

THE SALTWORKS OF ELOUNDA (CRETE) NEW PERSPECTIVES FOR THE REHABILITATION OF AN ABANDONED COASTAL WETLAND

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EXTENDED ABSTRACT

The establishment of the Venetian saltworks in the Gulf of Elounda, on the north-east coast of Crete, goes back to the 14th-15th century A.D. They were continuously exploited since then, first by the Venetians and after 1647 by the Turks. From the first years of the 20th century onwards they operated under control of the Greek State, but the repeal of the State Salt Monopoly law led to the cessation of their operation in 1972.

The saltworks always played an important role in the economy of the poor and arid area of Elounda and the everyday life in the nearby villages, which were established along the coast of the Gulf in the 16th century, initially as temporary settlements for the workers of the saltworks. In the 20th century, many inhabitants of these villages continued to work in the cultivation and harvesting of salt, which also helped them to survive during the Second World War, under the German rule, as they could barter salt for food and other necessary goods. Furthermore, an old crystalliser of the saltworks was used for some decades as a spa of brine mud therapy for skeletal afflictions.

For many years after 1972 the saltworks were abandoned; the place was degraded and its waters were subject to soiling and pollution. It is only due to the high tourism development of the area of Elounda Gulf, during the last decades of 20th century that local authorities have entered into an effort of sanitation, protection and rehabilitation of the historic coastal wetland of the old saltworks. A project on the "Development of the Elounda Saltworks" was drawn up in 1999 and most of its findings and proposals were incorporated (2001) in the "Master Plan for the Municipal Area of Aghios Nikolaos" (the capital of Lassithi prefecture), in which region Elounda at present belongs. Currently, another project is under preparation, concerning the establishment of a Salt Museum, which will be installed in a restored stone-made salt storehouse at the north end of the saltworks. The possibility of limited salt production for tourist purposes, in the traditional methods and techniques, is being examined, too.

Last, but not least, the cleaned waters of the saltworks' wetland have begun to attract greater numbers and a better variety of wild birds, such as flamingos, swans, herons etc., which find refuge here in late autumn on their way to Africa and some of them remain for the winter, to feed and to rest on the banks of the salt pans.

Key words: salt, emery, Crete, Elounda, saltworks, wetlands, brine baths, ecological parks, salt museums, sustainable rehabilitation

The saltworks of Elounda is located at the north-east coast of Crete, at the inner part of the Gulf of Elounda. Four decades have already passed since, after having been in continuous operation for at least six centuries, it was abandoned. Nowadays, its calm waters, at times dark green, at times light blue, lie voicelessly by the isthmus of *Poros*, silent testimonies of a memorable past, which maybe constitutes the most significant chapter in the history of the place.



Figure 2 (above): An aerial view of the Saltworks of Elounda, the isthmus and the canal at Poros (Google Maps).

Figure 1 (left): The Gulf of Elounda, aerial view (Google Maps). 1. Korfos (The Gulf), 2. Poros gulf, 3. Nissi peninsula, 4. Port and islet of Colochitha, 5. Isthmus of Poros, 6. Elounda Saltworks, 7. Spinalonga fortress, 8. Schisma village.

1.THE “SALINE DI SPINALONGA” THROUGHOUT HISTORY

The oldest positive testimony to the existence of the Venetian saltworks in the Gulf of Elounda goes back to the 15th century (years 1479 and 1499). But, considered the historical evidence found in venetian archival sources about distribution of saltworks to colonists settled in Crete during the first decades of the Venetian era, which began between the years 1204-1211, as well as the great augmentation of the population of the isle (and therefore the demand for salt), in the second Byzantine period (from 961 AD. onwards), one can justifiably presume that the establishment of the saltworks in question may date back to the start of the 13th century or even earlier.

The *Saline di Spinalonga* enjoyed their most flourishing period during the last decades of the 16th to the mid 17th century, mainly due to the construction (1579-1586) of the Spinalonga fortress on a little rocky islet, which lies at the entrance of the Gulf of Elounda. The harbour of Elounda and the nearby coasts being efficiently defended against pirate invasions by the fortress, the Venetian State was able to develop and expand the saltworks, which at that time were grouped in two plants, one at *Messa* (= Inside) Elounda, i.e. at the far end of the Gulf, and a second at some distance to the north, at *Oxo* (= Outside) Elounda. Their exploitation was conceded to feudatories from the nearby villages of *Fourni* and, no matter what problems at times occurred, they could give a salt yield of 35.000-60.000 *misure* (i.e. around 550-1000 tons) of salt per year. In 1647 the exploitation of the saltworks passed into the hands of the Turks who, having invaded West Crete in 1645, soon became masters of the greatest part of the isle. The Venetians, still owning

the fortress of Spinalonga, entirely destroyed the saltworks in 1653 but the Turks soon re-established them, so they are mentioned again in 1670 in Ottoman archival sources. During the numerous insurrections of the Cretan people against Ottoman rule, there were always conflicts around the saltworks, between local people who rushed to loot salt and Turks who tried to push them back. In the last decades of the Ottoman rule the management of the saltworks belonged to the Department of the Ottoman Public Debt; then it passed successively, to a committee of five people from the villages of Elounda during the revolution of 1897, immediately after to the Autonomous Cretan State and finally to the Greek Ministry of Industry, when Crete was united to the Greek State in 1913. The saltworks continued their operation, with a short interval between the years 1947-1955; substantial repairs were carried out in 1955, but the intention of the Greek State to update and develop them for improvement of the production (1964) was not realized; instead, their operation came to a halt, due to the suspension of the State salt monopoly, in 1972.

It should be noted that only the group of saltworks of Messa Elounda have been in operation in the modern times, as those of Oxo Elounda seem to have been gradually abandoned during the Ottoman period; to this fact can be attributed the decrease of salt production to only 30.000 misure (less than 500 tons) reported in a document of 1670; for this quantity the Ottoman state paid the producers 30.000 Turkish *aspres* (one *aspro* per misura). Some of these salt pans, still surviving as marshes on the seashore of *Schisma*, the nearest to the saltworks village of Elounda, were filled up with earth between the years 1967-1972, thus forming a part of the large square of the settlement.

2.THE DIACHRONIC ROLE OF THE SALTWORKS IN THE LOCAL ECONOMY

The decline of the ancient Cretan city of Olous, which lay on the isthmus of Poros and disappeared into the sea towards the end of the paleo-Christian period, combined to the continuous and serious problem of piracy, which did not encourage people to live by the sea, seem to have kept the shores of the Gulf uninhabited for several centuries. From the words of a Venetian officer in 1574, who stresses the urgent need for the harbour of Spinalonga to be fortified, among other military reasons, "*for the protection of people working at the saltworks*", we can trace an interesting fact: the little temporary settlements founded on the coast of the Gulf by people from the villages of the hinterland (Fourni etc.) coming here to work, have subsequently been transformed into the permanent villages of Elounda, which, therefore, owe their very existence to the presence of the saltworks.

During the Venetian and the Ottoman periods salt always retained its prime significance for the local economy, helping people to make their living, though state monopoly and heavy taxation left the producers only a little part of the price that consumers paid for it. The same happened in the 20th century, as, agriculture being the main occupation of local communities, people never had a sufficient farm production, because of the very dry climate and the arid and mountainous character of their land. Rumours that the saltworks was about to shut down in 1932 prompted the panic-stricken people of the villages to refer to the state authorities that such an event would bring misery to more than 50 families employed in salt-making.

Later on, in the hard years of German rule, the villagers used to go, with their pack animals loaded with salt, to the provinces of Lassithi and Pediada, to barter salt for food and other necessary goods. In this monetary use of salt, one *oka* (=1,28 kilos) of salt was the equivalent to two *okas* of olive oil. The struggle for survival under such circumstances understandably led to large scale salt smuggling, which obliged the Greek State to establish a sales branch for salt at Schisma; from there every person could get 7 kg of salt per year for personal use and any other kind of salt trade was strictly forbidden. In late au-

turn, after the salt harvest, the villagers were allowed to enter into the saltworks and collect the rest of the salt that remained in the crystallisers. Furthermore, people reverted to the primitive practice of the collection of brine, which was formed by natural crystallization in *gurguthus*, that is in puddles of the seaside rocks. When the operation of the saltworks was suspended in 1972, the local economy did not suffer a serious blow, only because a new possibility, easier than salt-making, had already appeared for the villages of Elounda: that of a rapid tourist development, a development which nowadays offers employment to 70% of the local population.

3. ECOLOGICAL PROFILE: NATURAL ENVIRONMENT AND ECOSYSTEMS

The *Korfos* (= Gulf) of Elounda is a naturally protected and shallow lagoon, with a maximum depth of 8 m. The climatic conditions in the area are mild, with limited rains, a long dry and sunshiny period from April to October or November, low levels of relative air humidity and, in summer, frequent strong winds (*meltemia*), with steady north-west direction. The above conditions explain very well the reasons why the saltworks have been installed in this area, their continual operation till recently and the usually very good or excellent quality of the product.

It has been stressed that “saltworks epitomize all types of known wetlands, since the whole spectrum of environmental conditions coexist here, from the harshest to the mildest.” Saltworks are semi-artificial ecosystems, unique of their kind, which host a great number of organisms, an important part of them endemical. Hence, the Gulf of Elounda, together with the site of the saltworks, constitute one of the most interesting coastal wetlands in Crete, an isle with very few wetlands and of limited size anyway; their shallow waters favour a high primary productivity, serving as a nursery ground for a great number of sea creatures.

In the limited space of the saltworks and in its surrounding area researchers of the Natural History Museum of Crete report to have identified a notable number of habitats, two of which are priority habitat types for the European Community. Moreover, they have listed a variety of 104 species of flora, among which 9 are endemic to Greece and 5 endemic to Crete. The maritime flora includes species of great interest, such as the *Posidonia oceanica* and the *Ruppia maritima*. Among the local fauna one can find about 10 species of mammals; two species of bats, designated as endangered in Greece, live in nearby caves and come to feed on the abundance of insects found in the saltworks. Among reptiles and amphibians we have the remarkable presence of *Caretta-caretta* tortoise, which, according to local fishermen, often visits the Gulf and even breeds here, though there are no sandy beaches suitable for it to lay eggs. Fifty-nine species of fish have been observed in the Gulf, most of the endemic species of the Cretan coasts included; the famous Cretan sargus, described by 18th century travelers, is one of them. Invertebrate fauna is found in great abundance and variety in these shallow waters; it is worth mentioning the mollusc *Arca noe*, which, under the name *achivadha*, is a popular local delicacy.

The greatest wealth of the saltworks habitat is, of course, its birdlife; 142 species of birds have been observed here, of which 53 are species threatened with extinction; Audouin's gull (*Larus audunii*), Eleonora's falcon (*Falco eleonorae*) and shag (*Phalacrocorax aristotelis*) are the most significant of the latter. Seventy-four species are passengers, especially during migration periods; this happens because Elounda is under the migratory route that birds usually follow as they fly along the west coast of Mirabello gulf, in order to overpass Crete at its narrowest point, over the isthmus of Hierapetra. Another 24 species are mainly winter visitors, some of which remain here to spend the winter; among them it's worth mentioning the presence of flamingos (*Phoenicopterus ruber*), swans (*Cygnus*

olor), cormorants (*Phalacrocorax carbo*), whimbrels (*Numenius phaeopus*), great crested grebes (*Podiceps cristatus*), little ringed plovers (*Charadrius dubius*), little egrets (*Egretta garzetta*), several species of herons (*Ardeola ralloides*, *Ardea cinerea*, *Ardea purpurea*), black-winged stilts (*Himantopus himantopus*) etc. For all these species of birds, the abandonment of the saltworks has affected the biodiversity of their habitat, as the pans of different salinity, which used to host different species of living creatures, are now uniformly flooded by waters. Fortunately, hunting is strictly forbidden in the area.

4. OPERATIONAL STRUCTURE: SALT-MAKING TECHNIQUES, WORKING PEOPLE, PRODUCTION CAPABILITY

The practice of salt-making in solar saltworks of continuous crystallisation, that is, of the type to which the saltworks of Elounda belonged, has remained almost unchanged throughout history: saturated brine is obtained from sea water with its gradual evaporation, caused by solar energy, and the sodium chloride (NaCl) crystals precipitate to the bottom of the crystallization basins. The density of sea water is expressed in degrees of the Baume climax ($^{\circ}\text{Be}$). Natural sea water has a density of approximately 3.5°Be - in the Gulf of Elounda it is a little higher, near the 4.0°Be - and saturated brine around 25°Be . In 4.6° precipitate the carbonic calcium (CaCO_3) crystals and in 13.2° the gypsum (calcium sulphate, CaSO_4) crystals. After the crystallization of NaCl, the magnesium (Mg) salts are formed beyond the 30°Be . The evaporation of 90% of sea water being indispensable for the salt to be obtained, the evaporation basins need to occupy 90% of the total surface of a saltworks. In the case of Elounda things are better again: the low air humidity and the strong winds have allowed a proportion between the evaporation basins (the so-called *thermastres*) and the crystallisers (*tigania*) of 80% to 20%. The total surface of the latter was 14.420 m^2 .

The traditional way of salt-making and the simple tools described in the Venetian documents of the 17th century reappear almost unchanged in the narrations of former workers in the saltworks of Elounda of the 20th century. There was one harvest per year and the cultivation period lasted from March to October. With the sea-ebbing, in March, the basins were emptied of winter waters through a canal at their north end, cleaned of mud and left to dry. The earth bottoms of the non slated crystallisers were well flattened with manually-operated rollers. Then, again from the north canal, new sea water was allowed in the evaporation basins, which, in serial connection occupy the north and eastern part of the saltworks. During the evaporation, impurities, suspended particles and the calcium and sulphate salts gradually precipitated; having reached 25.7°Be , saturated brine was allowed into the ten crystallisers, which occupied the central and north-west part of the saltworks surface, through a brine canal. The inflow of brine was done by use of a diesel pumping-station; not very long ago, the whole work was done manually, with tub-shaped pumps suspended from tripods, locally called *agliès*; the term, of obvious Greek origin, from the word *andlia*=pump, is one and the same with the term *aglie* mentioned in 17th century Venetian documents. At this stage, with further evaporation, salt was crystallized and precipitated to the bottom of the crystallisers; higher saturation and precipitation of bitter magnesium salts to be avoided, the water that remained above the salt layer was poured out and new brine was allowed in, for the same circle to be repeated.

In September, when the layer of salt in the crystallisers was about 15 cm thick, the manual harvest began. Men workers cut the layer with *kopidhia* (= cutters) and collected it in small piles; other workers, mostly women and children, carried it in buckets on their shoulders to two open storehouses, one at the north end of the saltworks, called *Hiona* (= Snow-white) and a second, much larger, at the south-east side, called the *Alona* (= threshing ground). The large salt stockpiles were covered with tiles for protection from

any sudden rain, until the supervisor of the local monopoly sales branch came from Aghios Nikolaos to weigh the product and take it away to be sold.

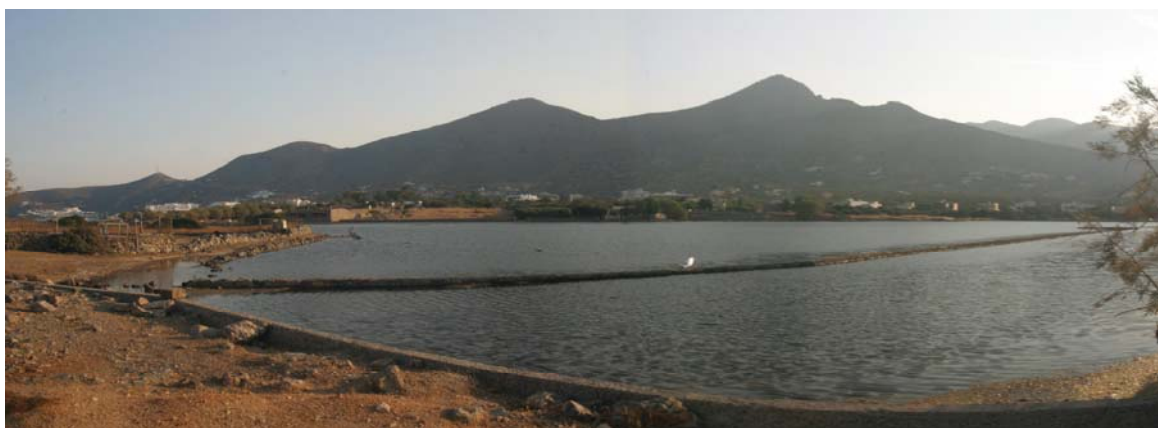


Figure 3: The Saltworks of Elounda as they are today. General view of the wetland from the north-east (August 2006).

During the last period of its operation the staff of the saltworks included one manager, one engineer, two overseers and inspectors of water density and operation of the canals and four guards. About 100 casual workers were employed every year for the harvest. The frequent control of the waters' density by an experienced and attentive staff resulted in a usually excellent product level. The excellent quality of the salt of Elounda was due not only to the favourable climatic conditions but equally to the skillfulness of the staff. After the upgrading of the plant carried out in 1955 the annual production of the saltworks was 1000-1200 tons, which was used to cover the demands of the market of Crete.

5. SECONDARY OPERATIONS: BRINE BATHS, TRADITIONAL FISH-POND

From the decade of the 40s until their closure in 1972, some secondary operations flourished in the saltpans besides salt-making. The first of them was brine therapy, i.e. baths in the brine mud of an abandoned crystalliser, the so-called *Vourkias*, located at the south side of the saltworks. The beneficial role of brine baths was well known long ago and in the case of Elounda it was combined with a climatically very favourable environment. The baths in the hot black brine mud offered help to many people with skeletal and other afflictions; some of them with serious problems, who could hardly walk or were totally paralyzed, usually managed to get up and walk after a cure cycle of less than a week! The community of Elounda had installed shower facilities and there was a person in charge to help patients to take the mud off.

A second activity that took place in the water of the saltpans was the traditional (without the existence of any organized plant) fish production. Old people narrate that there were lots of eels, mullets and other species of fish and that, at times, the annual production reached 50 tons. Here we should remember that even in the Venetian era small veins of sweet water were reported to spring out of the bottoms of some saltpans, which harmed the process of salt crystallization but can well explain the presence of eels in the basins.

6. LEGAL AND OWNERSHIP STATUS, PRESENT STATE, TECHNICAL FEATURES

After the saltworks were out of operation their ownership passed to the Greek Ministry of Economy and later on to the Public Real Estate Company till today. The management of the area belongs to the Ministry of Culture: since 1976 the saltworks itself, the isthmus of Poros, the Spinalonga peninsula (locally called *Megalo Nissi*), the port and the rocky islet

of *Kolochitha*, both lying to the east of the peninsula and the fortified islet of Spinalonga constitute an *A class archeological zone*, within the restrictions of which every construction activity is strictly forbidden. In a zone around this area, declared *B class archaeological zone*, construction is possible only under special regulations and under supervision of the Ephorates of Archaeology of East Crete. Furthermore, in 1970 the area was declared *landscape of exceptional natural beauty*.

In its present state the saltworks occupies an area 350 m. long and 180 m. wide, along the isthmus of Poros, facing to the Gulf of Elounda. Its total surface is 62 acres, divided by a central embankment in two approximately equal parts. Both are almost totally flooded with water, the depth of which is between 0.2-1.0 m. and they connect to the sea only through a narrow canal of 0.25X0.25 m. To the north, the south and the east side of the area pass three roads; the first of them, leading from the village of Schisma to Nissi peninsula, is asphalt paved. At the west side of the saltpans one can distinguish the remains of an old wall and an abandoned canal for the leading away of rainwaters; we should remember that the Venetians had carried out such constructions, for the purpose of keeping animals out of the saltpans and for protection of the salt production.

Nowadays, the saltworks having been out of operation for almost forty years, many alterations have supervened on the place, especially concerning the crystallisers which are always flooded and their bottoms destroyed. More or less serious damages has also been suffered by the side banks of the basins, mainly because of great sea-storms, which overflow the whole area with water. Furthermore, two of the ten crystallisers have been filled with earth by the local community for a football ground to be constructed there. Of the salt-making installations what has survived is the pumping house in ruins, some remains of the completely destroyed brine canals and, in relatively better condition, the manager's office and the two salt storehouses, the Hiona with a surface of 100 m² and Alona with almost 480m².

The limited possibilities for renovation of the stagnant waters through the one and only canal to the sea, the eutrophism phenomena, the increasing human presence, the annoyance caused by circulation of vehicles in the surrounding roads, the soiling and the pollution of the waters and the embankments on part of its surface led the place to a state of deterioration and degradation. Nevertheless, it should be noted that the saltworks still keeps its general layout unchanged, with most of the side banks of the basins in place.

7.PROPOSALS FOR SANITATION AND REHABILITATION

It is only due to the high tourism development of the area of Elounda Gulf, in the last decades of 20th century that people and local authorities began to be alarmed with regard to the aggravation of the state of the saltworks. Under these circumstances, a project was undertaken in 1998 and completed in 1999, on the *"Development of the saltworks of Elounda"*, within the framework of which the present state, the technical features and the character of the saltworks as an ecosystem were for the first time studied and analyzed in a detailed and systematical way. This project, carefully documented with the aid of the Natural History Museum of Crete and the Hellenic Saltworks S.A., concluded that *"the saltworks should be put in operation again, for salt production in the traditional method and techniques, with continual solicitude for the protection and upgrading of the wetlands and with respect to the natural and cultural wealth of the place."*

More specifically, in the project there is an index of the necessary repairs of basins, crystallisers and separating banks of the saltworks; these done, it is estimated that in its area (62 acres) the saltworks can reach, without any intensifying or mechanization of the proc-

ess, an annual production of 600-700 tons of salt. The yield could be advanced to the salt industry, in order to enter the market. Part of it is proposed to remain at place, to be properly packed and to be sold in its natural thick-grained form to visitors. It is estimated that many tourists would be very interested in getting to know the almost unknown production process of one of the most common, everyday commodities.



Figure 4: The old (probably Venetian) salt storehouse of Hiona and the inner part of Elounda Gulf to the left; the road towards Nissi peninsula and part of the saltworks wetland to the right (August 2006).

Further proposals of the project concern the restoration and possible reuse of the saltworks installations. On the basis of a previous idea of the Cultural Association of Elounda, which has gained the approval of the Greek Ministry of Culture, the project elaborates a detailed proposal for the use of the old (probably Venetian) storehouse of Hiona, after its restoration under supervision of the Ephorate in charge of the Byzantine and Medieval Monuments, as Museum of Salt and *Akoni*. It should be explained here that *akoni*, a kind of thin-grained emery, unique to Greece, is another product of Elounda famous since antiquity, which is till nowadays manually extracted by experienced local craftsmen in *akonies*, that is in small scale emery mines, located at the slopes of the mountains dominating the villages of Elounda. The project gives a program of the process that should be followed for the establishment of the Museum, its operation and targets, its necessary equipment, categories of articles that could be exhibited etc.

Concerning the sanitation and protection of the saltworks' wetland, there are proposals for small scale arrangements that could favour the augmentation of the birds' populations, improving their possibilities for feeding, breeding and nesting in the area. Such arrangements could be: fencing to prevent animals entering the area and scaring the birds; decrease of the annoyance caused by human presence and vehicles; creation of small earth islets for birds to rest and nest; installation, at two or three proper sites, of small observation pavilions, for those visitors who are interested in birdwatching; possible enrichment of the fishlife in the saltworks with local species, for the attraction of amateur fishermen, etc.

The author of this paper wishes to contribute to the already mentioned proposals her feeling that, considering the total absence in Crete of natural spa facilities -apart from the trendy thalassotherapy centers, recently created by most luxury resort hotels- the revival of the brine therapy center at the saltworks of Elounda could really be a beneficial solution, at reasonable prices, for many people of modest financial means, who nowadays have to carry their hopes for a cure to spa centers outside Crete.

With the above described actions the saltworks can be part of an archaeological and ecological park of exceptional significance and interest, which will include a) the landscape around the low isthmus of Poros, with the three windmills along it, the canal opened in 1898 for connecting the lagoon of Korfos with the gulf of Poros to the south, the saltworks itself, the submerged remains of ancient Olous, the roman cemetery of the city and the relics of its paleochristian basilica, b) the Gulf of Elounda, the Spinalonga peninsula or Nissi, with its ancient and byzantine antiquities, the port of Colochitha and the homonymous rocky islet in front of it, which is a refuge for rare birdlife, c) the islet at the entrance of the Gulf, to the north, with the magnificent Venetian fortress of Spinalonga and d) the

picturesque villages of Elounda, some of which retain their traditional character, with many old stone-built houses. Within this park there are a lot of possibilities for walks on cultural routes, visits to significant or less known monuments, to the saltworks and the Salt Museum, boat tours in the Korfos, observing of flora species, birdwatching, fishing, acquaintance with local manners and customs etc.

The idea of the saltworks to operate again had a wide and warm acceptance among the local population -mainly among the old salt-workers, who still emotionally remember the snow-white landscape with the series of salt piles in the crystallisers- though some people feel anxious about the harm that high salinity might cause to the biodiversity of the wetland.

8.NOW WHAT? RECENT ACTIONS AND EFFORTS

The carefully elaborated project of 1999 was the motive for a discussion in the local society on the future of the saltworks. Most of the findings and the proposals of this project have been accepted a little later (2001) and incorporated almost unchanged in the "*Master Plan of the Municipal area of Aghios Nikolaos*", of which Elounda is nowadays a municipal section. The local authorities have begun to realize the prime significance of the wetland and the urgent need for its protection, the more so as the province of Mirabello has none of its areas included in the Natura 2000 Catalogue for Crete. The community of Elounda has entered into an effort of sanitation and rehabilitation of the saltworks, firstly by some simple and obvious actions, like collecting of waste, cleaning and accommodation of the area and removal of some recent embankments. The upgrading of the wetland, combined to the prohibition of hunting in the area, has already helped to increase the numbers of birds, by attracting a greater variety there in autumn and in winter time.

The idea of restarting salt production, unfortunately, is not being considered by the local authorities at the moment, and it is not clear whether and when it will, but the area has begun to be used as a field for the execution of environmental activities by pupils of schools of nearby towns and villages. One such project is under preparation by the team of the Environmental Education Center of Neapolis, Crete, for the school year 2006-2007.

In March 2006 a project concerning the creation of the Salt and Akoni Museum was undertaken by a team of specialists. Its object is the research, collection, registration, analysis and presentation of all the necessary elements and materials for the establishment of the Museum and its installation in the storehouse of Hiona, after its restoration, according to the general plan proposed as described above. The results of this project, indispensable for the concession of the ownership of Hiona building to the local community by the Ministry of Culture is still under preparation.

9.CONCLUSION

The great challenge with regard to the saltworks of Elounda is its sustainable rehabilitation and its active incorporation to the local life as a complementary tourist background, without harm to the fragile equilibrium of its sensitive aquatic ecosystem or to the surrounding natural environment. The arrangements proposed, if accomplished carefully and with respect to the *genius loci*, can undoubtedly contribute to the protection of the natural environment, the aesthetic upgrading of the area, the wider promotion of its significant monuments and the revitalization of traditional activities; to the support of research programs and environmental education projects and, mainly, to the launching and development of alternative types of tourism, with all the benefits that such practices could have, at the moment that the classic *sun-and-sea* tourism has entered a period of prolonged

abatement and its future, even for a famous destination like Elounda, seems rather uncertain.

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