ponds with stones	Decrease of dangers through briefing-information of the public	Contact and information of the people of Gavdos
Disturbance from accidental and unexpected disasters	Decrease of dangers through briefing-information of the public	Contact and information of the people of Gavdos

### **Omalos plateau**

In the area of Omalos the management objectives, the conservation and restoration methods related to the current anthropogenic effects and threats are reported in a brief way in the following **Table 5.3**.

**Table 5.3.** Threats and relative management objectives and restoration methods for the area of Omalos plateau.

<b>Threats</b>	<b>Management objects</b>	<b>Management and restoration methods</b>
Accidental disaster or pollution	Decrease of dangers through briefing-information of the public	Information of the local and regional administrative authorities Updating of the documentation for the Natura 2000 site, in order the Omalos MTP to be enlisted and the publication of the results (the updating has been sent from the Ministry of Environment and Public Works Of Greece to the EU)

Extensive use as water reservoir for the livestock watering	Monitoring of the number of the local flocks and the water consuming	Contact and information of the area stockbreeders  Annual monitoring of the number of sheep and goats used in daily base at the Pond for watering and how often  Regularly measuring (weekly) the size of the surface covered by the Pond  Construction of watering in areas outside the MTPs and ecologically fencing of the habitat which will permit the graze (open fencing)
Potential water resource for irrigation	Decrease of dangers through briefing-information of the public	Contact and information of the farmers of the area

## Kourna Lake

In the area of Kourna Lake the management objectives, the conservation and restoration methods related to the current anthropogenic effects and threats are reported in a brief way in the following **Table 5.4**.

**Table 5.4.** Threats and relative management objectives and restoration methods for the area of Kourna Lake.

<b>Threats</b>	<b>Management objects</b>	<b>Management and restoration methods</b>
Eutrofication of the surface waters that are rich in nutrients and come from the cultivated areas in the region	Land use without application of chemical fertilizers and pesticides in the hydrological basin of the lake	Contact and informing-sensitization of the land owners in the agricultural land over the MTP in order to not use fertilizers (at the basis of contract signing)
Surface water polluted from pesticides	Limitation of the effects from the (potential) pollution sources  Decrease of the dangers through the briefing-informing of the public  Land use without	Contact and informing-sensitization of the land owners in the agricultural land over the MTP so not to use fertilizers (at the basis of contract signing)  Informing and strengthening of the practice of the National Legislation that include laws encounter the pollution and of the European-International

	practice of chemical fertilizers and pesticides in the hydrological basin of the lake	commitments of Greece (Directive 92/43, Directive 2000/60)
Intensification of the land uses in the hydrological basin of the Kourna Lake	Decrease of the dangers through the briefing-informing of the public, contracts for the use of pesticides and fertilizers  Land use without practice of chemical fertilizers and pesticides in the hydrological basin of the lake	Contact and informing-sensitization of the owners of the agricultural land, also in the touristic-shops around the lake, in order not use chemicals and to avoid the direct waste disposal in the lake. The fields near the MTP and the Kourna Lake (including its flooding) will have to contain in the informative-sensitization campaign.  Cooperation with the Municipality of Georgioupoli for the promotion of the creation of sewage system and waste treatment plant
Spreading of the shrubberies	Control the shrubbery	Cutting the individuals of <i>Vitex (Vitex agnus-castus)</i> in a limited area near the MTP
Overgrazing from geese	Decrease of the effects of the grazing and monitoring the grazing  Decrease the dangers through the briefing-informing of the public	Contact and informing-sensitization of the local owners of geese flocks. Alternative or moreover could established fencings in which can take place the geese grazing
Overexploitation as a water resource	Decrease the dangers through the briefing-informing of the public	Contact and informing-sensitization of farmers in order that they apply the rules according our European and National obligations.  Forwarding of the hydrological study of the broader area of Kourna Lake to the Municipality and to the Regional authority for the quantification of the water reserves (water balance) which will underlie the application of rational plans for the management of water of the area

## Falasarna

In the area of Falasarna the management objectives, the conservation and restoration methods related to the current anthropogenic effects and threats are reported in a brief way in the following **Table 5.5**.

**Table 5.5.** Threats and relative management objectives and restoration methods for the area of Falasarna.

<b>Threats</b>	<b>Management objects</b>	<b>Management and restoration methods</b>
Eutrofication and pollution of the ground water table	<p>Decrease the dangers through briefing-informing the public</p> <p>Limitation of the effects from the (potential) pollution sources</p> <p>Application and imposition of law means</p>	<p>Contact and informing-sensitization of the owners of greenhouses</p> <p>Contact with the state local and regional authorities so to determined an area for the greenhouses outside the wetland</p> <p>Contact with the state local and regional authorities with objective the activation-application of the current legislation for the confrontation of the pollution/promotion of environmental friendly agricultural practices</p>
Disaster of the area from the disposal of wastes and sediments	<p>Decrease of dangers through the briefing-informing of the public</p> <p>Application of law means</p>	<p>Contact and informing-sensitization of the owners of greenhouses</p> <p>Contact with the state local and regional authorities with objective the activation-application of the current legislation for the confrontation of the pollution/promotion of the creation of waste collection system and disposal of solid wastes</p> <p>Removal of the illegal solid wastes and ditches disposals</p>
Direct and indirect effects from the construction and the use of greenhouses	<p>Decrease the dangers through the briefing-informing of the public</p> <p>Practice local land and property register</p>	<p>Contact and informing-sensitization of the owners of greenhouses</p> <p>Request at the local and regional administrative authorities in order to cooperate and practice a local land and property register</p> <p>Contact with the state local and regional authorities in order to define an area for the greenhouses outside the wetland</p>
Exsiccation and handling (management) of the ground water table	<p>Restoration and monitoring of the MTP hydrological dynamic</p> <p>Application of law means</p>	<p>Contact and informing-sensitization of the owners of greenhouses</p> <p>Forwarding of the hydrological study of the broader area to the Municipality and to the Regional authority for the quantification of the water reserves (water-balance) which will underlie the application of rational plans for the management of water of the area</p>

		Contact with the state local and regional authorities so to determined an area for the greenhouses outside the wetland
Pollution of the surface water through the drainage ditches	Limitation of the effects from the (potential) pollution sources	Contact and informing-sensitization of the owners of greenhouses  Contact with the state local and regional authorities with objective the activation-application of the current legislation for the confrontation of the pollution
Overexploitation of the resources that enrich the ground water table	Decrease the dangers through the briefing-informing of the public  Application of law means  Practice local land and property register	Contact and informing-sensitization of the owners of greenhouses  Request at the local and regional administrative authorities so they cooperate and to practice a local land and property register  Contact with the state local and regional authorities so to determined an area for the greenhouses outside the wetland  Application of a monitoring system that will includes the establishment of piezometer for measures of the level of the ground water table