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Integrated Coastal Zone Management of the Ghajn Tuffieha Conservation Area Annual Report April, 2000.

INTRODUCTION

The Gaia Foundation commenced its third year of management of Ghajn Tuffieha with a view to stepping up the activities on site following the first two years which saw the drawing up of the management plan in 1997, approval thereof in July, 1998, and implementation of first intervention measures and preparation and commencement of the medium term (year two to year five) plan. A decision was taken to use the surveys, management plan and work experience of the initial two years as the basis of an application for LIFE funds from DG Environment of the European Commission in order to raise funds for the expansion of work at Ghajn Tuffieha, as well as the commencement of a similar management project at Ir-Ramla, Gozo.

Considerable input was made for the submission of the application for LIFE funds. The Foundation teamed up with ICOD, the institute specialising in insular coastal dynamics, in order to put together the detailed application that was required. ICOD's role would be to oversee the project and submit six monthly progress reports to the DG Environment. The Gaia Foundation would retain its role as integrated coastal zone managers. The Ministry for the Environment was approached, as well as Mr. Loius Vella of the Environment Protection Department. Both agreed to endorse and support the project, which entailed a commitment to match the funds provided by LIFE. The thrust of the project was an expansion of present management of Ghajn Tuffieha in accordance with the approved management plan, and an extension of management to cover the area around ir-Ramla, Gozo. In July ICOD was informed

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that the project had been accepted. The Foundation initiated steps in order to be in a best position to get the project off the ground upon commencement the following February, 2000.

The Foundation started plans to upgrade its indigenous tree and shrub nursery in order to secure a regular supply of flora for its extensive work in flora rehabilitation. It also started head hunting for the most appropriate personnel.

Another sponsorship lead was successfully followed up with the Bank of Valletta Plc. who agreed to sponsor the foundation's management work as part of its millenium social contribution. This sponsorship is focussed principally on the Gozo part of the Foundation's activities.

INDIGINOUS TREE AND SHRUB NURSERY

The Foundation had encountered problems of lack of availability of indigenous trees and shrubs in Malta. This was addressed by setting up an indigenous nursery on site at the disused waste water treatment plant. The site was considered the most suitable and could serve as a rehabilitation of a very degraded part of the site. The location of the large reservoir and the storage tanks was considered extremely ideal. The exposure of the site to the prevailing northwesterly is however a challenge that will have to be met by the plants at an early stage.

The setting up of the nursery has also made sound financial sense, since the purchase of thousands of plants would require a substantial financial undertaking that could otherwise be better directed to other coastal management work. In October, 1999 Carmen Chetcuti was taken on part time in order to upgrade the work at the nursery. Her experience with a private nursery was invaluable, and she proved to be very industrious and willing to learn about the propogation of indigenous species.

A major upgrade of the nursery was commenced immediately in early February, 2000, which coincided with the start of the LIFE project, with a view to propogate and accommodate a minimum of 10,000 plants. By March 2000 the necessary work had been carried out. This included the purchase of pots, compost, irrigation pipes and other accessories, as well as restoration of two storage wells on site.

WARDENS.

The year also saw a change in staff on site that are well equipped to handle wardening, maintenance, and the running of the nursery. Joseph Chetcuti, a part time farmer living in the vicinity was taken on to carry out maintenance, tree planting and watering as well as warden work. Mr. Chetcuti also carried out night patrols in the summer months on weekends in an effort to step up the security and enforcement of regulations pertaining to the site. The proximity to his home facilitated quick one hour patrols at various times during the night.

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RESTORATION

Progress was made on the restoration of Ghajn Mixkuka Tower, despite delays in the work which was being done in collaboration with Projects House of the Works Division. The major cause for the delay was the substantial expense involving the hiring of scaffolding, which would account for over half of the total expense. The Director of Public Works generously agreed to provide the scaffolding as well as the personnel to carry out the restoration work. Din L-Art Helwa agreed to finance all the materials required. Approval was obtained from the Planning Authority to carry out the works. By March, 2000 work had progressed on both exterior and interior, as well as the roof. Work mostly involved pointing, replacement of damaged stone slabs that formed part of the ceiling, and painting the interior. Once completed the Tower could house information on the local environment available to visitors.

FIRE SAFETY

Fire Safety was again a major concern. It was deemed paramount that every effort be made to reduce fire risks that would not only threaten existing flora but also saplings introduced to the site as part of the rehabilitation measures. The water system was upgraded in order to address this need, as well as the need to keep watering the new trees and shrubs throughout the hot months. Only two minor fires were started along the clay slopes and another below the car park, resulting in negligible damage.

Most of the area is inaccessible to fire engines, owing to the geology of the clay slopes. For this reason water pipes were laid to reach the inaccessible areas that are currently being rehabilitated.

A few small wooden signs two feet by one foot, were posted on site alerting the public that the area is a fire hazard zone. No fire on site has occurred to date since the placement of such signs. A couple of extra shovels, to add to the two used for maintenance, were purchased as part of the fire fighting equipment considered by the fire department as being most effective for fires in wooded areas. One small fire extinguisher was also purchased.

WATERING OF TREES AND SHRUBS.

Irrigation of new trees and shrubs kept the staff rather busy throughout the hot months. This was done early morning and evening. Evenings were also taken up wardening the site in order to control the heightened activity around the beach. The Foundation's plan for plant rehabilitation includes the constant watering of young trees and shrubs for a minimum of two years, with an intention to extend this to a third year. This is considered vital if a high success rate is to be ensured. The survival rate so far has been roughly calculated at about 90%, which is very high considering the difficult and exposed terrain. A 70 % success rate is generally considered to be very good.

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BEACH SAFETY

Beach Safety was another major concern. Talks were conducted with the Red Cross in an effort to have lifeguards patrol the beach. Despite an initial interest being shown, Red Cross did not unfortunately provide such a service at Ghajn Tuffieha. The Foundation however introduced 3 life lines leading to the beach which were found to be very effective in assisting persons finding themselves in difficulty owing to strong undercurrents caused by strong Northwesterly winds (Majjistral). The season saw no casualties for the third year running at a beach which has claimed more fatalities in the past than any other in Malta.

The Foundation had obtained planning permission for a sign for beach safety. Owing to the delays in setting up an official lifeguard watch on site, the sign was not completed. Furthermore the ideal beach safety system for Ghajn Tuffieha had not been found, despite consultation with a professional lifeguard organisation. The lifelines introduced over the summer and autumn have been tried and tested, and having proved successful, will feature on a sign that will be completed for the coming season.

An important aspect of beach safety is the enforcement of maritime regulations pertaining to pleasure craft within bay areas. Despite several requests by the Foundation, The Malta Maritime Authority delayed in placing its yellow markers that mark the area out of bounds for such craft. The foundation, fearing for the safety of bathers, placed its own markers at the edge of the bay. It is to be noted that any markers are a guideline to the public who is dutibound by Law, even in the absence of markers, not to approach any beach or beachhead within 200 metres. The Maritime Authority eventually placed its own markers the following day, as late as mid August.

TOURISM ACTIVITY ON SITE

Public activity on site reached its usual peak in the summer months, owing to the sandy beach which is very popular with local and tourists alike. Wardens were faced with the usual problems of campers, barbeques on the clay slopes, offroaders and boats entering the bay beyond legal limits. The summer however saw no major incidents in this regard. All cases were logged. An analysis of the site's log book has shown an increasing cooperation by the public and willingness to abide by the regulations, with a corresponding decrease in incidents. Pilfering of equipment and trees still remains a problem. This happens mostly on weekends. No person has yet been caught red handed, despite a stepping up of night vigilance at this period.

Police presence was once again requested for Saturday nights, the time of most activity on the beach. This was retained for the month of August.

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PUBLIC FACILITIES

Public amenities on the beach remained a main problem. In the absence of bar and toilet facilities, in April, 1999, the Foundation submitted an application to the Planning Authority for a wooden kiosk that would serve as a beach bar, run a sustainable packaging system for beer and soft drinks by phasing out aluminum and plastic, and provide a public convenience, a telephone line, night security and beach safety. Despite the Foundation's efforts to provide these services which are essential for the public as well as for plans to bring the Blue Flag status (a UNEP initiative) to the beach, the Planning Authority has to date not shown any signs of progress in this regard and have never replied to any written correspondence on the subject.

The Foundation however is persevering in an effort to bring an ecologically sustainable service to the general public. This has however been complicated by the submission 5 months after the Foundation's application, of another application for a beach bar, from Neville Fenech acting in his individual capacity. Mr. Fenech has no rights in the area, and has provoked the ire of his co directors in the Golden Sands Co. Ltd. for such personal initiative. One of the Directors has registered an opposition to Mr. Fenech's application.

The Foundation is seeking an interim solution to the need for all the public beach facilities referred to above in the event that The Planning Authority fail to issue a permit for a wooden kiosk. The Foundation has sent copies of its correspondence to the EPD, the Environment Ministry and the Tourism Authority. It cannot but note the irony that its efforts to augment its coastal zone management with the introduction of Malta's first ecologically sustainable beach bar have thus far been thwarted when on the neighbouring beach at Golden Sands, there are two kiosks illegally placed upon the sand, one of which is placed directly across the level one protected sand dunes, which development grows every summer and now includes a stone stairway from the road directly down to the bar, built upon the said dunes. The operators seem to be totally immune to the law and any attempts at environmental protection are weak or non-existent. Meanwhile Malta's only managed coastal site at Ghajn Tuffieha remains without any public facilities, despite the Foundation's efforts.

PLANTING OF INDIGINOUS SPECIES

The late Autumn rains saw the commencement of the third year of plantation of indigenous trees and shrubs in accordance with the plantation report carried out and submitted in the previous year. A greater number were planted than in the previous year. Many of these were purchased at good prices, while others, being all shrubs, were available from the Foundation's nursery that commenced work in March, 1999.

Details of the quantities and species planted in the nursery as well as on site are listed in the Flora Rehabilitation Report, 2000.

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MAINTENANCE WORKS ON SITE.

Maintenance on site over the last six months (Oct 1999 – Mar 2000) has been considerable. This has focused largely on the old sewage treatment plant site which is housing the nursery, as detailed above. It has included repair of rubble walls, repair of water storage tanks and water drainage work that diverted the flow of rainfall into the disused reservoir. This led to a decrease in soil erosion around the Golden Bay sand dunes, which still receives a considerable amount of water, but which has been spared excessive runoff that causes extensive erosion. The reservoir is in a bad state of repair and cannot hold water, but has served to direct the water back into the water table.

THE FOUNDATION'S WEBSITE: www.gaiamalta.org

March, 2000 has seen the setting up of the Foundation's website named gaiamalta.org. The purpose of the site is to provide a full 'expose' of the Foundation's activities, reports and surveys that could assist the general public in raising their awareness of coastal area management in Malta, as well as to provide useful data to academia. The Foundation is providing on the website substantial documentation pertaining to its activities, including surveys on ecology, geology, geomorphology, hydrology and photogrammetry, the management plan for Ghajn Tuffieha, specialised reports as well as interim reports of its activities.

The Foundation plans to upgrade the site considerably over the next few weeks.

SITE STUDIES

A study on site being carried out by Dr. Alan Dykes of Huddersfield University continued this year with site visits by the team in the Autumn. The study is on the dynamics of the clay slopes and the effects of precipitation. The conclusions of the study are expected this coming year.

A team from Sheffield University has conducted site studies and met with the management of the Foundation as part of its research on the impacts and effectiveness of the public authorities on coastal areas of touristic importance.

In May, 1999 a four person team from the James Madison University, led by Dr. Jonathan Miles, assisted the Foundation in its management of Ghajn Tuffieha as part of their University accreditation. Work was carried out on the rehabilitation of the

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footpaths along the clay slopes, the drawing up of a nature trail map for the area, a report on the indigenous species to be encouraged in the nursery, and a report on the water requirements and water catchment potential for the area. A presentation of their work was made by the students at the University of Malta.

VOLUNTEERS.

The Foundation has put together a number of volunteers who have assisted in work on site through out the year. This has included assistance in watering, planting, implementation of beach safety measures and equipment as well as work at the tree nursery. One volunteer has also started propagating oak trees in his private garden which will be made available to the Foundation within two years.

PERMACULTURE

In accordance with the plans laid down in page 25 of the management plan, which deals with the encouragement of organic projects in agriculture, the Foundation has identified a disused field which directly overlooks the road leading to the car park as ideal a sustainable agriculture experiment. This field covers approximately 3.5 tumoli of land (just over 1 acre) and has been unworkd for several years. After consultation with Andre Muscat, the first person in Malta to have started organic farming some three years ago, the Foundation has planted pine trees along the perimetre wall to act as windbreakers and to protect against windborne pesticides from other fields. It has also planted a number of olive trees in four rows further in. It is in the process of commissioning a permaculture report as a working document for sustainable agriculture. Permaculture is an advanced sustainable agriculture method and philosophy introduced by Jim Mollison in Australia in the 1970's. He has since written a number of works on his methods. Permaculture does not only consist of the principles of organic farming, which are mainly the phasing out of chemical fertilisers, pesticides, herbicides and fungicides. It is based upon a holistic approach to farming. It does away with the monoculture that deals with the growing of just one crop on the land. It encourages biodiversity that reduces the draining of minerals and the proliferation of pests, thus regaining nature's balance. It also encourages the mixture of vegetables and trees which can help to increase the yield per acre which is generally lower with organic methods than with current intensive farming ones.

The object of the experiment is to form a pilot project for the area. The right combinations of produce will be studied, together with the problems encountered, the yield per acre and the testing of the market in Malta. The results will be used to encourage these sustainable agricultural methods on a macro level on the island.

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RIVIERA MARTINIQUE DERELICT HOTEL

The Foundation has again put pressure throughout the year on the relevent authorities to resolve the issue of the dangerous structure which has lain derelict for about 20 years just above the clay slopes leading down to the beach.

An architect's report of the dangerous nature of the structure commissioned by the Foundation was circulated to the authorities, including the Commissioner of Police. Reports have since been carried in the local press upon the initiative of the public on this same issue. Throughout the winter there have been signs of further crumbling of the structure down the said clay slopes. The Environment Protection Department has also written to the Commissioner of Police to request action. In the month of March the owner limited himself to removing the main stairway up to the hotel entrance to prevent public access to the building. His workers simply dumped the rubble waste onto the site that is administered by the Environment protection Department and managed by The Gaia Foundation, on the other side of the car park on the side of Ghajn Mixkuka Tower. The owner is the same person who had breached conditions for the construction of the Ghajn Tuffieha beach bar, and who has filed another application for a new bar. To date, the hotel structure remains more dangerous than ever, perched as it is, on the cliff edge overlooking the public stairway to one of the most popular beaches.

RESTORATION AT HOTBA L-BAJDA

The Gaia Foundation is in contact with Wirt Artna in an effort to carry out works at restoring the derelict rooms at the top of the clay slopes at Hotba I-Bajda. The Foundation has received an interest by this voluntary organisation to provide labour free of charge for the carrying out of the works. The Foundation is looking for funds for the financing of materials required for restoration.

Once restoration is complete, the main structure could be used as an open air visitor centre centrally located along the scenic nature trail.

WASTE MANAGEMENT

The six month swimming season saw the reintroduction by the Foundation of a separation at source waste management system on the main beach at Ghajn Tuffieha. Bins were made available for paper, aluminium, plastic and mixed waste. The number of bins were increased from 16 to 20. Bins for glass were also introduced for small non returnable glass bottles. The volume of waste over the summer was reduced. The beach was serviced by a makeshift bar, in the absence of a development permit. This consisted of a canopy with a few fridges and freezers, Snacks and kegs to store beverages. Glass and aluminum were almost entirely phased out. Beverages were served in paper cups, which were collected for reuse at the tree nursery or for recycling. Plastic beverage containers were totally phased out.

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The Foundation also introduced a waste management scheme bins for the small beach below the Qarraba Isthmus, which is only accessible by sea and on foot. The Foundation negotiated the use of a small private boat for the collection of waste from three bins.

In the coming year the Foundation plans to upgrade the waste management system to include the following:

1. The collection of waste to be sent directly to the Sant'Antnin Waste Management Plant.
2. To include bins for organic waste, which is now being treated at the said plant.
3. To collect some of the posidonia grass for composting.
4. To set up its own composting at the nursery from some beach organic waste and waste from pruning, weeding and agriculture.
5. The introduction of bins at the Ghajn Tuffieha Car Park.
6. The introduction of bins at coves accessible only by sea, which will be maintained by Gaia personnel.

SITE REGULATIONS

The regulations that pertain to the site remain the ones that are general national regulations, such as those against offroading, camping, open fires and littering. Enforcement of these has been largely successful, though the exceptions remain, since the site is large and is frequented at all hours of the day or night.

Attempts to have site specific regulations in place has to date been unsuccessful, despite various reminders to the Planning Authority. This has been detrimental in a number of ways, namely,

1. The picking of flora and the removal of sand or clay are impossible to enforce under the general protection guidelines falling under the scheduling of land.
2. Pilfering and stealing of trees and equipment is rampant. Stricter penalties would be a deterrent.
3. Vandalism is also a problem. The removal of signs, for example, for use at a campfire, cannot be enforced under the laws of vandalism if no malicious attempt is proved.
4. Fire safety measures, like open fires or negligent disposal of cigarette ends, cannot be properly enforced under the general laws.

The completion of these regulations is one of the few things that remains outstanding for the current period covered by the management plan. The Foundation had submitted its recommendations over three years ago. However it remains up to the Planning Authority to determine these regulations and to enact them.

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EQUIPMENT

Equipment necessary for the management of the site has increased over the past year to include irrigation material, pots, compost, a small tractor, a cart, garden and other tools, water tanks, shade screens for the nursery and safety lines for Ghajn Tuffieha Bay. A list of assets will be available by June, 2000.

SECURITY

Theft and vandalism is estimated to cost the project around Lm200-Lm300 per annum. Though obviously undesirable, the present cost does not justify the hiring of a night warden or security man on a regular basis. Night patrols are however conducted on weekends.

In March, 2000 a number of escaped prisoners sought refuge at the Foundation's nursery grounds overlooking Golden Bay, under the cover of darkness and a carob tree. They were arrested by Police the following morning. The area around the nursery also houses most of the Foundation's equipment. Security in this area is therefore considered to be paramount.

CONCLUSIONS

The Foundation has over the past 12 months stepped up its activities in an effort to accomplish as much as possible in the coming years that are covered by the LIFE project funds. A large part of this work has been in connection with the water storage capabilities on site and the propagation of indigenous trees and shrubs that will cater for the Foundation's growing needs over the next few years. This was made possible by the dedication of staff and the loans extended to the Foundation by the Founders in order to maintain a steady pace in the buildup to the LIFE project.

Progress in connection with development, by way of required permits, enforcement notices, appeals against enforcement and police action for demolition of dangerous structures, has been painstakingly slow, leaving the public the impression that these are the obvious exception to the general conservation of the Ghajn Tuffieha area. They also constitute a terrible eyesore in a place of outstanding scenic value. This lack of progress is an issue that must be successfully taken up in the best interests of the site.

The coming year should see an increase in activity on site owing to the increase in funding from LIFE, the development of the nursery and the increase in water storage capacity and staff. Progress is expected in the following areas:

1. Planting of new indigenous trees and shrubs to top the 2,000 figure.
2. A more comprehensive waste management system.

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3. Assistance in the landscaping of the Scout run camp site just outside the Conservation area.
4. The introduction of proper beach facilities in preparation for Blue Flag Status.
5. The completion of restoration of The Ghajn Mixkuka Tower, which may serve as a visitor centre on site.
6. Work on restoration of the Hotba I-Bajda derelict buildings which may be added as a visitor centre, covering different aspects of environment information.
7. A full development of the Foundation's website, with links to other sites and projects.

A detailed workplan for the next year is covered in a separate document. This workplan takes into account the Management Plan as well as the LIFE project, which includes the second site of ir-Ramla, Gozo.

Rudolf Ragonesi