



## LIFE-THIRD COUNTRIES (LIFE-TCY)

PROJECT REFERENCE	
LIFETCY	99 / M / 095
<i>Please indicate the reference as mentioned in the contract.</i>	

PROJECT TITLE
Integrated Management of Specially Protected Coastal Areas in Malta
<i>Please indicate the full title of the project as stipulated in the contract.</i>

FINAL REPORT
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Period of activities covered by this report		
from:	1 / 2 / 2000	to: 30 / 04 / 2003
<i>The period of activities covered by this report.</i>		

COMMENCEMENT DATE OF THE PROJECT : 1 / 2 / 2000
<i>The date should correspond to the one mentioned in the official letter sent by the beneficiary to the European Commission confirming the official project start date and of the related project expenses.</i>

AREAS OF ACTIVITY		
Technical assistance	Nature Protection	Demonstration actions
<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
<i>Please tick the appropriate box</i>		

BENEFICIARY			
<i>Please indicate the full name and address of the signatory of the contract, i.e. the organisation (entitled to carry out the project under the supervision of the European Commission) and its legal representative.</i>			
Organisation	Euro-Mediterranean Centre on Insular Coastal Dynamics (ICoD) Foundation for International Studies		
Full address	St Paul Street, Valletta VLT 07		
Country	Malta		
Tel	+ 356 21 240746		
Fax	+ 356 21 245764		
E-mail	m.cassar@icod.org.mt		
Legal representative	Dr Anton Micallef		
VAT liability	Yes	<input checked="" type="checkbox"/>	No <input type="radio"/>
	If yes, VAT number :		1298 - 5826

PROJECT CO-ORDINATOR	Michelle Cassar
Direct telephone	+ 356 21 240746
Direct fax	+ 356 21 245764
E-mail	m.cassar@icod.org.mt
<i>The project co-ordinator should be the person who deals with the operational/technical issues of the project, and the principal contact for the European Commission.</i>	

<b>STATEMENT</b>	
Report prepared by (name):	<b>Michelle Cassar, Project Officer</b>
On (date):	<b>28/07/03</b>
<p><b>The undersigned certify that the information provided in Section I, Section II and Section III is true and correct and that the financial Section provides a precise image of the costs which the Beneficiary has had in relation to the project within the time frame outlined by the decision of the European Commission.</b></p>	
Signature:	

# GENERAL

## BENEFICIARY COMMENTS

<b>EXPRESS YOUR VIEWS</b>
<i>This report is not solely intended to provide technical and financial information to the EC – we have tried to prepare it as a management tool that ideally should be shared by the project team, the stakeholders and the European Commission. We are aware that reporting is time-consuming and might be considered as constraining. Feel free to express your views and comments.</i>
<p>The 2-month period allowed for writing up following completion of project activities could be extended to a minimum of three months, particularly for longer running projects such as the current one, where the requirements for documentation of expenditure in the financial section of the Final Report are extremely rigorous. This extended reporting period would facilitate the compilation and processing of all the financial documents required for this section of the report.</p> <p>The format of the report is extremely rigid and constraining. A less rigid format would make it easier to convey important information about the project in a more readily accessible and readable way. In order to include all the information that was considered relevant, some sections of this report are therefore longer than the specified number of pages.</p>

## LIFE -THIRD COUNTRIES OFFICE ADDRESS

<b>FORWARDING ADDRESS</b>	
For all correspondence, including reports	European Commission Directorate-General Environment DG ENV – A LIFE-Third Countries Co-ordinator 200, rue de la Loi B-1049 Brussels Belgium
For clarifications, questions, etc. e-mail address:	Life-tcy@cec.eu.int

## REPORTING REQUIREMENT CHECK-LIST

<b>REPORTING REQUIREMENTS</b>		
SECTION I	3 copies	required
SECTION II	3 copies	required
SECTION II - annexes	1 copy of the technical reports, and other dissemination material (leaflets, video, training manuals, etc.)	required
SECTION III	3 copies	required
SECTION III – supporting documents	Originals or 1 copy certified true and correct	required

PROJECT REFERENCE	LIFETCY 99 / M / 095
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<b>FOR COMMISSION USE ONLY</b>
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<b>FINAL REPORT</b>	Received on : .. / .. / 20..
<b>EC REFERENCE NUMBER</b>	

<b>SECTION I</b>	Approved by TCY office	YES	<input type="radio"/>	NO	<input type="radio"/>
Name:					
Date:					
Comment(s)					
Recommended action(s)					

<b>SECTION II</b>	Approved by TCY office	YES	<input type="radio"/>	NO	<input type="radio"/>
Name:					
Date:					
Comment(s)					
Recommended action(s)					

<b>SECTION III</b>	Commitment reference number:				
	Approved by TCY office	YES	<input type="radio"/>	NO	<input type="radio"/>
Name:					
Date:					
Comment(s)					
Recommended action(s)					

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## SECTION I - ADMINISTRATION OF THE CONTRACT

### 1.1. PROJECT IDENTIFICATION

<b>PROJECT REFERENCE</b> <i>Please indicate the reference as mentioned in the contract.</i>	<b>LIFETCY 99 / M / 095</b>
<b>PROJECT TITLE</b> <i>Please indicate the full title of the project as stipulated in the contract.</i>	<b>Integrated Management of Specially Protected Coastal Areas in Malta</b>
<b>Place(s) and country (countries) where the project is being implemented</b>	<b>Ghajn Tuffieha, Malta and Ramla Bay, Gozo</b>

CONTRACTUAL DURATION	
<b>Date of signature of the contract by the EC :</b>	<b>24 / 11 / 1999</b>
<b>Date of signature of the contract by the Beneficiary :</b>	<b>15 / 12 / 1999</b>
<b>Expiry date of the contract :</b>	<b>30 / 06 / 2003</b>
<i>Please refer to article 2 of the contract.</i>	

PROJECT DURATION	
<b>Commencement date of the project activities</b>	<b>1 / 02 / 2000</b>
<i>The date should correspond to the one mentioned in the <b>official letter</b> sent by the beneficiary to the European Commission confirming the official project start date and of the related project expenses.</i>	
<b>Initial duration of the project (in months):</b>	<b>..36 .months</b>
<b>Project activities completion date</b>	<b>01 / 03 / 2003</b>
<i>This should be the same as mentioned in the contract and in the initial project proposal.</i>	

### 1.2. REPORTING SCHEDULE

REPORTING SCHEDULE			
<b>Six-monthly progress reports</b>	<b>N° 1</b>	to be provided by / provided on	<b>31 / 08 / 2000</b>
	<b>N° 2</b>		<b>01 / 03 / 2001</b>
	<b>N° 3</b>		<b>31 / 08 / 2001</b>
	<b>N° 4</b>		<b>01 / 03 / 2002</b>
	<b>N° 5</b>		<b>31 / 08 / 2002</b>
<b>Interim report</b>	to be provided once disbursements reach	<b>140,000</b>	EURO
<b>Final report</b>	to be provided by	<b>31 / 03 / 2003</b>	
<i>Please refer to the indicative timetable with deadlines for providing reports annexed to the contract</i>			

### 1.3. PROJECT CO-ORDINATOR

<b>Full Name</b>	Michelle Cassar
<b>Title, function</b>	Project Officer
<b>Organisation</b>	Euro-Mediterranean Centre on Insular Coastal Dynamics (ICoD)
<b>Direct telephone</b>	+ 356 21 240746
<b>Direct fax</b>	+ 356 21 245764
<b>E-mail</b>	m.cassar@icod.org.mt
<i>The project co-ordinator should be the person who deals with the operational/technical issues of the project, and the principal contact for the European Commission.</i>	

#### 1.4. PROJECT PARTNERS AS CO-FUNDERS

Organisation	Ministry for Rural Affairs and the Environment, Government of Malta		
Type of organisation	Public <input checked="" type="checkbox"/>	Private <input type="checkbox"/>	NGO <input type="checkbox"/>
Telephone	+ 356 21 225236/225238		
Fax	+ 356 21 251998		
E-mail	emanuel.borg@magnet.mt; emanuel.borg@mepa.org.mt		
Full name(s) of the person(s) directly involved in the project	Mr Emmanuel Borg		
<i>Please add as many frame(s) as there are co-funder(s). Indicate also potential co-funder(s) not initially foreseen</i>			

#### 1.5. PROJECT PARTNERS AS SUB-CONTRACTORS

Organisation or Name of individual	The Gaia Foundation		
Type of organisation	Public <input type="checkbox"/>	Private <input type="checkbox"/>	NGO <input checked="" type="checkbox"/>
Telephone	+ 356 21 584473/4		
Fax	+ 356 21 584473/4		
E-mail	gaiarr@waldonet.net.mt		
Full name of the person(s) directly involved in the project	Dr Rudolf Ragonesi, Managing Director		
<i>Please add as many frame(s) as there are sub-contractor(s)</i>			

#### 1.6. CONTRACTUAL AMENDMENT(S)

CONTRACTUAL DURATION			
Initial expiry date of the contract: -	30 / 06 / 2003		
Amended expiry date of the contract:	30 / 04 / 2005 *		
Submitted to the EC on:	29 / 1 / 2003	Approved by the EC on:	13 / 2 / 2003

\* as per Amendment No 2 to Contract No. LIFE 99 TCY/M/095.

PROJECT DURATION			
Initial duration off the project	in months:	36	
Amended duration of the project	in months:	39	
Initial project activities completion date	1 / 03 / 2003		
Amended project activities completion date	30 / 04 / 2003		
Submitted to the EC on:	29 / 1 / 2003	Approved by the EC on:	13 / 2 / 2003

AMENDED REPORTING SCHEDULE			
Six-monthly progress reports	N° 1	to be provided by	NO CHANGE
	N° 2		NO CHANGE
	N° 3		NO CHANGE
	N° 4		NO CHANGE
	Etc.		NO CHANGE
Interim report	to be provided once disbursements reach	NO CHANGE	EURO
Final report	to be provided by	31 / 7 / 2003	
<i>Please refer to the amended indicative timetable with deadlines for providing reports annexed to the contract</i>			

<b>SECTION II - TECHNICAL REPORT</b>
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<b>Project Reference</b>	<b>LIFETCY 99 / M / 095</b>
<b>PROJECT TITLE</b>	
<b>Integrated Management of Specially Protected Coastal Areas in Malta</b>	

**2.1. PROJECT FICHE (2 pages maximum)**

*Please, refer to the information included in the initial proposal and in the contract, and to the information on your project including the logframe matrix.*

Attaining sustainability is particularly challenging in the case of coastal areas having conservation value, since protection of sensitive or threatened features must be achieved without excluding recreational use and public enjoyment of the site. Hence the need for an integrated approach in order to achieve a commonly acceptable framework for management of such coastal areas.

Malta's coastal area has played a very important role in both the social and economic development of the islands, and is probably the country's most important natural resource. With a total coastal length of less than 200 km, the pressures of development on the Maltese coastline are particularly pronounced. Conflicting uses compete fiercely for valuable space along the short coastline. On mainland Malta, 50% of the coast is classified as "inaccessible" due to a combination of physical features such as cliffs, and coastal development. For the island of Gozo, 74% of the coastline is considered to be inaccessible. In this context, urgent action is required to avoid the complete degradation of the natural and man-made environment of coastal areas, and the protection and enhancement of the existing landscape are of vital importance for the islands.

The current project is being co-ordinated by the Euro-Mediterranean Centre on Insular Coastal Dynamics (ICoD), in partnership with the Gaia Foundation, and with the support of the Ministry for Rural Affairs and the Environment. Working towards the better understanding and integrated management of the coastal zone is a common objective shared by all three organisations.

**OVERALL OBJECTIVE(S):**

The overall project objective is the implementation of good management practices for the sustainable use of two coastal areas of conservation value in the Maltese islands. Both project sites, Ghajn Tuffieha and Ramla Bay, are recognised at a national level to constitute important landscapes, and are so far largely unspoilt by anthropogenic influence. It is this same "unspoilt" character that attracts the hundreds of visitors to the sites, giving rise to the threat of degradation of their natural beauty and ecological integrity. This project thus aims to reconcile the simultaneous use of these sites for nature protection and for tourism, both domestic and international

**PROJECT PURPOSE (SPECIFIC OBJECTIVE):**

The aim of the project is to implement integrated management practices at 2 selected protected coastal areas, in order to promote their sustainable use for tourism and conservation. An innovative approach has been adopted in the institutional set-up for management of these protected areas, involving the transfer of responsibility for management of sites on public land from national government to a non-governmental organisation



**EXPECTED RESULTS:**

The following main results are expected from the implementation of this project at the two project sites:

- Rehabilitation of sites' unique biodiversity and habitats, ensuring their preservation for future generations
- Protection of sites' features of ecological and scientific importance, such as clay slopes, sand dunes, freshwater wetlands, etc.
- Control of erosion of blue clay slopes, thus protecting the landscape value of the entire project sites
- Regulation of recreational uses, and promotion of the public's enjoyment of a pristine landscape via environmentally-friendly activities
- Education of the general public and raising of awareness regarding the importance of coastal conservation
- Promotion of the innovative concept of decentralisation of SPA management, both at a national and regional level

**MAIN ACTIVITIES/PHASES:**

The project's main activities comprise the following:

- design and implementation of first intervention measures
- on-site regulation enforcement activities
- beach management
- rationalisation of footpath systems and creation of signposted nature trails
- surveying of ecological, geological and hydrological features at sites, including photogrammetric survey
- development and implementation of site-specific management plans, to include conservation profiles and detailed intervention measures
- re-vegetation work, including setting up of nursery to supply flora for planting
- education and dissemination of information

Project activities have commenced with detailed surveys of the sites to establish the resources present i.e. biodiversity, habitats, geological and hydrological features, and archaeological heritage. Site rehabilitation is the next phase of the project, followed by the formulation of site management guidelines and regulations for the sustainable use of the areas. Monitoring and research activities, in direct support of the implementation of the project's activities at each site, will also be conducted.

Dissemination of the project results is an essential part of the project, and will be implemented through the production of information brochures for visitors and of information boards on-site. A campaign to promote membership of the NGO managing the sites will be implemented, and access to a wider audience is being provided through the setting-up of a web-page giving detailed information about the sites. The organisation of seminars to present the results and to share the experience gained, both locally and at a regional level, will also take place.

## 2.2. DESCRIPTION OF PROJECT IMPLEMENTATION AND PROJECT RESULTS

### 2.2.1. ACTIVITIES UNDERTAKEN

Ref.	ACTIVITIES	STATUS OF IMPLEMENTATION
1	Rehabilitation of unique biodiversity and habitats	<ul style="list-style-type: none"> <li>Activities included detailed site surveys, and an intensive afforestation programme (11,080 trees and shrubs planted) to regenerate the natural vegetation</li> </ul>
1.1	Detailed mapping of habitats	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>Habitat maps of the previously unmapped adjacent Rdum Majjiesa area were drawn up as part of the Vegetation Survey of this area (Spring 2000) (REF. 2)</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>An Ecological Survey of the Ramla site and environs (REF 21, was completed in January 2003 by Dr Adriana Vella. This survey updates the existing 1994 report and forms the basis for ongoing survey work with the Biological Conservation and Research Foundation (BICREF), a local environmental NGO. Also carried out in support of the ecological survey were surveys on the geology, geomorphology and hydrology of the site, completed by Dr Saviour Scerri in January 2003 REF.23.</li> <li>Details of the ecology of the sand dune area were obtained from a recent graduate thesis by Darrin Stevens from the University of Malta</li> </ul>
1.2	Inventory of species present, ; listing of threatened species	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>A species list was drawn up within the ecological survey of Rdum Majjiesa clay slopes (REF. 2). Vulnerable and restricted species present, as listed in the Red Data Book for the Maltese Islands, were found as follows: <ul style="list-style-type: none"> <li>Rare: 6 species</li> <li>Very rare: 3 species</li> <li>Vulnerable: 1 species</li> <li>Endemic: 5 species</li> <li>Restricted distribution in the Med.: 10 species</li> <li>Restricted distribution in Malta: 10 species</li> </ul> </li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>The main species characterising the sand dune areas were listed in the Ramla Ecological survey report (REF 21). These included five species considered to be confined to Ramla only.</li> </ul>
1.3	Assessment of habitat degradation	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>A further photogrammetric survey of the Ghajn Tuffieha site was carried out to assess vegetation recovery REF 28.</li> <li>The Vegetation Survey of the Rdum Majjiesa area (REF 2) identifies areas of degraded habitats and provides recommendations for their rehabilitation</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>Aerial photographs taken in March 2003 of the Ramla Bay area have been obtained for assessing habitat degradation (23)</li> <li>Assessment of habitat degradation was made within the 2003 ecological survey report, together with recommendations for rehabilitation (REF 21)</li> </ul>
1.4	Afforestation (native species) of degraded areas	<ul style="list-style-type: none"> <li>Malta's first nursery for indigenous trees and shrubs, accommodating 10,000 saplings, and 1,500 seedlings by the end of the project period, was set up to serve both project sites. Activities carried out at the nursery: <ul style="list-style-type: none"> <li>Repair and rehabilitation work on walls and security fencing, and landscaping using indigenous trees and shrubs</li> <li>Installation of fire-fighting system for protection of nursery</li> <li>Maintenance and repair of five wells, and restoration of the 600,000 litre reservoir at the nursery for storage of irrigation water</li> <li>Laying of channels for diversion of rainfall runoff into existing reservoir for irrigation, and collection of sediment deposited in reservoirs by runoff and utilisation for potting and planting</li> </ul> </li> </ul>

1.4 (cont.)	Afforestation (native species) of degraded areas (cont.)	<ul style="list-style-type: none"> <li>- Regular collection from wild native stocks of seeds and cuttings for spring propagation, including rare endemic and indigenous species never previously propagated or rarely so (e.g. the Hoary Rock Rose, Maltese Everlasting, the native Rosemary, the Maltese Cliff Orache, and the Maltese Rock Centuary, Mediterranean Willow, Wolfbane, Sea Samphire, Golden Samphire, Yellow horned Poppy, Esparto grass, Dwarf Palm, Chaste Tree and the National Tree, the Sandarac Gum Tree)</li> <li>- Formulation of biodiversity year planner for the propagation of indigenous and endemic plant species (REF 31)</li> <li>- Purchase of 2,649 trees/plants to make up for initial shortfall during nursery's first year</li> <li>- Propagation of 8,331 native trees and shrubs by the Elysium project nursery planted on the managed sites during the project period, and another 8980 in stock at the nursery by the end of the project period, to be planted on the sites in the coming seasons.</li> </ul> <ul style="list-style-type: none"> <li>• Supplementary activities at the nursery included: <ul style="list-style-type: none"> <li>- placing of gravel in all pots to reduce weed growth and evaporation</li> <li>- construction of greenhouses for seeding trays and seedlings</li> <li>- construction of shading to protect young plants from direct sunlight</li> <li>- transport of soils for repotting, and weeding and cleaning throughout the nursery</li> </ul> </li> </ul> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• The total number of indigenous trees and shrubs planted at this site between February 2000 and April 2003 is 8155</li> <li>• A fire-fighting system was laid on the clay slopes, as well as the level-1 protected areas of the site, connected to an 8,000 litre reservoir</li> <li>• The drip irrigation system was continuously extended to cover all new plants (irrigation rate 4 litres per hour)</li> <li>• Clean-up of two new areas by project staff and volunteers, as preparation for planting of indigenous species</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Following the initiation of the planting programme in March 2001, total number of trees and shrubs planted by April 2003 is 2,925.</li> <li>• Weekly irrigation was performed for all planted trees and shrubs</li> <li>• Consultation has been initiated with the relevant experts regarding the planting of indigenous species on the sand dunes. I would not add this. Being level one protection, it has been the general view that we should not intervene directly to re-vegetate but to protect the dunes and allow them to develop naturally RR –</li> </ul>
2	Protection of features of ecological, scientific and landscape value	<p><b>Activities focussed on production of management plans for the Rdim Majjiesa area (Ghajn Tuffieha site) and for the Ramla Bay site, and on the issue of a site-specific Conservation Order for Ghajn Tuffieha.</b></p> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Draft Management Plan for Rdim Majjiesa area produced in July 2000 (REF 4)</li> <li>• In January 2002, a Conservation Order for the site was issued by the Planning Authority, under section 46 of the Development Planning Act 1992 (REF 16). The draft text of the Conservation Order (REF13) had previously been submitted to LIFE project manager for his comments</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Management plan for Ramla Bay site (REF 9) submitted to the Environment Protection Department (EPD) and approved for implementation in April 2001. (Previous approval of immediate implementation of first intervention measures at the Ramla Bay site had already been obtained in January 2001 (REF 10))</li> </ul>

2.1	Removal of illegal constructions	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• <i>Action listed as specific measure in site's Conservation Order.</i> Following discussions with Planning Authority regarding the rehabilitation of the foreshore by removal of illegal structures, an illegal brick wall on the Golden Bay Headland was demolished in June 2000.</li> </ul>
2.2	Footpath rationalisation to reduce trampling	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Wooden signs indicating the accepted footpaths have been installed at the Ghajn Tuffieha site, and were constantly maintained and replaced whenever necessary. <i>Action in line with site's Conservation Order</i></li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Approved low-lying small signs at strategic points around the dune area at Ramla Bay, requesting visitors to stay on footpaths in order to minimise trampling of sensitive vegetation, were placed and maintained</li> </ul>
2.3	Fencing of disturbed sensitive areas	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Placing of a combination of heavy-duty bollards and padlocked gates to prevent vehicular access to degraded area of blue clay slopes. Regular repair of vandalised bollards and gates.</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Placing of a combination of heavy-duty bollards and padlocked gates to prevent vehicular access, and regular repair of any damage</li> <li>• Following approval of Ramla Bay Management Plan in April 2001, low signs were placed around the sand dunes to discourage trampling of these sensitive areas</li> </ul>
2.4	Stabilisation of clay slopes through afforestation programme	<ul style="list-style-type: none"> <li>• Purchase of a number of necessary texts on local flora and permaculture methods</li> </ul> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Planting of indigenous trees and shrubs on the clay slopes east of the bay (approx. 4,700 plants). <i>Action in line with site's Conservation Order.</i></li> <li>• Laying of irrigation system covering the new areas of vegetation resulting from above planting programme</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Planting of indigenous trees and shrubs around the foot of the clay slopes that are subject to heavy erosion (over 2,300 plants)</li> </ul>
2.5	Access control and restrictions	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Planting across areas of unauthorised access from threatened clay slopes to the beach, and maintenance of signs restricting access</li> <li>• Prevention of access to the clay slopes from road by unauthorised vehicles by installation and maintenance of a padlocked gate and bollard system. <i>Action in line with site's Conservation Order.</i></li> <li>• Police and warden patrols enforced vehicular access regulations, both on land and at sea (booking and police prosecution of offenders)</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Closing of access to dune and clay slopes by unauthorised vehicles on-site through use of heavy duty bollards, steel cable and concealed padlock to discourage vandalism</li> <li>• Police and warden patrols enforce vehicular access regulations, both on land and at sea (booking and police prosecution of offenders)</li> </ul>

2.6	Beach-cleaning	<ul style="list-style-type: none"> <li>It should be noted that beach cleaning by hand, which can never be as thorough as mechanical sand-sifting was the preferred method of beach cleaning due to the ecologically sensitive nature of both project sites.</li> </ul> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>Daily beach cleaning by hand and removal of <i>Posidonia</i> seagrass debris were implemented during the summer months (May to September) for the years 2000, 2001 and 2002.</li> <li>Placement and servicing by boat of bins in swimming areas inaccessible to vehicles during the summer months as above.</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>Daily beach cleaning by hand and removal of <i>Posidonia</i> seagrass debris were implemented during the summer months (May to September) for the years 2000, 2001 and 2002.</li> <li>Negotiations with Xaghra and Nadur local councils re. details of a beach cleaning management plan, including limited waste separation, at Ramla Bay April, 2002</li> </ul>
2.7	Limiting expansion of unsustainable agricultural activity	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>Production of permaculture report on sustainable agriculture in January 2001 (REF 11), and assembly of a “pharmacy” of organic pesticides</li> <li>Implementation of Malta’s first permaculture project on a suitable site (approx. 0.6 acres) at Ghajn Tuffieha – <ul style="list-style-type: none"> <li>planting of olive trees as a first stage of agriculture, and pine trees along the perimeter as a windbreak</li> <li>Implementation of second stage of permaculture project: tilling of fields and removal of stones, and planting of clover as a green compost</li> </ul> </li> <li>Third stage involved the propagation and harvest of crops of 19 different vegetables, two types of fruit and a selection of herbs.</li> <li>A month-by-month planting plan (Permaculture Report REF 11) for the above was formulated and started being implemented in March 2001. Also introduction in November 2001 of data collection system for productivity and yields</li> <li>Purchase of 650 olive trees of Italian origin, for planting by farmers in order to enhance traditional landscape</li> <li>The Persephone Organic Food Club was launched in June 2001 – by July 2002, 40 members were being supplied with weekly organic produce (waiting-list of further 30 members)</li> <li>Provision of assistance to local farmers on extending permaculture methods to neighbouring areas and on marketing of organic produce.</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>Provision of assistance to two farmers regarding implementation of organic methods and advice on marketing of produce in Gozo.</li> <li>Initiation of a small organic farming site on private agricultural land adjacent to project site, to contribute to setting up of Organic Club in Gozo (November, 2001)</li> </ul>
2.8	Protection of aquifer	<ul style="list-style-type: none"> <li>Promotion of organic agriculture in buffer zones around project sites leading to reduction in environmental contamination by pesticides and other chemicals.</li> </ul> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>Use of purely organic fertilisers and pest control agents within the permaculture pilot project contributed to the protection of the aquifer from contamination</li> <li>Education of local farmers at Ghajn Tuffieha regarding reducing use of synthetic fertilisers and pesticides, as already practised by farmers in the Majjiesa area</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>Initiation of a small organic farming site on private agricultural land adjacent to project site, using purely organic methods, and provision of advice to local farmers</li> </ul>

3	<b>Regulation of recreational uses</b>	<b>Action in line with Conservation Order for Ghajn Tuffieha. A Beach Management Plan for Ramla Bay (REF 22) was completed in January 2003.</b>
3.1	Enforcement of site regulations for recreational users	<ul style="list-style-type: none"> <li>• Site warden and manager successfully completed training in boat handling and maritime regulations, on Malta Maritime Authority course April, 2002</li> </ul> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Regular land and sea patrols by wardens, who enforced regulations concerning boat access to swimming zones, camping, offroading, open fires and littering. <i>Action in line with site's Conservation Order.</i></li> <li>• Presence of plain clothes policeman on-site during summer weekends; duties included enforcement support of wardens; presence of police and night-watchman also discouraged theft and vandalism.</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• On-site police presence and land and sea patrols by wardens were introduced at Ramla Bay site to assist with security and enforcement of regulations concerning boat access to swimming zones, camping, offroading, open fires and littering.</li> <li>• Action taken against water sports operator lacking the required MEPA permits (August 2002), and against beach bar operator with regard to unauthorised light pollution of protected beach and dune area August, 2002</li> </ul>
3.2	Restriction of access to legitimate vehicles only	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Installation and maintenance of a padlocked gate and bollard system restricting vehicular access to clay slopes and beach.</li> <li>• Demarcation of a boat lane into the bay to guide boats away from the main swimming areas, in line with MMA policy for bathing areas. This was enforced by sea patrols by the site wardens, supported by the plain clothes police officer at weekends</li> <li>• Land and sea patrols by wardens, to enforce regulations as listed within site's Conservation Order</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Installation of gate and bollard system restricting access to clay slopes and beach</li> <li>• Demarcation of a boat lane into the bay to guide boats away from the main swimming areas, in line with MMA policy for bathing areas. This was enforced by sea patrols by the site wardens, supported by the plain clothes police officer at weekends</li> <li>• Land and sea patrols by wardens, to enforce regulations</li> <li>• Discussion meetings with beach bar operator regarding compliance with access regulations</li> </ul>
3.3	Reduction of access points and sites	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Prevention of vehicular access to the site using bollards, and restriction of pedestrian access to the beach to two signposted paths; servicing and replacement, where necessary, of bollards and regulatory signs. <i>Action in line with site's Conservation Order.</i></li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Bollards were placed at illegal entry points to sensitive areas (i.e. the beach and protected clay slope areas)</li> </ul>
3.4	Rationalisation of footpath system	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Servicing and replacement of regulatory and information signs along footpath system was a continuing activity. Development of sign-posted walks are being undertaken as a requirement of the Conservation Order for this site. Planning of mapped routes for short walks on and around site, with markers to explain important features of habitats and biodiversity are also in progress. The walk (to Qarraba and back) will be restricted to the Ghajn Tuffieha clay slopes along the two main existing paths.</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• footpath system to be used at Ramla Bay was identified, especially in the sensitive dune area, and markers were placed along the route. Information boards were posted along route to explain important features of habitats and biodiversity</li> </ul>

3.5	Implementation of waste management system Implementation of waste management system (cont.)	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Daily cleaning by hand of the beach during the summer months, carried out by waste personnel from the Tourism Department.</li> <li>• Separation at source (organic, glass, metal and plastic) of waste was introduced in summer 2000. Since June 2002, glass, metal and plastic waste is being recycled through collaboration with new Government initiative called "Progett Skart" for collection and proper disposal of separated waste.</li> <li>• Assistance with the introduction and running of waste separation system at commercial establishment on-site– separation and recycling of organic, glass, metal and plastic waste.</li> <li>• In Spring 2003, meetings were held with Malta Tourism Authority to discuss the potential for extending a similar waste management approach to other beaches on the North West coast.</li> <li>• Composting at the Elysium Nursery of organic waste from the beach included seagrass debris, also taking waste from 3 commercial outlets in the Ghajn Tuffieha area. Resulting compost was used for on-site permaculture project</li> </ul> <p>New bins were installed at car park and neighbouring dune area to reduce littering</p> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Daily cleaning by hand of the beach during the summer months, and regular removal of seagrass debris from beach.</li> <li>• Recycling of organic waste collected from beach through collaboration with local farmer.</li> <li>• Separation at source for recycling of waste from beach was introduced in summer 2002. This is limited to metal and glass at the entry point to the beach. These are taken by the manager to the Progett Skart skips in the Ghajn Tuffieha site. Waste separation in Gozo is as yet inexistent.</li> </ul>
3.6	Enforcement of beach management guidelines	<p>2 project staff members obtained MMA licence in boat handling and maritime regulations in April, 2002</p> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Enforcement of site regulations on land and at sea by warden patrols, aided by the presence at weekends of a plainclothes police officer</li> <li>• Installation of 3 buoyed lifelines at Ghajn Tuffieha Bay as a safety measure for swimmers due to dangerous underwater currents in rough weather during the summer months. The lines are removed each December at the end of the bathing season and re-installed in May.</li> <li>• Demarcation of a boat lane, and enforcement by sea patrols of maritime regulations excluding boats from entering the main swimming areas during the summer months</li> <li>• Permit was obtained in December 2001 from MEPA to construct a snack-bar which will implement a sustainable waste strategy, profits of which will be reinvested in management of the site. A call for tenders to construct and operate said amenities was issued in March 2002. An operating license from MTA was obtained in July, 2003</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Enforcement of site regulations on land and at sea by warden patrols, aided by the presence at weekends of a plainclothes police officer</li> <li>• Two buoyed lifelines were laid for the first time at Ramla Bay in summer 2001 as a safety measure for swimmers due to dangerous currents in rough weather. Position of lifelines was selected following consultation with surfers, and lines were replaced in May 2002 and 2003.</li> <li>• Demarcation of a boat lane, and enforcement by sea patrols of maritime regulations excluding boats from entering the main swimming areas</li> <li>• A first aid post was set up within the Police Station</li> <li>• Detailed Beach Management Plan produced in January 2003 (REF. 22)</li> </ul>

4	<b>Education and public awareness raising</b>	
4.1	Placement of visitor interpretation boards at vantage points	<p>Project by visiting James Madison University student group during summer 2002 on improving information dissemination – preparatory work on fact sheets and drafting of information boards and brochures for both sites.</p> <p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Placement of information boards at main entrance to site giving information about the site and project partners, and highlighting site regulations.</li> <li>• Placement of information boards on waste management, organic farming and marine conservation</li> <li>• placement of small information boards on fire hazard zones, beach safety, site regulations and waste separation guidelines, and of large weather-proof signs giving information about use of safety lines for swimmers.. Servicing and replacement when necessary</li> <li>• On-site presence of wardens to assist with visitors' interpretation of information boards</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• 3 new information signs were installed in July 2001 at the entrance to the site giving information about the site and project partners, and highlighting site regulations.</li> <li>• Information board concerning safety for swimmers was posted at Ramla Bay in collaboration with the MMA; also 2 signs regarding purpose and use of safety lines for swimmers</li> <li>• On-site presence of wardens to assist with visitors' interpretation of information boards</li> </ul>
4.2	Establishment of Nature Trails	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Guided tours were carried out at the Ghajn Tuffieha site for groups of German visitors, in collaboration with a German Tour Operator, Studiosus</li> <li>• Planning of signposted routes, including meetings with the Malta Tourism Authority to discuss promotion of ecotourism at the project sites March, 2003</li> <li>• Work on a route for self-guided tours of the Ghajn Tuffieha site by a group of 4 students from James Madison University in the US June, 2000</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Planning of signposted routes, including meetings with the Malta Tourism Authority to discuss promotion of ecotourism at the project sites March, 2003</li> </ul>
4.3	Holding of educational activities, including beach clean-up campaigns	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Call for publicity information from local ngo's for display on-site</li> <li>• Public cleanup activity held at the site in September 2001, covering an area adjacent to the sand dunes, at which 4 industrial sized skips were filled.</li> <li>• Preliminary work on promotion of ecotourism in cooperation with hotel owners in the area, assisted by Amy Townsend, author of "Smart Office".</li> <li>• A beach awareness event was held at Ghajn Tuffieha in August 2002, combining swimming and entertainment with environment and beach management awareness.</li> <li>• A cultural musical event was held at the project nursery premises during two evenings in September 2002, and promoted public awareness of the project's tree-planting and biodiversity work</li> <li>• Educational trips by school parties throughout Winter and Spring 2002, to familiarise students with the work being carried out on-site, and particularly with the propagation of indigenous and endemic plants in the nursery</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• Guided Tours on site for local and foreign visitors</li> <li>• Distribution of Ramla information brochure during weekends in June and July, August, 2002.</li> <li>• Tree planting public events in February, 2001, and February, 2002</li> <li>• Educational trip by Men of the Trees, June, 2002 to view re-vegetation work</li> </ul>



4.4	Membership drive and fund-raising	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• The Adopt-a-Tree Campaign was introduced in April 2001, and officially launched in Autumn 2001, followed by fund-raising sponsored sports activity.</li> <li>• Membership of the Organic Food Club running at full capacity of 40, with another 30 persons on the waiting list.</li> <li>• Funding contribution from nearby catering establishment to site clean-up activity in Sept 2001</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• The Adopt-a-Tree Campaign was introduced in April 2001, and officially launched in Autumn 2001, followed by fund-raising sponsored sports activity in Malta.</li> <li>• Membership of the Organic Food Club</li> </ul>
4.5	Web-page and information leaflet	<ul style="list-style-type: none"> <li>• Setting up, maintenance and regular updating of website at <a href="http://www.projectgaia.org">www.projectgaia.org</a> giving access to information about the project, including: <ul style="list-style-type: none"> <li>– downloadable text of all professional studies and project reports</li> <li>– Gaia Foundation's management accounts</li> <li>– Posting of Spanish, French and German translations of project information</li> <li>– Listing of local and foreign press articles regarding project</li> </ul> </li> <li>• Information leaflets produced and distributed, regarding <ul style="list-style-type: none"> <li>– Management plan for Ramla Bay site, outlining key actions and highlighting natural and historical importance of the site (REF14)</li> <li>– Organic agriculture production, as a means of promoting sustainable agricultural practices at the project sites, and as a fundraising activity (REF 15)</li> <li>– Biodiversity in the Maltese Islands, and the contribution of Project Elysium to the rehabilitation of natural habitats at the project sites (REF 26).</li> </ul> </li> </ul>
4.6	Publication of newsletter	<ul style="list-style-type: none"> <li>• Publication of a number of newspaper articles in local and German press</li> <li>• Publication and mailing to stakeholders, members and public officials of 2 project newsletters in November 2002 (REF 19) and April 2003 (REF 27).</li> </ul>
4.7	Recording of educational video	<ul style="list-style-type: none"> <li>• Filming of the project for an Austrian TV documentary on Malta's road to the EU</li> <li>• Production of a documentary by the Malta Public Broadcasting Service dealing with project activities at the Ghajn Tuffieha site, as part of a series of features on the Maltese landscape</li> <li>• Filming of the project by German TV producer for programme featuring projects in 4 European countries, to be aired on German and French national TV in September 2002</li> <li>• Production of a series of 3 15-minute video documentaries, produced in both English and Maltese language versions, (REF 29) as follows: <ul style="list-style-type: none"> <li>– Project Persephone, covering sustainable agriculture in the coastal zone, as part of the initiative to implement a sustainable agriculture zone around Ghajn Tuffieha</li> <li>– Project Elysium, covering the biodiversity of natural habitats in the Maltese Islands, many of which are found in coastal areas of ecological importance</li> <li>– Project Olympus, covering coastal conservation and management</li> </ul> </li> </ul>
4.8	Holding of annual seminars	<p>Three 1-day seminars were held between February and April 2003, as follows:</p> <ul style="list-style-type: none"> <li>– In March, ECOAST 2003 Seminar on Organic Agriculture was held at the project nursery (REF 24) The seminar was well attended by representatives of the Malta Organic Agricultural Movement.</li> <li>– In April, ECOAST 2003 Seminar on Biodiversity in the Coastal Zones was held (REF 25), and was attended by representatives of a number of local Ngo's, including Birdlife (Malta), BICREF and Nature Trust.</li> <li>– The ECOAST 2003 Waste Management Workshop was held in April (REF 30), between representatives of the Gaia Foundation, Progett Skart and the Malta Tourism Authority, concerning the launch of a separated waste management programme for the Northwest beaches, using the Ghajn Tuffieha project site as a model.</li> </ul>
4.9	Organisation of regional seminar/workshop	<ul style="list-style-type: none"> <li>• A Seminar on Ecotourism in Coastal Areas (ECOAST 2002) was organised on 26-27 November 2002 at Xemxija, Malta. (REF 20), with 3 international guest speakers (from the UK and Turkey) and a number of local presentations. Seminar included two discussion workshops and a site visit to Ghajn Tuffieha and the project nursery</li> </ul>

5	Promotion of decentralisation of management of specially protected areas (SPA's)	The signature of the Management Agreement for the Ramla Bay site in December 2000 signified a transfer of responsibility for its management from government to a non-governmental organisation. <i>Action in line with Conservation Order for the Ghajn Tuffieha site.</i>
5.1	Management by NGO of protected coastal areas	<p><b>Ghajn Tuffieha:</b></p> <ul style="list-style-type: none"> <li>• Discussions were carried out (Spring 2001) with the Ministry for Education, currently responsible for the adjacent Rdum Majjiesa area, to hand over management for this land through the signing of a management agreement</li> <li>• Decentralisation of SPA management is a specific aim of the site's Conservation Order issued in January 2002.</li> <li>• Visit to the project's nursery ( June 2002) by newly appointed Parliamentary Secretary for the Environment who expressed his support for the project</li> <li>• Regular discussions with Local Councils, local police, snack bar operators, and other stakeholders in connection with site management strategy</li> </ul> <p><b>Ramla Bay:</b></p> <ul style="list-style-type: none"> <li>• The management contract for the Ramla Bay site was signed in December 2000, by the legal representatives of the Environment Protection Department and the Gaia Foundation.</li> <li>• Official inauguration of Management Plan in August 2001; presence and support of Minister for the Environment and Minister for Gozo</li> <li>• Continued consultation meetings with Local Councils, local police, representatives of the local surfers and snack bar operators in connection with the management of the site</li> </ul>
5.2	Dissemination of project results and experience to local and regional audience	<ul style="list-style-type: none"> <li>• Inauguration of official launch of the project in March 2000, by the Minister for the Environment. Good media coverage of the project's planned activities, and of the LIFE programme</li> <li>• Information on the project was featured in the e-mail newsletter of the EPD</li> <li>• All reports produced by the project copied to the Environment Protection Department (EPD) and to the MEPA</li> <li>• Media reports of the Ramla Bay official inauguration in August 2001 and of the Parliamentary Secretary for the Environment's visit to the nursery in June 2002</li> <li>• Broadcast of television documentaries featuring the project both locally and in Austria</li> <li>• Presentation of project experience and results at five international events: <ul style="list-style-type: none"> <li>– <b>Globalgarden workshop</b> on the implementation of sustainable methods of living, in Sweden in June 2001</li> <li>– <b>MEDCOAST Fifth International Conference on the Mediterranean Coastal Environment</b>, in Hammamet, Tunisia; October 2001 (REF 18)</li> <li>– <b>DEPANA seminar on "LIFE Project for the sustainable management of La Punta de la Mora"</b> in Tarragona, Spain in May/June 2002</li> <li>– <b>Global Challenges of Parks &amp; Protected Area Management</b>, held in La Maddalen, Sardinia, in October 2002.</li> <li>– <b>ECOAGUA International Conference</b> on the importance of water management and ecotourism, held in Galizia, Spain, between 16-19 October 2002.</li> </ul> </li> <li>• The project managers were consulted by the Ministry responsible for Lands and Local Councils regarding three new treeplanting and biodiversity projects locally (May-July 2001)</li> </ul>

## 2.2.2. PROJECT MILESTONES

DESCRIPTION	DATE
Official Inauguration of LIFE Project TCT 99/M/095 by Minister for the Environment	March 2000
Vegetation Survey Report for Rdum Majjiesa, Ghajn Tuffieha	May 2000
Approval of Management Plan for Ramla Bay, Gozo for implementation under the above agreement	November 2000
Signature of Management Agreement for Ramla Bay, Gozo between the Gaia Foundation and the Ministry for the Environment	December 2000
Publication of 2 Information leaflets on the Management Plan for Ir-Ramla, Gozo and on the Persephone Organic Food Club	July 2001
Official Inauguration of Management Plan for Ramla Bay, Gozo, by the Minister for the Environment and the /Minister for Gozo	August 2001
Issue of Conservation Order for Ghajn Tuffieha	January 2002
Submission of Project Interim Report covering the period 1/2/2000 to 30/9/2001	February 2002
Official visit by Parliamentary Secretary for the Environment to project site and nursery	June 2002
Publication of Project Gaia newsletter, issue 1	November 2002
International Seminar on Ecotourism in Coastal Areas, ECOAST 2002	November 2002
Report of the Ramla Bay Ecological Survey by Dr Adriana Vella	January 2003
Report of the Ramla Bay Geology Survey by Dr Saviour Scerri	January 2003
Beach Management Plan for Ramla Bay by Dr Anton Micallef	January 2003
Meetings with Malta Maritime Authority officials to discuss joint organisation of coastal patrols by boat by Gaia Foundation staff to cover entire Northwest of Malta	February 2003
Local Seminar ECOAST 2003 on Organic Agriculture	February 2003
Local Seminar ECOAST 2003 on Biodiversity in Coastal Zones	March 2003
Production of Persephone video documentary on organic farming	January 2003
Production of Olympus video documentary on coastal management	April 2003
Production of Elysium video documentary on Maltese biodiversity	April 2003
Publication of Project Elysium brochure on Maltese biodiversity	April 2003
Publication of Project Gaia newsletter, issue 2	April 2003
Local Seminar ECOAST 2003 on Waste Management	April 2003
Photogrammetric Survey by Working Light Ltd	April, 2003
Meeting with Malta Tourism Authority to discuss application of project results to national beach waste management strategy for the Maltese Islands	April, 2003
Submission of Project Final Report covering the period 1/2/2000 to 30/4/2003	July 2003
Foreseen Milestone: Final Press Conference on successful completion of current project and on future plans for the project sites and for other sites locally	August 2003

## 2.2.3. RESULTS

Results to be achieved	Means of Verification*	Status
1. Rehabilitation of unique biodiversity and habitats	<ul style="list-style-type: none"> <li>• Planting records (REF. 33) by site</li> <li>• Website photo galleries (see CD (REF 35) attached)</li> <li>• Photographic evidence (see CD (REF 34) attached)</li> <li>• Field visits</li> <li>• Photogrammetric survey results (REF. 28)</li> <li>• Rdum Majjiesa Survey Report (REF. 2)</li> <li>• Ramla Bay Ecological Survey Report (REF. 21)</li> <li>• Newspaper articles listed on project website (see CD (REF 35) attached)</li> </ul>	<ul style="list-style-type: none"> <li>• Production of baseline habitat maps and species lists</li> <li>• 11,080 native trees and other plants were planted at the project sites.</li> <li>• Production and planting of 8,331 trees and shrubs from local stock at the project nursery. A further 8,980 trees and plants are available in the project nursery for continuation of the rehabilitation of the sites' habitats.</li> </ul>
2. Protection of important features	<ul style="list-style-type: none"> <li>• Conservation Order for Ghajn Tuffieha (REF 16)</li> <li>• Police and MEPA reports concerning direct intervention in case of illegal activities</li> <li>• Newspaper articles listed on project website (see CD (REF 35) attached)</li> <li>• Management Plan for Ramla Bay (REF 9) and Rdum Majjiesa (REF 4) areas</li> <li>• Police and MEPA reports concerning direct intervention in case of illegal activities</li> <li>• Photogrammetric survey results (REF 28)</li> <li>• Membership and waiting list of Organic Food Club</li> </ul>	<ul style="list-style-type: none"> <li>• Rationalisation of footpath system on clay slopes at Ghajn Tuffieha (achieved by signposting and fencing of pathways on clay slopes)</li> <li>• Introduction of Warden patrols, with Police support</li> <li>• Demarcation of sand dune area at Ramla bay to prevent trampling</li> <li>• Enforcement of legislation barring vehicular access to clay slopes and dune areas, by physical barriers and Warden patrols</li> <li>• environmentally-sensitive litter control measures</li> <li>• Introduction of Warden patrols, with Police support</li> <li>• Planting of trees on clay slopes to reduce erosion</li> <li>• Pilot project and promotion of organic agriculture methods</li> <li>• Provision of olive trees to farming community</li> </ul>
3. Protection of landscape value by stabilising clay slopes	<ul style="list-style-type: none"> <li>• Photogrammetric survey results (REF 28)</li> <li>• Conservation Order for Ghajn Tuffieha (REF 16)</li> </ul>	<ul style="list-style-type: none"> <li>• Tree-planting on clay slopes</li> <li>• Enforcement of legislation barring vehicular access to clay slopes, by physical barriers and Warden patrols</li> </ul>
4. Regulation of recreational activities by public	<ul style="list-style-type: none"> <li>• Conservation Order for Ghajn Tuffieha (REF 16)</li> <li>• On-site boards giving project information and site regulations</li> <li>• Police and MEPA reports concerning direct intervention in case of illegal activities</li> <li>• Waste management collaboration with Progett Skart (Ministry for Resources and Malta Tourism Authority)</li> <li>• Beach Management Plan for Ramla Bay (REF. 22)</li> <li>• Discussion meetings with MTA regarding contribution of project to national beach management strategy</li> <li>• Site visits and photo galleries on website and CD (REF 35) attached</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Warden patrols, with Police support, to control vehicle access on land and at sea, lighting of fires, camping, and other site regulations</li> <li>• Demarcation of separate swimming zones and boating areas during summer months</li> <li>• Implementation of separated waste management strategy</li> <li>• Discussion meetings with stakeholders</li> <li>• Planning and signposting of footpaths</li> <li>• Installation of safety lines for swimmers</li> <li>• Installation of on-site boards giving project information, site regulations and safety warnings</li> </ul>

5. Education and awareness raising	<ul style="list-style-type: none"> <li>• Project website: 3,682 visitors between May 2002 and July 2003 (see CD attached as REF 34)</li> <li>• Newsletters (REFS 19 &amp; 27)</li> <li>• Seminar programmes (refs 20,24,25,30)</li> <li>• Brochures on biodiversity (REF 26), Ramla Bay management plan (REF 14) and organic farming (REF 15)</li> <li>• Published conference proceedings (e.g. REF 18)</li> <li>• Video documentaries (REF 29)</li> </ul>	<ul style="list-style-type: none"> <li>• Development of regularly updated website</li> <li>• Cleanups and awareness raising events</li> <li>• Fundraising activities – Adopt-a-tree campaign and Organic Food Club</li> <li>• Publication and distribution of brochures and newsletters</li> <li>• International Seminar on Ecotourism</li> <li>• Programmes of seminars on Biodiversity, Waste Management and Organic Agriculture</li> <li>• Conference presentations on project</li> <li>• Production of educational videos</li> <li>• Site visits by school groups, tourist groups and general public</li> <li>• Use of different languages in educational material</li> </ul>
6. Promotion of decentralisation of management	<ul style="list-style-type: none"> <li>• Listing of newspaper articles on website (see CD attached as REF 34)</li> <li>• Management Agreement for Ramla Bay (REF. 8)</li> <li>• Conservation Order for Ghajn Tuffieha (REF. 16)</li> <li>• Expansion of collaboration to include new government bodies e.g. MTA and Ministry for Resources</li> </ul>	<ul style="list-style-type: none"> <li>• Entrusting by central government of management of protected area on public land to non-governmental organisation</li> <li>• Granting of on-site enforcement powers to site managers</li> </ul>

*\* Means of verifications are sources of information (newspapers, reports, ...) or means (enquiry, etc) that allow to check easily that the results have been achieved.*

#### 2.2.4. REVIEW OF ANTICIPATED PROBLEM(S) / ASSUMPTION IDENTIFIED DURING THE PROJECT PREPARATION

Ref.	DESCRIPTION	SOLUTION(S) IDENTIFIED
<b>Project objectives</b>	<b>Continued Government support and co-operation</b>	<ul style="list-style-type: none"> <li>• Close collaboration with the relevant government department (Environment Protection Department, EPD and the Malta Planning and Environment Authority, MEPA) involving discussions and regular meeting, provision of copies of all reports, consultations on management plans and intervention measures</li> <li>• The above measures have been successful in achieving the signature of the Management Agreement for Ramla Bay, the second project site, as well as approval of the Management Plan for this site</li> <li>• The first half of 2002 saw the creation of a new environmental body, the Malta Environment and Planning Authority (MEPA), through the merger of the former Environmental Protection Department (EPD) with the former Planning Authority (PA). Meetings were held with officials of the new Authority in order to ensure continuity in the collaboration on this project</li> </ul>
	<b>Co-operation of tenants and owners of private sections of project sites</b>	<ul style="list-style-type: none"> <li>• Discussions and provision of information regarding the sites, such as providing aerial photos to farmers at the Ramla Bay site, and making available to farmers olive trees for landscaping of agricultural land within the Ghajn Tuffieha site</li> <li>• Involvement of local catering establishments with the embellishment and clean-up activities of the project sites, and with waste management project</li> <li>• Assistance to farmers at the project sites with production and marketing methods for organic produce</li> </ul>

	<b>Continued public interest in nature protection and coastal conservation</b>	<ul style="list-style-type: none"> <li>Regular media coverage (newspapers and television) regarding the project and aspects of site management</li> <li>Setting up of on-site Visitor Centre (non-LIFE funded)</li> <li>Provision by wardens of on-site explanations to visitors of project activities</li> <li>Opening of the Elysium tree and plant nursery to the general public for the purpose of visitor education</li> <li>Information boards at both sites provide explanations of the work being carried out by the project</li> </ul>
1	<b>Technical feasibility of intervention measures</b>	<ul style="list-style-type: none"> <li>Expert advice sought from relevant consultants prior to finalising management plans and intervention measures</li> <li>Advance planning of activities to ensure availability of sufficient resources. E.g. Setting up of nursery within project to ensure provision of adequate numbers of suitable tree and shrub species for planting at sites</li> </ul>
2	<b>Political and public recognition of sites' important features</b>	<ul style="list-style-type: none"> <li>Close liaison with staff of relevant Ministries, especially the Ministries for the Environment, and for Gozo, and with the Malta Environment and Planning Authority</li> <li>Media campaign about project, placement of information boards on-site and on-site presence of wardens to explain sites' features to visitors</li> <li>Public complaints regarding weekend traffic congestion caused by exclusion of car parking from protected area at Ramla Bay resolved by temporary use of some fields currently not under cultivation</li> <li>Liaison with Planning Authority regarding demolition of illegal constructions at Ghajn Tuffieha, and the issue of site-specific regulations within a Conservation Order</li> </ul>
3	<b>Political and public recognition of project management's authority</b>	<ul style="list-style-type: none"> <li>Media campaign about project's benefits, information signs, and educational guidance of visitors on-site by wardens</li> <li>Signature of Management Agreements legally entrusting management of project sites to the Gaia Foundation</li> <li>Issue of a Conservation Order for Ghajn Tuffieha, granting project managers legal powers to enforce site regulations</li> </ul>
4	<b>Sufficient national conscience on environmental matters</b>	<ul style="list-style-type: none"> <li>Media campaign, including production of information leaflets on various aspects of the project</li> <li>Educational activities, such as the Adopt-a-Tree campaign, beach clean-ups and school visits to Elysium nursery</li> <li>Setting up of Visitor Centre (non-LIFE funded activity)</li> </ul>
5	<b>Innovative decentralisation approach</b>	<ul style="list-style-type: none"> <li>Good liaison with relevant government departments and provision to departments and Ministries of all reports on the project</li> <li>This approach has resulted in signature of Management Agreement for second project site at Ramla Bay. Both sites are now legally managed by the Gaia Foundation.</li> <li>Agreements on future collaboration with other local environmental ngo's</li> </ul>

## 2.2.5. REVIEW OF PROBLEMS ENCOUNTERED AND LESSONS LEARNT

Ref.	DESCRIPTION	SOLUTION(S) IDENTIFIED
1.1	<b>Lack of rainfall during 2002 delayed the ecological survey at Ramla Bay</b>	<ul style="list-style-type: none"> <li>The new survey required the presence of typical vegetation in order to characterise and assess habitats – survey was eventually completed in January 2003.</li> </ul>
1.4	<b>Delay in obtaining electricity supply to power pumps for essential irrigation of clay slopes afforestation (Ghajn Tuffieha) during summer months</b>	<ul style="list-style-type: none"> <li>Irrigation was carried out through the purchase and use of petrol-driven pumps and generator as a temporary measure</li> <li>Electricity connection was obtained in September 2001. Mains electricity was used to power irrigation after this date.</li> </ul>

1.4	<b>Exceptionally low rainfall in the planting seasons 2000/2001 and 2001/2002</b>	<ul style="list-style-type: none"> <li>The planting season coincides with the annual rainy season, generally between October and March. The low rainfall during the project's first two years meant that the planting season began late (end of November), and intensive watering by irrigation was carried out for all new plants.</li> </ul>
2 2.1	<b>Debate over the details of the conservation Order for Ghajn Tuffieha, for better protection of site – this was the first site conservation order in the Maltese Islands</b>	<ul style="list-style-type: none"> <li>Continued negotiations and discussions with Planning Authority, including submission of Gaia Foundation's extensive comments and proposed amendments to draft text of Conservation Order for Ghajn Tuffieha.</li> <li>Conservation Order for Ghajn Tuffieha issued in January 2002</li> </ul>
3.1 3.2 3.6	<b>Lack of compliance by certain members of the general public with site regulations and management guidelines</b>	<ul style="list-style-type: none"> <li>Regular site patrols by wardens, and employment of plainclothes police officers during summer weekends (busiest time on-site). The number of breaches of regulations has declined as the public has become more aware of the importance of the protected status of the sites.</li> <li>Immediate replacement of all stolen or vandalised equipment, including signs and safety lines</li> <li>Immediate repair of vandalised bollards etc restricting vehicular access to protected areas, and use of heavy duty equipment to deter further vandalism</li> <li>Action by the police force was requested in connection with threats and breach of maritime regulations at Ghajn Tuffieha by a motorised dinghy owner, and in dealing with illegal bird trapper at Ghajn Tuffieha site</li> <li>In summer 2002, a joint operation was carried out at Ramla Bay against an illegal water sports operator, by the MEPA, Lands Department and the Police, in collaboration with the project's site manager.</li> <li>Specific resistance to new access restrictions was encountered from beach bar operator at Ramla Bay - discussion meetings were held regarding compliance with access restrictions. This issue highlighted the importance of involving local stakeholders in on-site management, from the planning to the implementation stages, possibly in part-time positions. This is important to foster local support for the project, in spite of reservations about the efficiency of such persons</li> </ul>
3.1 3.2 3.6 (cont.)	<b>Lack of compliance by certain members of the general public with site regulations and management guidelines (cont.)</b>	<ul style="list-style-type: none"> <li>A more intensive PR campaign, specifically requesting the public's assistance with the project might have enhanced the public's acceptance of site regulations. Ideas for future PR include TV discussion programmes and presentation/discussion sessions in collaboration with Local Councils.</li> </ul>
3.5	<b>Problem with achieving desired level of cleanliness of sand</b>	<ul style="list-style-type: none"> <li>The hand-picking of waste from the beach sand at the two sites does not allow the smallest waste items to be collected, and these therefore remain in the sand. Mechanical sand-sifting, while more efficient, is however not an option due to the ecologically sensitive nature of the project sites</li> </ul>
3.5	<b>Difficulty in implementing full waste management strategy at Ramla Bay site due to lack of necessary infrastructure for waste separation on the island of Gozo</b>	<ul style="list-style-type: none"> <li>Organic waste from one of the snack bars being used as animal feed</li> <li>Soft drinks are supplied in glass bottles that are returned to the local manufacturers for reuse, thus minimising plastic waste</li> </ul>
3.6	<b>Delay to provide basic amenities (including toilet facilities) at the Ghajn Tuffieha beach, owing to contention of third party rights over ownership of some land bordering the public land at Ghajn Tuffieha</b>	<ul style="list-style-type: none"> <li>Continued effort by the Project Managers for this issue to be resolved as expeditiously as possible</li> <li>Permit was obtained in December 2001 from MEPA to construct a snack-bar.</li> <li>Toilet facilities at the site consist of mobile units.</li> </ul>

4.1	<b>Vandalism of signs and equipment</b>	<ul style="list-style-type: none"> <li>• Instant replacement of vandalised signs and other equipment, and continual vigilance by wardens/police officers/night-watchmen – this approach is considered to be more cost-effective than 24-hour security.</li> <li>• This has proved to be a particular problem at the Ramla Bay site, where the co-operation of the Police has been requested to prevent further acts of vandalism</li> </ul>
5.1	<b>Protracted negotiations in finalising third party rights on public land and other details of contract for management of Ramla Bay</b>	<ul style="list-style-type: none"> <li>• First intervention measures at Ramla Bay were initiated while waiting for approval of complete Management Plan.</li> <li>• Interim period was used to complete drawing up of management plan within 10 months of the project period for immediate implementation on signature of contract</li> <li>• Project activities planned for Ramla Bay were accelerated and completed within the remaining project period.</li> </ul>

## 2.2.6. RECOMMENDATIONS FOR DURABILITY AND FOR SUSTAINING LONG TERM BENEFIT OF THE ACHIEVED PROJECT RESULTS

The aim of the Gaia Foundation now that the LIFE-funded project is over is to continue management of the project sites, including operation of the Elysium tree and plant nursery, as well as to follow-up a number of new initiatives at a national level. The Gaia Foundation was established in 1994 as a non-governmental organisation with the aim of protecting Malta's environment and promoting sustainable living, and the management of the Ghajn Tuffieha area has been entrusted to the Gaia Foundation since 1998. The three year LIFE-funded project was thus a part of Gaia's long-term vision for Ghajn Tuffieha and for other coastal sites in the Maltese Islands, and the Gaia Foundation is committed to ensuring that the results of the LIFE project are used as building blocks for further efforts towards achieving a sustainable and integrated approach to coastal management in the Maltese Islands.

Given the success of the current LIFE-funded project and of the Government's decentralised operations through the Gaia Foundation concerning field implementation of coastal environmental protection at Ghajn Tuffieha and Ramla Bay, there is reason to be optimistic that Government financial support provided over the last few years will be continued. The renewal of the management agreements for both sites is currently being discussed with Government, with the intention of the Gaia Foundation continuing with the development and implementation of management at the two sites, and supplementing the Government income with funding from other sources. For example, funds from non-LIFE sources during the LIFE project period (derived from sponsorships by the Bank of Valletta, Studiosus and Thomson) were used for the setting up of a visitor centre which is open to the public and which can host workshops and school group visits. Besides sponsorships, other projected sources of funding include the income from sales of organic vegetables from the Persephone project (LM 656.73 in 2002 and a similar amount is expected in 2003), and the projected income from the snack bar opened at Ghajn Tuffieha by the Gaia Foundation, which commenced operation in July 2003. Also important to note is the availability of plants produced at a reduced cost by the Elysium nursery, leading to reduced running expenses for the continued afforestation of the site. As was predicted in the original LIFE project proposal, management activities at the two sites are firmly expected to continue with the same momentum that has been established during the three years of the LIFE project.

In view of the need for continued monitoring and research at the project sites, an agreement has been reached with a local conservation ngo, the Biological Conservation and Research Foundation (BICREF) and its President Adriana Vella, for the ecological survey already carried out at Ramla Bay and for future surveys to be charged at cost price only. It should be noted that this type of collaboration between ngo's with similar aims is extremely conducive to sustainability, and a longterm monitoring programme is planned for the project sites.

The decision to set up a tree and shrub nursery as part of the LIFE project, rather than purchasing the required trees as was originally envisaged, has enabled longterm sustainability of efforts related to site rehabilitation. The problems encountered when attempting to purchase trees as planned in the project proposal were twofold. Firstly, not all the required species of native trees were available from local nurseries, and even those species that could be purchased were not available in sufficient numbers. Secondly, it was difficult to ascertain provenance of trees available from local nurseries, since guaranteed Maltese stock was required. It was therefore decided to set up a nursery within the project, which would supply trees and other plants of correct provenance in sufficient numbers for the planned site rehabilitation, and which would enhance the project's sustainability in the longterm.

Had trees for site rehabilitation been purchased as originally planned, the Lm 12,000 originally budgeted for purchase of trees would not have purchased more than 4,8000 trees (at an average cost of Lm 2.50 per tree). During the first year, pending the first production by the project nursery, 2,649 trees were purchased or made available for planting by donation. A total of Lm



2,678.80 was spent on purchasing trees in the first year of the project. By April 2003, a further 8,331 trees and plants were planted at the project sites from project nursery stock, while 8,980 trees and plants were in stock for future planting which will commence at the start of the rainy season in October 2003.

This continued planting of trees and shrubs for the rehabilitation of the natural vegetation at Ghajn Tuffieha and Ramla Bay has been enabled by the development of the Elysium Nursery at Ghajn Tuffieha, which, apart from producing 8,331 trees and shrubs planted during the LIFE project period, currently houses a stock of 8,980 trees and other plants (see REF. 33) which will be planted at the sites in the coming planting seasons. It is estimated that a further 5,000 plants can be propagated annually at reduced costs, benefiting from the capital expenditure made on the nursery during the project period. Plants in excess of the requirements of the currently managed areas can be used for the rehabilitation of other sites in the Maltese islands, in collaboration with other environmental ngo's. The project nursery can thus be regarded as an environmental legacy of the project to future projects in Malta concerning rehabilitation of natural vegetation

The patrols by project staff, both on land and at sea, were found to be an essential part of enforcing site regulations at the project sites. These patrols will continue to be carried out, and will continue to make use of the equipment purchased during the LIFE project, namely the multi-purpose vehicle and the boat.

The integrated management approach adopted by the LIFE project is the first successful example of a separated waste management system in the Maltese Islands. Separated wastes collected from the site were initially handled by a private company, until the Ministry for Resources set up "Progett Skart", a project for the proper collection and disposal of separated wastes. The LIFE project sites were among the first sites to implement Progett Skart, and the sites are now being considered as a national model for other sites locally. Discussions have been held with The Malta Tourism Authority and with Progett Skart, in order to secure the long-term implementation of separated waste management for the two project sites, as well as the inclusion of a third site, Golden Bay, as pilot project sites that can be replicated on other beaches. The measures planned for implementation at selected beaches will mirror the successful waste strategy adopted at Ghajn Tuffieha during the LIFE project period: waste separation bins will be maintained on the beach, and the separated waste will be deposited into the Progett Skart skips at the site, and then removed for proper disposal of the different waste fractions.

The importance of the continued dissemination of information is fully realised by the project managers. The information boards placed at the sites will be maintained so that, together with explanations by the wardens, they will continue to provide important information to visitors. The Elysium nursery will continue to be open for visits by the public and for educational visits organised for local schoolchildren. The computers and projector purchased during the LIFE project are essential tools for continuing to present the management's aims and progress at the project sites. The project website has now reached an advanced stage of development, with full information about all the project activities, as well as downloadable copies of all project reports and documents. It is expected that maintenance of the website, including regular updating of the project activities, and posting online of new project reports, can now be sustained at a reduced cost.

### 2.3. LIST OF REPORTS AND OTHER DOCUMENTS PRODUCED BY THE PROJECT

Ref.	Title / Description	Date	Already provided	Attached
1	Programme of the Official Project Launch	11 April 2000	yes	no
2	DRAFT Vegetation Survey of Rdum il-Majjiesa, Ghajn Tuffieha	May 2000	yes	no
3	DRAFT Management Plan for Ramla Bay, Gozo	June 2000	yes	no
4	DRAFT Management Plan for Rdum Majjiesa, Ghajn Tuffieha	July 2000	yes	no
5	DRAFT Management Agreement for Ramla Bay, Gozo	July 2000	yes	no
6	List of trees and shrubs planted Autumn 99 – Spring 2000	28 Aug 2000	yes	no
7	Gaia Foundation Annual Report 2000 (includes report summary)	April 2000	yes	no
8	Management Agreement for Ramla Bay, Gozo	December 2000	yes	no
9	Management Plan for Ramla Bay, Gozo	November 2000	yes	no
10	Urgent Conservation Measures for Ramla Bay, Gozo	December 2000	yes	no
11	Sustainable Agriculture (Permaculture) Report	Jan 2001	yes	no
12	Gaia Foundation Progress Report, August 2000 – January 2001	Feb 2001	yes	no
13	Draft Conservation Order for Ghajn Tuffieha, with comments by the Gaia Foundation	June 2001	yes	no
14	Information leaflet – Management Plan for Ir-Ramla, Gozo	July 2001	yes	no
15	Information leaflet – Persephone Organic Food Club	July 2001	yes	no
16	Conservation Order for Ghajn Tuffieha	January 2002	yes	no
17	Organic yield records, Nov 2001 – Jan 2002	February 2002	yes	no
18	Paper published in Proceedings of MEDCOAST Fifth International Conference on the Mediterranean Coastal Environment	October 2001	no	yes
19	Newsletter no. 1	November 2002	no	yes
20	ECOAST 2002 Seminar on Ecotourism Programme	November 2002	no	yes
21	Ramla Bay Ecological Survey	January 2003	no	yes
22	Beach Management Plan for Ramla Bay	January 2003	no	yes
23	Geo-Environmental Survey of Ramla Bay	January 2003	no	yes
24	ECOAST 2003 Seminar on Sustainable Agriculture	March 2003	no	yes
25	ECOAST 2003 Seminar on Biodiversity	April 2003	no	yes
26	Information leaflet – Biodiversity in the Maltese Islands	April 2003	no	yes
27	Newsletter no. 2	April 2003	no	yes
28	Photogrammetric Survey of Ghajn Tuffieha	April 2003	no	yes
29	Video documentaries on the Persephone, Elysium and Olympus projects	April 2003	no	yes
30	ECOAST 2003 Seminar on Waste Management	April 2003	no	yes
31	Biodiversity Year Planner	April 2003	no	yes
32	Site Manager's Activity Reports	Feb 2000 to April 2003	no	yes
33	Elysium Nursery Stocktakes and Activity	April 2003	no	yes
34	Image galleries on CD	April 2003	no	yes
35	Project Website on CD	April 2003	no	yes

Also attached are two further CD's with copies of various reports and other documents listed above.

## 2.4. PROJECT ABSTRACT

*The project abstract is intended to provide a short narrative description of the technical achievement for the entire duration of the project. Please keep in mind that the aim of this abstract is to provide a summarised overview of the project activities and achievements for third parties upon request.*

### **Project LIFE TCY 99/M/095 – Integrated Management of Specially Protected Areas in Malta**

The proposal for this project was submitted in January 1999 in answer to the call for applications for LIFE-Third Countries projects, under the category “actions for the conservation and restoration of significant habitats of threatened species of flora and fauna”. Following the award of LIFE funding, the project contract was signed on 24<sup>th</sup> November 1999, and project activities commenced on 1<sup>st</sup> February 2000. Project duration was 39 months, and activities ended in April 2003. The total project budget was € 378,871.29, with 50% being provided by LIFE and the Government of Malta as co-funder. The project was co-ordinated by the Euro-Mediterranean Centre on Insular Coastal Dynamics (ICoD), working in close collaboration with the Gaia Foundation as site managers, with the financial support of the Ministry for Rural Affairs and the Environment. It is the first project locally to bring together such diverse institutions under EU funding for the purpose of managing protected areas on public land. The project also incorporates two of the first management contracts of this type to be issued by the Ministry for the Environment.

The principle aim of this project was the implementation of integrated management practices at two protected coastal sites – the Ghajn Tuffieha area on the Northwest coast of Malta, and the Ramla Bay area on the island of Gozo. Both these sites comprise a number of features of ecological and scientific importance at a national level, and are in a relatively pristine state. Both sites are however prime recreational areas, hosting thousands of visitors especially during the summer months. The challenge in managing these sites in a sustainable manner is therefore to protect their unique ecology while simultaneously controlling and managing the human activities taking place there.

Project activities were directed towards achieving the following specific objectives:

- Rehabilitation of unique biodiversity and habitats, ensuring their preservation for future generations.
- Protection of features of ecological and scientific importance, such as clay slopes, sand dunes, freshwater wetlands, etc.
- Control of erosion of Blue Clay slopes, thus protecting the landscape value of the entire project sites.
- Regulation of recreational uses, and promotion of the public's enjoyment of a pristine landscape via environmentally-friendly activities.
- Education of the general public and raising of awareness regarding the importance of coastal conservation.
- Promotion of the innovative concept of decentralisation of SPA management, both at a national and regional level.

Habitat mapping was an important part of the ecological surveys carried out at both sites. At Ghajn Tuffieha, the vegetation of a previously unmapped area (Rdum Majjiesa) was surveyed in Spring 2000, while an Ecological Survey of Ramla Bay and its environs was carried out. Both surveys included species lists, with particular reference to rare and vulnerable species and to those with restricted distribution, and provided recommendations for rehabilitation of the sites' vegetation, which were incorporated into the Management Plans produced for the two sites. Additional surveys were carried out on the geology, geomorphology and hydrology of the sites. Work on monitoring the vegetation at these sites is continuing after the end of the LIFE project period, through collaboration with BICREF, a local conservation NGO, which will continue to assess the vegetation and to provide recommendations for future management.

An important component of the rehabilitation of the sites' vegetation was the 3-year planting programme employing native trees and shrubs of local provenance. A total of 11,080 trees and shrubs were planted at the project sites during the three-year LIFE project period: 8,165 at Ghajn Tuffieha and 2,925 at Ramla Bay. Of the total number planted, 2,649 trees/shrubs were purchased or donated during the first year of the project, while the remaining 8,331 were produced by the project's Elysium nursery, the first nursery in

Malta top specialise in the propagation of indigenous species. Plants were propagated from native stocks through the collections of seeds and cuttings from the wild, and included a significant number of endemic and indigenous species rarely propagated and generally unavailable for purchase from commercial nurseries. The advantages of the setting-up of an on-site nursery were the guaranteed local provenance of the trees and shrubs produced, a property which is very hard to ascertain for commercially produced stock, and the increase in the total number of trees planted, from the 5,000 originally budgeted for to more than 11,000 actually planted. In addition to the 11,080 trees planted during the project period, a further 8,980 trees and plants are currently in stock at the nursery, ready to be planted after the start of the rainy season in October 2003.

Tree production and planting on-site was supplemented by a number of other activities, namely the irrigation of all new plants at both project sites, the laying of a fire-fighting system (connected to an 8,000 litre reservoir) on the clay slopes and protected area at Ghajn Tuffieha, the repair and maintenance of four wells and a 600,000 litre reservoir for storage of rainwater for irrigation purposes, and a number of clean-up activities by staff and volunteers to prepare new areas for planting.

The main project achievements for the protection of important ecological, scientific and landscape features of the project sites were the production in July 2000 of a draft Management Plan for the Rđum Majjiesa Area (Ghajn Tuffieha), the production and approval by the environmental authorities of a Management Plan for Ramla Bay (April 2001), and the issue of a Conservation Order for Ghajn Tuffieha (January 2002). The Management Plan for the main Ghajn Tuffieha area (produced in 1997) continued to be developed and implemented, and management activities were strengthened by the issue of the Conservation Order, which lists as specific actions many of the project's activities for the protection of this site. At both project sites, access to the sensitive areas (clay slopes and sand dune) was controlled in order to prevent trampling and reduce erosion. This was done by a combination of physical barriers such as fences and bollards, footpath directional signs, planting across unauthorised access points, and warden patrols, together with the support of the police to enforce site regulations.

The limiting of the expansion of unsustainable agricultural activity within the project sites and around their boundaries was achieved by the setting up of one of Malta's first organic farming projects on a suitable site at Ghajn Tuffieha. Successful year-round harvests of a variety of vegetables and fruit were used to supply regular boxes of produce to members of the Organic Club, a pilot scheme for the distribution of organic produce to consumers. Assistance was provided to local farmers at both project sites regarding both organic production methods and marketing strategy, as demonstrated by the pilot project. The protection of the aquifer, and of the temporary freshwater wetland at Ramla Bay from contamination by synthetic fertilisers and pest control chemicals is also an important result of such an approach.

The clay slopes found at both sites are a particularly important landscape feature, and special attention was paid to their rehabilitation and preservation. Protection measures were aimed at reducing erosion, and comprised three main activities – control of illegal vehicle access by installation and maintenance of physical barriers, footpath rationalisation to direct visitors along an identified network of main paths and reduce trampling of other areas, and planting of trees and shrubs in areas subject to heavy erosion. The regeneration of natural vegetation that resulted from these measures has helped to stabilise the clay slopes against further mudslides and erosion.

The regulation of recreational activities was an important aspect of the management of the two protected areas. Notices giving information about protection status and outlining site regulations were installed and maintained at both sites, and project wardens were present on-site to answer queries and explain regulations. Regular patrols by the wardens supported by the police, on land and at sea at both project sites, helped to enforce the site regulations concerning exclusion of boats from swimming zones, camping, vehicle access and offroading, open fires and littering. On a number of occasions, the project managers worked closely with the authorities to curb illegal activities, and action was taken against illegal bird-trappers, a water sports operator lacking required permits, and other infringements of the regulations.

A separated waste management system was implemented at both sites. Daily beach cleaning by hand was carried out during the summer months (this method was preferred over more efficient mechanical sand-sifting due to the ecological sensitivity of the sites). At Ramla Bay, organic waste from the beach was recycled through collaboration with a local farmer, while labelled bins for separated collection of metal and glass were introduced at the entrance to the beach. The waste fractions from Ramla Bay were then transported to Malta, since no infrastructure for disposal of separated waste exists on the island of Gozo. At the Ghajn Tuffieha site, separation at source into glass, plastic, metal and organic fractions, and subsequent proper disposal, were introduced in summer 2000. Organic waste and seagrass debris from

the beach was composted at the Elysium Nursery, together with the waste from three commercial establishments in the area, and the resulting compost was used on the permaculture site. From June 2002, glass, metal and plastic waste were recycled through collaboration with new Government initiative called "Progett Skart" for collection and proper disposal of separated waste. Through agreements between the project management and the Malta Tourism Authority and the Ministry for Resources, the current beach cleaning and separated waste disposal strategy set up during the LIFE project will continue to be implemented at the Ghajn Tuffieha site, which will serve as a pilot project for the extension of this approach to other beaches in the Northwest of Malta.

Beach management at the project sites focussed on a number of aspects. A Beach Management Plan was produced for Ramla Bay, to supplement overall Management Plan for this site. Regulations were enforced by warden patrols, and bather safety was enhanced through the installation of buoyed lifelines as a safety measure for swimmers due to the dangerous underwater currents in rough weather at both sites. The demarcation of a boat lane and the enforcement by sea patrols of maritime regulations excluding boats from entering the designated swimming areas also contributed to bather safety. Permits were obtained from the authorities for the Gaia Foundation to construct and operate a snack-bar at Ghajn Tuffieha, which will implement a sustainable waste strategy and the profits of which will be invested in future management of the sites. The bar started operations in July 2003.

A large variety of activities were carried out in connection with education and public awareness raising, and with the dissemination of the experience and results gained from the project. Visitors were provided with on-site information in the form of information boards in various locations around the sites. Such information included listing of the project partners and acknowledgement of support by the LIFE programme, the sites' protection status and important features, site regulations, beach safety information, fire hazard warnings, waste separation guidelines and details regarding the waste management, organic farming and biodiversity activities of the project. On-site wardens were also available to assist with interpretation of the information boards. Guided tours were carried out at the sites, for local and foreign visitors. A number of educational activities were organised, including site visits by school parties to familiarise students with the project and particularly with the propagation of indigenous and endemic plants in the nursery. A public clean-up and a beach management awareness activity, as well as a cultural musical evening and several public tree-planting events were held during the project period. The Adopt-a-Tree campaign was launched in April 2001, and was followed by a fund-raising sponsored sports activity. Information brochures about project activities were distributed during all these activities, and the Elysium Nursery regularly received both local and foreign visitors, resulting in a number of media articles and television features both locally and abroad.

A wide dissemination of information concerning project activities was achieved through the publication and distribution of two newsletters and through the setting up of a detailed website at [www.projectgaia.org](http://www.projectgaia.org) giving access to information about the project, including the downloadable text of all professional studies and project reports, the Gaia Foundation's management accounts, as well as posting of Spanish, French and German translations of project information. Three information leaflets were produced and distributed, regarding (i) the Management Plan for Ramla Bay site, (ii) the organic agriculture pilot project, as a means of promoting sustainable agricultural practices in the Maltese Islands, and (iii) Biodiversity in the Maltese Islands and the contribution of the project to the rehabilitation of natural habitats in Malta. As a further educational tool, a series of three 15-minute video documentaries, in both English and Maltese language versions, were produced. The video documentaries focussed on Project Persephone, covering sustainable agriculture in the coastal zone, as part of the initiative to implement a sustainable agriculture zone around Ghajn Tuffieha; Project Elysium, covering the biodiversity of natural habitats in the Maltese Islands, many of which are found in coastal areas of ecological importance, and Project Olympus, covering coastal conservation and management.

Dissemination of project results and experience was further achieved by the holding of 3 local seminars and an international seminar during the project period. The local seminars covered the topics of Organic Agriculture (March 2003) and Organic Agriculture (March 2003), both of which were well attended by members of the Malta Organic Agricultural Movement and of representatives of a number of local Ngo's, including Birdlife (Malta), BICREF and Nature Trust. The third local seminar on Waste Management was held in April 2003 and took the form of a workshop between representatives of the Gaia Foundation, Progett Skart and the Malta Tourism Authority, concerning the launch of a separated waste management programme for the Northwest beaches using the Ghajn Tuffieha project site as a model. A Seminar on Ecotourism in Coastal Areas (ECOAST 2002) was organised on 26-27 November 2002 at Xemxija, Malta, with 3 international guest speakers (from the UK and Turkey) and a number of local presentations. The seminar included two discussion workshops and a site visit to Ghajn Tuffieha and the project nursery

The signature of the Management Agreement for Ramla Bay in December 2000 signified a transfer of responsibility for the management of this site from government to a non-governmental organisation, and the Conservation Order issued for Ghajn Tuffieha in January 2002 specifically states this achievement as one of its aims for the management of this site. The two main project sites at Ghajn Tuffieha and Ramla Bay were thus under direct NGO management during the project period, while discussions are still ongoing with government regarding a similar management agreement for the Rdum Majjiesa area adjacent to the currently managed area at Ghajn Tuffieha. This management set-up and the significant steps taken during the project period are encouraging evidence of progress towards the decentralisation of management of specially protected areas in the Maltese Islands. Continued government support of this project was shown by the visit to the project nursery at Ghajn Tuffieha in June 2002 by the Parliamentary Secretary for the Environment, as well as by the presence of the Minister for Environment and the Minister for Gozo at the official launch of the Ramla Bay Management Plan in August 2001. A good working relationship was established with the relevant personnel at the various ministries and other government agencies, as well as with the Local Councils concerned and with stakeholders at both sites.

The dissemination of project results and the presentation of the project as one that can be reproduced elsewhere, locally and in other Euro-Mediterranean countries, was carried out both locally (at the seminars outlined above) and abroad at a number of international events. There are promising indications for the project's sustainability and reproducibility within the Maltese Islands. The renewal of the management agreements for both sites is currently being discussed with Government, with the intention of the Gaia Foundation continuing with the development and implementation of management at the two sites, and supplementing the government income with funding from other sources. Such sources include sponsorships as well as income from sales of organic vegetables from the organic agriculture project, and the projected income from the snack bar opened at Ghajn Tuffieha in July 2003 by the Gaia Foundation. Also important to note is the availability of plants produced at a reduced cost by the Elysium nursery, leading to reduced running expenses for the continued afforestation of the sites. The decision to set up a tree and shrub nursery as part of the LIFE project, rather than purchasing the required trees as was originally envisaged, has enabled longterm sustainability of efforts initiated during this project related to site rehabilitation.

The integrated management approach adopted by the LIFE project is the first successful example of a separated waste management system in the Maltese Islands. Discussions have been held with the Malta Tourism Authority and with Progett Skart, in order to secure the long-term implementation of separated waste management for the two project sites, as well as the inclusion of a third site, Golden Bay, as pilot project sites that can be replicated on other beaches. The measures planned for implementation at selected beaches will reproduce the successful waste strategy adopted at Ghajn Tuffieha during the LIFE project period. Discussions have also been held with the Malta Tourism Authority regarding the replication at other coastal sites of the beach management strategy developed and adopted by the project, and the contribution of the project to the formulation of a national beach management strategy

It is our view that the project has not only achieved the expected results, but has exceeded what was expected in several crucial areas. Most notable is the planting of over 11,000 trees, compared to the 4,8000 originally budgeted for, through the setting up of Malta's first specialised indigenous tree and plant nursery, which has also produced a further 9,000 trees and shrubs for future planting at the project sites. The nursery has also resulted in an enhanced visitor experience, with the indigenous and rare species housed there proving to be a very popular feature with visitors. Also of note is the addition of posting in three languages of project information on the website and the production in both Maltese and English of the video documentaries. The support provided by the LIFE programme was an essential component of an ambitious project that will continue to contribute to the management of Malta's coast for many years to come.

**SECTION III - FINANCIAL REPORT**

**Project Reference**

**LIFETCY 99 / M / 095**

**3.1. CONTRACTUAL FINANCIAL INFORMATION**

*Please use the following table to provide information on the status of project expenditure compared with the budget initially estimated (as stipulated in **Annex II of the contract**).*

*The column entitled "Total actual project costs to date" should mention the project's actual expenses incurred from the beginning of the project to date.*

***Annex III of the contract** provides relevant financial information.*

	<b>EURO</b>	<b>%</b>
<b>Total cost of the project</b>	<b>378,871.29</b>	<b>100</b>
<b>Total eligible cost of the project</b>	<b>378,871.29</b>	<b>100</b>
<b>LIFE maximum assistance</b>	<b>189,441.03</b>	<b>50</b>
<b>Minimum threshold for advancing the intermediate payment</b>	<b>140,000.00</b>	<b>37</b>

*This section should be completed following the information provided in Annex II of the contract.*

<b>The expenditure concerns the period</b>	<b>from:</b>	<b>1/2/2000</b>	<b>to:</b>	<b>30/4/2003</b>
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<b>Bank account number</b>	<b>13224723011</b>
<b>Bank details (name, address)</b>	<b>Bank of Valletta plc, Palace Square, Valletta, Malta</b>
<b>Opened in the name of</b>	<b>Foundation for International Studies</b>

<b>Payment received to date:</b>	<b>Type</b> <i>(please, specify)</i>	<b>Date</b>	<b>Amount</b> <i>(specify currency)</i>	<b>Exchange rate</b>	<b>Amount (EURO)</b>
	<b>Advance</b>	17/2/2000	Lm 30,892.58	2.4529	75,776.41
	<i>Interim 1</i>	8/5/2002	Lm 32,472.97	2.5039	81,309.08
	<i>Final</i>				

### 3.2. CONTRACTUAL AMENDMENT(S)

INITIAL ESTIMATED BREAKDOWN OF TOTAL AND ELIGIBLE COSTS		
Categories of expenditure	Total cost in EURO <i>(as per annex II of the contract)</i>	Total eligible cost in EURO <i>(as per annex II of the contract)</i>
1. Personnel	192,906.04	192,906.04
2. Travel	2,393.38	2,393.38
3. External assistance	59,834.38	59,834.38
4. Durable equipment***		
4.1 Infrastructure	0.00	0.00
4.2 Equipment***		
4.3 Prototype	38,294.00	38,294.00
4.4 Non eligible	0.00	0.00
5. Consumables	38,097.31	38,097.31
6. Publications	21,540.38	21,540.38
7. Other costs	26,805.80	26,805.80
<b>TOTAL</b>	<b>378,871.29</b>	<b>378,871.29</b>

*This section should be completed following the information provided in Annex II of the contract*

AMENDED ESTIMATED BREAKDOWN OF TOTAL AND ELIGIBLE COSTS – IF ANY			
Categories of expenditure	Total cost in EURO <i>(as per amended annex II of the contract)</i>	Total eligible cost in EURO <i>(as per amended annex II of the contract)</i>	
1. Personnel	192,906.04	192,906.04	
2. Travel	2,991.72	2,991.72	
3. External assistance	14,702.50	14,702.50	
4. Durable equipment***			
4.1 Infrastructure	0.00	0.00	
4.2 Equipment***			
4.3 Prototype	64,022.79	64,022.79	
4.4 Non eligible	0.00	0.00	
5. Consumables	39,490.69	39,490.69	
6. Publications	25,130.44	25,130.44	
7. Other costs	39,627.11	39,627.11	
<b>TOTAL</b>	<b>378.871.29</b>	<b>378.871.29</b>	
Submitted to the EC on:	2 / 6 /2002	Approved by the EC on:	8 / 1 /2003

**NB:**

The amended breakdown of costs per budget line is attached as **Annex 1**. Also attached is a copy of the letter dated 8/1/2003 from Mr Bruno Julien, Head of the LIFE Unit, instructing the beneficiary to follow these amended budget lines in the Final Report.



**FORM (BPC - with value-added tax (VAT))**

**3.4. BREAKDOWN PER CATEGORIES with value-added tax (VAT)\***

Categories of expenditure	Total cost in EURO (as per annex II of the contract)	Total eligible cost in EURO (as per annex II of the contract)	Total project cost incurred to date in EURO	Total actual project costs to date in EURO		
				actually incurred by the beneficiary**		actually incurred by the project partner(s) (= other sources of financing)
				incurred with LIFE Fund	incurred with beneficiary contribution	
1. Personnel	192,906.04	192,906.04	193,265.56	NA	NA	NA
2. Travel	2,991.72	2,991.72	3,245.45	NA	NA	NA
3. External assistance	14,702.50	14,702.50	16,911.94	NA	NA	NA
4. Durable equipment***						
4.1 Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00
4.2 Equipment***				NA	NA	NA
4.3 Prototype	64,022.79	64,022.79	62,245.57			
4.4 Non eligible	0.00	0.00	0.00	0.00	0.00	0.00
5. Consumables	39,490.69	39,490.69	40,451.06	NA	NA	NA
6. Publications	25,130.44	25,130.44	22,577.81	NA	NA	NA
7. Other costs	39,627.11	39,627.11	46,479.53	NA	NA	NA
<b>TOTAL in EURO</b>	<b>378,781.29</b>	<b>378,781.29</b>	<b>385,176.92</b>	<b>157,085.49</b>	<b>170,742.83</b>	<b>57,348.60</b>
			A =	B +	C +	D

**NB:**

- As for the Interim Report, "NA" indicates that no breakdown is available for the separate percentages of costs covered by LIFE funds and Government of Malta funds. The records of financial contributions from the Government of Malta are attached as Annex 2 to this document.
- B = sum of Advance and Interim payments received from LIFE  
C = sum of Government contributions to date (see **Annex 2** for details and supporting documents). The sum of Lm 10,000 is still outstanding from Government, pending approval of final report  
D = funds spent on completing project activities, temporarily derived from other sources, pending final payments from Government and LIFE sources.
- Since the beneficiary is not entitled to any refund of the value-added tax on goods or services purchased (see **Annex 3** for supporting documentation), expenditure on goods and services was calculated using the costs including VAT.
- Total income for the project period deriving from the sale of organic produce from the pilot permaculture project was Lm 1,118.35. A breakdown of this income is given in **Annex 4**.

\* costs including value-added tax (VAT) – when the Beneficiary is not entitled to recover value-added tax, VAT can be considered as an eligible cost

\*\* and recorded in the legal accounting of the beneficiary.

\*\*\* subject to linear depreciation over a period of 5 years (Please see Budget line 4, page 12).



### 3.5. Detailed breakdown per expenditure categories

#### Preliminary remarks:

The following tables are given as formats, prepared along the lines of the initially proposed budget. At this stage, only **actual costs** should appear and no longer indicative ones. The beneficiary is expected to provide documented justifications (invoices, hotel bills, air tickets and boarding passes, timesheets, salary slips, etc.) for any cost incurred within the framework of the project. This concerns not only the costs covered by LIFE financial support, but also by other sources of funding including the beneficiary's own financial contribution to the project.

Annex III of the contract provides relevant financial information.

#### Coherence:

The beneficiary should complete the financial forms and ensure that the calculations on the Breakdown per Categories (Form BpC) are consistent with the subsequent forms. For this purpose, project costs are categorised as :

- Total project costs already incurred is referred to as A;
- Project costs incurred with LIFE financial contribution are referred to as B;
- Project costs with the Beneficiary financial contribution are referred to as C
- Project costs with Partner(s) financial contribution are referred to as D

The Total project costs already incurred A should always = B + C + D

