

3.10.2. Deliverable title

INHERIT approach implementation guide for MED remote islands

3.10.2. Description

The guide will provide specifications and instructions to adapt the INHERIT approach to the needs of MED remote islands, and provide solutions to specific remote islands problems.

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INHERIT project and approach

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The INHERIT project aims to conserve and valorize natural heritage in MED coastal and maritime tourist destinations. The project will test and deploy a new approach adapted to MED specificities protecting natural heritage from the adverse effects of intensive tourism. INHERIT will promote sustainable tourism alleviating seasonality and tackling the surpassing of the hosting capacity, by designing and implementing a “bottom-up” protection approach relying on self-regulation and monitoring by local society and tourism stakeholders.

INHERIT proposes a new approach to protect MED coastal and maritime natural heritage, including:

- ✓ A novel mix of measures (e.g. ICZM-MSP integration, “bottom-up” waste management initiatives) to protect its natural heritage from mass tourism effects (excess construction & waste, desertification-erosion, exceeded capacity of specific destinations, tourism seasonality).
- ✓ A strategy of transnational cooperation to form a network of MED areas, namely INHERITURA areas (inspired by the NATURA 2000 network), which will prioritise the enhanced protection of their natural heritage as an asset to develop sustainable tourism activities (e.g. sea caving in the MED, MED inland tourism itineraries, remote islands activities) and to ensure responsible development.

The bottom-up approach in the INHERIT project - The INHERIT project attempts to promote sustainable tourism by alleviating seasonality and tackling hosting capacity excesses; to this end, the project will design and implement a “bottom-up” protection approach that will rely on self-regulation and monitoring by local society and tourism stakeholders. This approach will be beneficial for both the natural environment and the tourism industry, since it will a) protect and enhance the quality of the natural heritage, thereby augmenting the attractiveness for tourists, b) leverage visibility, thereby enhancing the value of tourism offering, c) sustain natural heritage, thereby increasing the long term value of tourism.

The INHERIT protection approach will involve all relevant stakeholders (e.g. non-experts, civil society actors and sectoral businesses) in voluntary formations and initiatives of natural heritage protection and valorisation, to:

- Shift the emphasis towards policies and strategies that stem from successful initiatives (bottom-up approach to policy development).
- Promote collaborations and synergies between key local actors (e.g. collaboration platform that will allow tourism economic operators present their business ideas and find partners who share a similar vision)

¹ Source for this section: University of Patras, 2019. Feasibility study on the application of "bottom-up" initiatives for sustainable tourism in MED

- Encourage the creation of new market segments/niches (e.g. thematic routes that showcase the destination's natural beauty, biodiversity status and history).
- Encourage business model innovation to enable the modernisation of tourism companies (e.g. delivery of complementary products and services that connect or bundle together to create more value to customers such as a tourism package that includes tours in natural landscape, cooking lessons, and preservation activities).
- Promote the use of new technologies (e.g. GIS applications to enhance decision-making in dealing with seasonality or tourist overconcentration).
- Stimulate the creation and rapid spread of new knowledge (e.g. innovation support centres to support tourism SMEs innovation activities and promote knowledge sharing).
- Highlight destinations with rich natural resources and conservation status (e.g. special events initiatives aimed to showcase the destination's natural beauty and engage visitors in conservation efforts).

Through this bottom-up approach, the partnership aspires to deliver:

- A MED-wide policy strategy and protection measures (transferable and adjustable to different MED areas' characteristics), addressing the negative effects of intensive tourism flows.
- MED INHERITURA sites, i.e. designated areas in which human activities coexist with substantial natural heritage, subscribing to the INHERIT protection approach and acting as models, to scale up and out the approach to other MED areas.
- A network and management mechanism of the INHERITURA sites that will assume the sustainability and the scaling up after project completion.
- Thematic tourism routes (e.g. remote islands, prehistoric sites) will be pilot-integrated in the INHERITURA areas using the improved protection as an asset to increase tourism attractiveness in a sustainable way.

EU, Mediterranean, policy and thematic programs.

Below is the list (and links) of programs, projects, activities, initiatives from EU, non-governmental, regional and thematic spheres that provide initial input of the current dynamics and context in regards to sustainability of Mediterranean. They are structured under the following headings:

- Island associations, networks and initiatives
- European Parliament on island development
- Interreg Mediterranean
- EU tourism
- EU regions, associations, networks

Island associations, networks and initiatives

Conference on peripheral maritime regions (CPMR) <https://cpmr.org/>

The European Small Isles Federation (ESIN) <https://europeansmallislands.com/>

Smart Islands Initiative www.smartislandsinitiative.eu/en/index.php

Clean Energy for EU Islands Secretariat <https://euislands.eu/>

The Greening Islands www.greeningtheislands.net/

European Parliament on island development

Resolution of 4February2016 on the special situation of islands

http://www.europarl.europa.eu/doceo/document/TA-8-2016-0049_EN.pdf

Overtourism: impact and possible policy responses, 2018 (Research for TRAN Committee)

[www.europarl.europa.eu/RegData/etudes/STUD/2018/629184/IPOL_STU\(2018\)629184_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/629184/IPOL_STU(2018)629184_EN.pdf)

Environmental sustainability of EU islands, 2010

[www.europarl.europa.eu/RegData/bibliotheque/briefing/2010/100051/LDM_BRI\(2010\)100051_REV2_EN.pdf](http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2010/100051/LDM_BRI(2010)100051_REV2_EN.pdf)

Islands of the EU: Taking account of their specific needs in EU policy

[www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI\(2016\)573960](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2016)573960)

Interreg Mediterranean

The MED Sustainable Tourism Community - 17 Modular Projects (MPs) are implemented under the Interreg Med Sustainable Tourism Community. <https://sustainable-tourism.interreg-med.eu/>.

Biodiversity protection Interreg community holds 5 study project, 6 pilot projects, 2 capitalization projects, 1 integrated territorial project. <https://biodiversity-protection.interreg-med.eu/>.

Mediterranean Ecotourism Destination – DestiMED <https://destimed.interreg-med.eu/> aims at building the pre-conditions for a Mediterranean destination management organization (DMO) that will harmonize quality standards and tools to monitor compliance, propose attractive ecotourism offers promoted through a lasting brand. Specifically, the project will further develop and test ecotourism standards, offers and monitoring tools in 13 protected areas around the basin - forming the quality scheme of a future DMO. Sustainable Tourism Indicators Manual of Transfer of Best Practices presented in November 2018 presented to the European Parliament: <https://destimed.interreg-med.eu/news-events/news/detail/actualites/new-manual-sustainable-tourism-indicators-manual-of-transfer-of-best-practices-presented-at-the-e/>.

The MEET Network - An association of Mediterranean protected areas developing high-quality ecotourism products that benefit conservation. <https://www.meetnetwork.org/>

Cross Border Cooperation in the Mediterranean <http://www.medecotourism.org/default.asp>.

Cooperation across borders in the Med <http://www.enicbcmed.eu/>

The Blue Med Interreg project <https://bluemed.interreg-med.eu/>

Blue Med (research and innovation initiative for blue jobs) <http://www.bluemed-initiative.eu/>

Interreg Adrion Programme <http://www.adrioninterreg.eu/>

- TOUREST, Tourism Water Management for Sustainable ADRIAN Coastal Areas;
- ADRIAN 5 SENSES, Building the ADRIAN Brand Name in Tourism: Indulging all Five Senses;
- APPRODI, From Ancient Maritime Routes to eco-touristic destinations;
- QNeST, Quality Network on Sustainable Tourism;
- Adriaticaves, Sustainable management and tourist promotion of natural and archaeological heritage in the Adriatic Caves.

Full list of the projects: <http://www.adrioninterreg.eu/index.php/second-call-for-proposals-priority-axis-2-funded-projects/#toggle-id-2>

Roadmap for the Adriatic-Ionian Region contains guidelines for national, regional and local authorities <https://rm.coe.int/16808ecc0a>.

EU tourism

EU Cultural tourism http://ec.europa.eu/growth/sectors/tourism/offer/cultural_en

European Destinations of Excellence (EDEN)

https://ec.europa.eu/growth/tools-databases/eden/about/themes_en.

European Tourism Indicators System (ETIS)

http://ec.europa.eu/growth/sectors/tourism/offer/sustainable/indicators_en

EU Ecolabel <http://ec.europa.eu/environment/ecolabel/eu-ecolabel-for-businesses.html>.

EU Eco-Management and Audit Scheme (EMAS)

<http://ec.europa.eu/environment/emas/takeagreenstep/>.

Eurovello <http://www.eurovelo.com/en>, www.eurovelo8.com/.

Routes 4 U <https://pjp-eu.coe.int/en/web/cultural-routes-and-regional-development>

The cultural routes of the Olive

<https://pjp-eu.coe.int/en/web/cultural-routes-and-regional-development/-/international-workshop-on-the-routes-of-the-olive-tree-in-the-adriatic-ionian-region>.

EU Transnational tourism products

http://ec.europa.eu/growth/sectors/tourism/offer/sustainable/transnational-products_en

EU regions, associations, networks

Forum of the Adriatic and Ionian Chambers of Commerce (AIC Forum)

<http://www.forumaic.org/>

Association of Universities of the Adriatic-Ionian Area (UNIADRION) <http://www.uniadrion.net/>

Forum of Adriatic and Ionian Cities (FAIC) http://www.faic.eu/index_en.asp

EUROPARC Federation step-by-step guide towards becoming a sustainable destination:

http://www.europarc.org/wp-content/uploads/2015/12/ECST_2015.pdf.

Mediterranean Protected Areas Network (MedPAN) <http://medpan.org/?s=tourism>.

Adriatic Protected Areas Network (AdriaPAN) <http://www.adriapan.org/index.php/en/>

EMODnet Marine Data Portal <http://www.emodnet.eu/portals>.

AdriPLAN Maritime spatial planning project <http://adriplan.eu/index.php/project/summary>.

SUPREME Project - Supporting Maritime Spatial Planning in the Eastern Mediterranean
socio-economic trends within the basin, including tourism, and considers the conflicts and synergies of the use of maritime space between and within sectors. For more information:
<http://www.msp-supreme.eu/>.

Methodological approach

Based on the 3.10.1. task description, the information gathered via the data collection questionnaire and the online workshop was organized to discuss specific problems of tourism development in remote islands and potential measures to adapt the INHERIT approach to overcome them.

A questionnaire was prepared and distributed to project partners at the end of April. It covered the topics of:

- possible negative impacts of tourism on the natural heritage of remote islands;
- possible measures to overcome these negative impacts;
- effective policies and legislation effectively dealing with the negative impact of tourism;
- implementation issues; and
- best practices.

An online workshop was organized in the last week of May 2019 to discuss the aforementioned topics. The goal was to allow for direct feedback on the named issues pertaining to specific problems of tourism development in remote islands and potential measures to adapt the INHERIT approach so as to overcome them.

The following partners participated in the process:

Larnaca and Famagusta Districts Development Agency (ANETEL) CYPRUS	Eudokia Balamou
International Association for Mediterranean Forest (AIFM), PORTUGAL	Maria Carolina Varela
Department Council of Herault (CD 34) FRANCE	Nina Malovic
Malta Regional Development and Dialogue Foundation (MRDDF) MALTA	Mr Brian Restall Ms Katia Mifsud
Ministry of Tourism (MinTour) CROATIA	Ana Marija Vukčević
Park Dinarides – Network of Protected Areas of Dinarides MONTENEGRO	Bojana Mijović
Puglia Region – Department of Tourism, Economy of Culture, Territory (APULIA REGION) ITALY	Anna Introna, Enrico Barbone Benedetta Radichio , Roberto Ricco
Region of Peloponnese – Lead partner (RegPel) GREECE	Kokkinis Dimitrios
Region of Murcia – General Directorate of Natural Environment, Tourism, Culture and Environmental Council (CARM) SPAIN	Francisco Soriano Rico
Seneca Foundation – Science and Technology Agency for the Region of Murcia (FUSE) SPAIN	Remedios Pérez García-Estañ

Inputs made by the INHERIT partners

Input are listed below as presented by the participants of the workshop and the survey. They are structured in the following sections:

- A. Possible negative impacts of tourism on the natural heritage of remote islands
- B. Possible measures how to tackle negative impacts on the natural heritage of remote islands
- C. Policies and legislation effectively dealing with the negative impacts of tourism on the natural heritage of remote islands
- D. Implementation mechanisms for dealing with/reducing negative impacts of tourism on the natural heritage of remote islands
- E. Best practices of effective measures implemented in remote island community
- F. Overview of workshop results

A. Possible negative impacts of tourism

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Taking into consideration that tourism is in an increasing trend preventive measures should be put in place specially for islands that have easy access from mainland. The islands are prone to various problems when swept by mass tourism. Preventive measures upon foreseen problems should be considered as mending/ mitigation is more difficult than on the continental coast. In small islands near the coast, the flow of day-trippers during peak periods requires careful management of flows in conjunction with actions to improve perceptions of the environmental quality of the spots, particularly to limit the risk of fire, the devastation of fragile environments or the disturbance of wildlife. The impacts on the natural environment are all the more important because the islands often have a remarkable natural heritage: preserved seabed, many endemic species. The development of tourism induces changes in the natural character of remote islands. Tourism is a globalized business activity and thus presents growing challenges in terms of natural heritage conservation. From a development perspective, tourism revenue may increase household income by stimulating business development and job creation that is in principle compatible with biodiversity conservation as well as enhancing local services, and through improved education empower local people to advocate for the protection of the natural environment.

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Illegal camping and outdoor parking.

Freely accessible and not managed tourists' visits

Risk of damage or theft of archaeological material. Damage to antiquities - losses of archaeological information.

Light pollution

Illegal anchoring,

Biodiversity risks. Key species in danger of increasing tourism: the dolphin species *Tursiops truncatus* (rhinoceros) and *Delphinus delphis* (common dolphin), *Grampus griseus* (cedar), *Stenella coeruleoalba* (zonderine), *Physeter macrocephalus* (blower) the turtle *Caretta caretta*

Change in the flora and fauna due to pollution and climate changes

Recreational fishing activities cause loss of habitats and reduction in fish stocks as well as reduction of specific breeds.

Water, and especially fresh water, is one of the most critical natural resource in Cyprus. The tourism industry overuses water resources for hotels, swimming pools, and personal use of water by tourists. This result in water shortages and degradation of water supplies, as well as generating a greater volume of wastewater.

Tourism creates pressure on local resources like energy, food, and other raw materials that are already be in short supply. Greater extraction and transport of these resources exacerbates physical impacts associated with their exploitation. Because of the seasonal character of the tourism industry, there are ten times more inhabitants in the high season than in the low season. High demand is placed upon these resources to meet the high expectations tourists often have (proper heating, hot water, etc.)

Land Degradation: Increased construction of tourism and recreational facilities has increased pressure on these resources and on the landscape. Direct impact on natural resources, both renewable and non-renewable, in the provision of tourist facilities can be caused by the use of land for accommodation and other infrastructure provision, and the use of building materials.

Air Pollution and Noise: Transport by air and road is continuously increasing in response to the rising number of tourists and their greater mobility. Transport emissions and emissions from energy production are a negative impact from tourisms. Air pollution from tourist transportation has impacts on increased levels of carbon dioxide (CO₂) emissions. Some of these impacts are quite specific to tourist activities. For example, in Cyprus summer is very hot therefore tour buses often leave their motors running for hours while the tourists go out for an excursion because they want to return to a comfortably air-conditioned bus. At the same time there is noise pollution from airplanes, cars, and buses, etc.

Solid Waste and Littering: In the areas with high concentrations of tourist activities and natural attractions, waste disposal is a serious problem.

Construction of hotels, recreation and other facilities often leads to increased sewage pollution. Wastewater pollute the sea as well as damages the flora and fauna. Sewage pollution can threaten the health of humans and animals.

Loss of biological diversity: Loss of biodiversity when land and resources are strained by the excessive use, and when impacts on vegetation, wildlife, mountain, marine and coastal environments and water resources exceed their carrying capacity.

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The tourism industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water. In dry and hot regions like the Mediterranean, the issue of **water scarcity** is of particular concern. Because of the hot climate and the tendency of tourists to consume more water when on holiday than they do at home, the amount used can run up to 440 liters a day. This is almost double what the inhabitants of an average Spanish city use (UNEP, 1999).

Loss of biodiversity and landscape attractiveness already affects a number of tourist destinations throughout the Mediterranean region. The projected growth will continue to degrade these regions, as well as destroy what are now almost untouched areas.

Tourism has a very direct negative impact on biodiversity and is considered as a major cause of the **loss of natural habitat**, directly affecting rare and endangered species. Over 500 plant species in the Mediterranean are threatened with extinction and are under intense pressure from tourism development in some overbuilt destinations.

The Mediterranean Sea receives 10 billion tons of **industrial and urban wastewater** per year with little or no purification. The production of wastewater and solid waste in tourist areas often exceeds the carrying capacity of local infrastructures due the high seasonal demand. Pollution also negatively affects water quality in beach areas and drinking water supplies.

The large amount of **waste** generated by tourist related activity gives rise to relatively large waste dumps, which are often only a short distance away from the tourist centers. This creates health hazards (such as creating habitats for rats and other vermin, and toxic substances seeping through aquifers) and reduces the aesthetic qualities of the place (Briguglio, 2008).

Tourism causes disturbance to the **local way of life as well as to social structures**, and can adversely affect traditional practices that contribute to the conservation and sustainable use of biodiversity. It utilizes the physical environment for profits that are mainly directed out of the country, creating adverse impacts on livelihoods and lack of benefit sharing with the local people who will bear tourism related costs to both the human and natural environment (WWF, 2005).

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Seasonal concentration of tourism demand produce pressure on environment and local communities.

Pressure on natural resources by increased consumption in areas where resources are already scarce, in relation to the quality/quantity of local resources (Energy supply, Water supply, soil loss, etc.)

For small islands, the treatment and disposal of **liquid and solid wastes** constitute a major problem during the tourist season.

Biodiversity loss and ecosystem service change. Tourism is closely linked to biodiversity and attractions created by rich and varied environment, but it can cause loss of biodiversity by excessive exploitation of land and marine resources and by **exceeding carrying capacity of ecosystems**.

For example, among the natural habitats, **the increasing numbers of small ship tourism is a threat for Posidonia oceanica meadows**, an endemic species of the Mediterranean Sea that plays a vital role in the structure and functioning of the Mediterranean ecosystem.

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Loss of landscape quality due to **light pollution**

Change in bird behavior (disorientation) due to light pollution

Recreational / sport fishing from land and boats:

Affection to habitats and loss of habitat surface by activities.

Abandonment of breeding colonies.

Diving:

- Alteration and loss of habitat surface.
- Alteration in the structure and functions of habitats (Increase in turbidity and decrease in light availability, degradation of benthic communities, breakage of fragile species).
- Changes in the behavior of species.
- Disturbances to the avifauna

Visits and landings:

- Alteration and loss of habitat surface. Alteration in the structure and functions of the habitat (Affection to habitats (nitrification of the soil), colonization and expansion of opportunistic species, competitors and predators, predation of nesting seabird species)
- Disturbances to fauna
- Changes in the behavior of species
- Erosion and soil compaction.

Recreational navigation:

- Loss or degradation of habitats due to pollution (noise, spills, decrease in water quality, alteration of the physical-chemical gradient of the sediments)
- Alteration composition, structure and population dynamics
- Alteration behavior of species
- Disturbances to fauna
- Abandonment of breeding colonies

- Damage to the seabed by illegal anchorages. (Posidonia meadows)

Outdoor sports (land area):

- Degradation and loss of habitat surface. Alteration in structure and functions of habitats: (Affection to the dune dynamics, increase of nitrophilous species, soil compaction, attraction of opportunistic species by waste)
- Disturbances to birds in migration zones, breeding and resting areas (changes in behavior of species that affect migration, abandonment of nesting areas and species mortality due to abandonment of waste).

Urbanized areas and tourist infrastructure / restaurants:

- Waste increase
- Wastewater treatment plants not well dimensioned, discharges WWTP
- Increase of inhabitants in seasonal period
- Demand for resources and services
- Loss of landscape quality
- Alteration of habitats by introduction of alien species

Example: In "Isla del Fraile" (Murcia Region) the rest of a Roman salted factory is conserved. This has caused many tourists to carry out illegal excavations to take the remains of this factory.

Cruise tourism:

- Little contribution to the local economy for all-inclusive policies.
- They promote the seasonality of tourism.
- Water contamination. (Discharge of waste directly to the sea)
- Damage to marine habitats due to the introduction of species transported in the ship's ballast water.
- High CO2 emissions.

Oil prospecting

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With Gozo being totally dependent on Malta for energy and water supply and waste treatment, tourism puts a significant pressure on the environment due to additional **consumption of resources and increase in waste generation**.

Gozo is affected by a huge **seasonality problem** that creates **overcrowding** in the peak months.

Damage to marine habitats and biodiversity via direct/indirect touristic activity.

Coastal erosion associated with beach loss and cliff failure that is accelerated due to human intervention within sandy beaches and their adjacent coastline as well as on coastal plateaux and cliffs.

Degradation of coastal and marine habitats resulting from touristic activities occurring within them or in their vicinity.

Recreational activities threaten the cultural heritage along the coast. The main threats for **underwater relics** and structures of cultural significance are associated with coastal engineering works especially in ports and harbors, such as the placement of concrete blocks for anchorage.

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Water pollution with harmful and dangerous substances (waste waters, sailing boats, ships, etc)

Uncontrolled fishing and use of dynamite

International **underwater energy cable** (possible indirect impact)

Oil exploration (possible indirect impact)

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Monoculture and seasonality of tourism– pressure for eco systems and conflicts over nature protection and tourism development.

High pressures on local resources like **energy and water supply**.

Biodiversity loss and invasive species.

Problems with **waste** management.

Loss of **landscape** quality.

Ongoing trend of **depopulation**.

B. Possible measures to tackle negative impacts

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Restrictions / prohibition / enforcement (illegal fishing and snorkeling, anchoring, illegal camping, illegal parking).

Formation of **thematic tours**.

Integral **waste management**.

Protection of declared archaeological and NATURA 2000 areas.

Study, rescue excavation, fixation and restoration actions of submerged antiquities and antiquities on the coastline.

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Financial Contributions: Tourism can contribute directly to the conservation of sensitive areas and habitat. Revenue from park entrance fees and similar sources can be allocated specifically to fund for the protection and management of environmentally sensitive areas.

Improved Environmental **Management and Planning:** Sound environmental management of tourism facilities and especially hotels can increase benefits to natural areas. However, this requires careful planning for controlled development, based on analysis of the environmental resources of the area. Planning helps to make choices between conflicting uses, or to find ways to make them compatible.

Environmental **Awareness Raising:** The tourism industry can play a key role in providing environmental information and raising awareness among tourists of the environmental consequences of their actions. An example is introducing a visitors information programme that includes environmental information.

Regulatory Measures: Regulatory measures help offset negative impacts; for instance, controls on the number of tourist activities and movement of visitors within protected areas can limit impacts on the ecosystem and help maintain the integrity and vitality of the site. Such limits can also reduce the negative impacts on resources. An example is the carrying capacity for maximum sustainable tourists in an area.

Reducing demand in peak periods: seek to spread tourist arrivals over wider periods of time. Sustainable Tourism strategy that will include the following:

- 1) Conservation of specific coastal landscapes or habitats that make the area attractive or are protected under nature conservation legislation
 - 2) Development of regionally specific sectors of the economy that can be interlinked with the tourism sector (e.g. production of food specialities and handicrafts)
 - 3) Maximising local revenues from tourism investments
 - 4) Enabling self-determined cultural development in the region, etc.
- Improving control and enforcement of environmental standards (noise, drinking water, bathing water, waste-water treatment, etc.)

Creation of buffer zones around sensitive natural areas and a strict application of Environmental Impact Assessment (EIA) and Strategic Environmental Assessment procedures on all tourism related projects and programs.

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Drinking water supply, sewage treatment and waste are easily established when the constraint of insularity and tourist peak phenomenon are combined. Ongoing **campaigns to save water**.

Improve the **waste management**.

To tackle negative impact of the tourism industry, it is recommended to **keep the conservation objective behind tourism development**. This needs to be clear when establishing the vision for the business and should be integrated in all components of tourism development with Environment Charter outlines which serves as a framework policy to guide the development of management policies and plans.

This is also vital in developing, managing and **monitoring tourism** in and around remote islands. Within these islands, defined in detail in the respective Management Plans, certain activities are constrained or allowed.

A single **zoning** strategy is needed covering the whole island property, including the marine area.

Enforcing a strict **protection to all native organisms** and makes it an offence to transport any native organisms between islands or to introduce any non-native organisms. In regards to invasive infrastructure problem, it is recommended to create **infrastructure that minimally intrudes** on the site's scenic beauty, using materials that are ideal for the site, and making sure that any additional developments are made on previously built land at the edge of the island.

More **coordinated and collaborative approach between all stakeholders** would be as well beneficial to ensure sustainable tourism development and management.

Conserve **traditional practices** and uses of natural heritage to contribute to its conservation.

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Promote and strengthen an **Integrated Coastal Zone Management**.

Promote **de-seasonalization** of the offer.

Invest in **renewable energies** and promote energy efficiency techniques and water conservation.

The **plastic ban**.

Promote **sustainable transport**.

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(I. Loss of landscape quality due to light pollution & II. Change in bird behavior (disorientation) due to light pollution)

- Adopt mechanisms to reduce light pollution

(III. & IV. Recreational / sport fishing from land and boat)

- Surveillance, monitoring and control of fishing activities.
- Analysis of the interactions between recreational fishing and the key elements.
- Regulation of practice away from breeding colonies in breeding season.
- Delimitation of anchoring points and implementation of ecological anchorages.
- Surveillance, monitoring and control of fishing activities.
- Analysis of the interactions between recreational fishing and the key elements.
- Regulation of practice away from breeding colonies in breeding season.
- Delimitation of anchoring points and implementation of ecological anchorages.

(V. Diving)

- Load capacity studies
- Implementation of quotas
- Management, zoning and regulation
- Monitoring and control
- Communication and environmental education
- Agreements with diving club
- Good practices
- Delimitation of anchoring points and implementation of ecological anchorages
- Establishment of submarine itineraries.

(VI. Visits and landings)

- Ordination, zoning and regulation in nesting season
- Study of the load capacity of number of visitors.
- Monitoring and control

(VII. Recreational navigation)

- Surveillance, monitoring and control
- Activity regulation and navigation speed
- Delimitation of anchoring points and implementation of ecological anchorages

(VIII. Outdoor sports (land area))

- Public use planning: Study of the number of visitors' load capacity.
- Implementation and reinforcement of access restrictions, temporary quotas and alternative use.
- Elimination of paths for habitat recovery.
- Restoration of ecosystems.

(IX. Population centers and tourist infrastructure / restaurants)

- Monitoring and control of urban activities and accommodation
- Promote quality tourism instead of quantity tourism
- Design and implement urban development plans, providing for tourism management, landscape and own culture conservation.
- Limit the developable urban surface within the mechanisms of territorial management at the local level, to avoid overexploitation of resources and pressure on the natural and cultural environment.
- Promote clean energy and proper waste management.

(X. Illegal excavations to take ancient archeological items)

- Increase surveillance on the islands
- Inform visitors about this topic through signage

(XI. Cruise tourism)

- Study and control the presence of large cruise ships
- Discourage this type of tourism.
- Control that the ships have integral systems of water treatment, systems of treatment and storage of garbage on board.

- Connection to the electricity network of the ships in port.
- Encourage ecological vessels.

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Campaigns on energy and water consumption reduction together with investment in alternative **energy** sources for touristic activities

Fostering of **all-season** touristic activities and events that will provide an opportunity for tourists to experience the island and reduce seasonality issues.

Creation of more **marine protected areas** that will reduce the impact of human activity in the areas.

Planning, monitoring and enforcement that protects the coastal areas from excessive and damaging human intervention and activity

Educational campaigns, information boards, leaflets, etc informing the tourist about the boundaries and regulations limiting their touristic activity. These are to be promoted by the activity providers themselves for better impact.

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Waste water system purification improvement

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Developing the basic **infrastructure** (water supply ...)

Active participating in adapting **climate change** and strengthening resistance to the same on a local level

Implementation of advanced technologies to ensure optimal **management** and use of local **resources and infrastructure**

Promoting sustainable modes of **mobility** on islands including electromobility

Reducing **water** scarcity by using unconventional and smart ways of managing water resources

Strengthening and promoting **social inclusion, education and citizens support**

C. Policies and legislation effectively dealing with the negative impacts of tourism

...

Greek Legislation N. 1650/86 Law on the protection of the environment.

(a) To prevent pollution and, in general, to degradation of the environment, and to take all necessary preventive measures to that end.

(b) Safeguarding human health and various forms of environmental degradation, and in particular pollution and nuisances.

(c) Promoting the balanced development of the national space as a whole and its individual geographic and housing sections and through the rational management of the environment.

(d) Ensure the possibility of renewable natural resources and the rational use of non-renewable or rare in relation to present and future needs and environmental protection criteria.

e) Maintaining the ecological balance of natural ecosystems and ensuring their reproductive capacity.

f) Rehabilitation of the environment.

Also:

1. Wetlands of international importance under the Ramsar Convention
2. Areas of the Natura 2000 network
3. Specially Protected Areas under the Barcelona Convention
4. Biogenic Inventories
5. Biosphere reserves
6. World Heritage Sites
7. Areas to which the Eurobond has been awarded

...

Two decades ago there was no environmental legislation in Cyprus. It all began slowly in the year 1991 when the state submitted the first environmental legislation bills and the House of Representatives voted for their adoption. These bills formed the first environmental laws regarding the water and air protection from industrial pollution (headed by the Environment Service and the Department of Labour Inspection, respectively). Two decades later, more than 200 laws and regulations are being adopted in Cyprus for implementation across all environment categories. It is a massive effort both by the state and the private sector.

There is no legislation or specific policies designed to manage the impacts of tourism on the conservation of natural heritage in Cyprus apart from its inclusion within environmental protection areas national and European level, or what should be applicable due to plans and strategies; so the management of these impacts on the natural heritage of remote islands due to tourism, is done indirectly through national legislation and sectoral plans for environmental protection or tourism.

...

In addition to legislation regulating the creation and management of island protected areas, some legislation deserves mention. The example of the regulation of the Calanques National Park is illustrative of the desire to preserve the natural and cultural heritage. A decree (decree n ° 2012-507 of April 18, 2012) modified the one creating the Calanques National Park restricting:

- Smoking or lighting fire (outside inhabited areas and according to conditions);
- Create noise pollution on land as well as at sea;
- To undermine the heritages: tear off, take away, introduce animal or plant species ... the harvest is authorized for domestic, culinary or medicinal use (see the complete list of species in the National Park Charter);
- Discard waste outside the containers provided for this purpose;
- Drive in motorized vehicles outside traffic lanes and park outside dedicated spaces;
- Organize motorized sports competitions;
- Camping, bivouac or caravanning, to preserve the beauty of the sites and avoid pollution and fires;
- Hunting in prohibited areas and times.

Regulations concerning access to the massifs: In summer, forest areas are more exposed to fire hazards. Thus, to protect the walkers and the sites, the access to the forest massifs is regulated by the device "Envie de balade", renewed every year from June 1st to September 30th. Depending on the weather conditions, access, including by sea, and presence in the forest massifs may be allowed all day (danger levels green, yellow and orange) or prohibited all day (red danger level). The work in the forest is also concerned by this color code (restriction in yellow hazard level, prohibition in orange and red danger levels).

Regulation on access to the creeks of Callelongue, Sormiou and Morgiou in motorized vehicles: To protect the creeks from overcrowding and to allow the circulation of emergency and emergency vehicles, traffic on access roads to Callelongue creeks (boulevard Alexandre Delabre - 13 008 Marseille), Sormiou (former rural road n ° 20 -13 008 Marseille) and Morgiou (former rural road No. 4 -13 009 Marseille) is regulated by municipal decrees from the weekend of Easter and until the end of the holidays of All Saints.

For the 2018 season, traffic is prohibited to all motor vehicles, registered or not (except holders of an authorization issued by the General Delegation for Security - Administrative Police Division).

...

Ministry of Economic Development decree of 14th february 2017 del "Disposizioni per la progressiva copertura del fabbisogno delle isole minori non interconnesse attraverso energia da fonti rinnovabili".

Puglia decree for the bathing season 2019 “Stop plastic on the beaches”.

It is under approval from the Italian Parliament a Law about small islands.

...

There is no legislation or specific policies designed to manage the impacts of tourism on the conservation of natural heritage in the remote islands of Murcia Region, apart from its inclusion within environmental protection areas at regional, state or European level, or what should be applicable due to plans and strategies; so the management of these impacts on the natural heritage of remote islands due to tourism, is done indirectly through legislation and sectoral plans for environmental protection or tourism. To list some policies, legislation and treaties (All of them at a general environment protection level not aiming at islands specific protection frame):

REGIONAL AND STATE LEGISLATION - Law 42/2007, Natural Heritage and Biodiversity. (State level) Ley 4/1992, de 30 de julio, de Ordenación y Protección del Territorio de la Región de Murcia (Regional level) This legislation set protection frame for islands in Murcia appointing the protected “Natural protected Islands and islets of the Mediterranean coast”)

As result of the transcription of Directive 92/43 / EEC, on the conservation of natural habitats and of wild fauna and flora, there are Protected areas of the Natura 2000 Network, such as Sites of Community Importance (SCI) (In Murcia there is the SCI ES6200007 “Islands and islets of the Mediterranean coast”), and also regarding the transcription of European Communities Council Directive 79/409/CEE there are SPA Special Protection Areas (In Murcia Region there are some that includes islands: ES0000200 Isla Grosa, ES0000256 Islas Hormigas, ES0000270 Isla Cueva de Lobos y ES0000271 Isla de las Palomas)

INTERNATIONAL INSTRUMENTS AND TREATIES - Within the Barcelona Convention (Convention for the Protection of the Mediterranean Sea against Pollution), Spain signed it in 1995 the "Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean" and adopted one year later in Monte Carlo its annexes. According to this Protocol, each Contracting Party must establish Specially Protected Areas of Importance for the Mediterranean (SPAMIs) in the marine and coastal areas subject to its sovereignty and jurisdiction. In Murcia there is the "SPAMIs0004 Mar Menor and eastern mediterranean area of the Murcia coast".

OTHERS - With the aim of the improvement of the reproduction conditions of species of fishing interest and the survival of their juvenile forms there is the “Marine reserves”. In Murcia there is the Marine Reserve of Cabo de Palos-Islas Hormigas, this instrument aims to:

- Protection, regeneration and development of resources of fishing interest for the maintenance of sustainable fisheries that allow artisanal fishermen in the area to preserve their traditional way of life.

- Possibility of carrying out other activities of low impact prior authorization (autonomous diving and freediving, environmental education, etc.) that contribute to the economic development of their area of influence.

POLICIES AND STRATEGIES - There is two main regional strategies of natural heritage protection, this are the “Regional strategy for conservation and sustainable use of biological diversity” and the “Strategy for integrated management of coastal zones for the socio-ecological system of Mar Menor”. On the other hand there is some strategies, such as the Spanish Horizon 2020 Tourism Plan, whose general objective is to make the Spanish tourism system the most competitive and sustainable, providing the maximum social welfare. To achieve this, the plan is constituted for the following purposes:

- Increase the social benefits of tourism, extending them to the host societies as a whole, creating quality employment and improving their living conditions.
- Increase the economic benefit derived from tourism activity, increasing the profitability of assets through the reduction of seasonality.
- Achieving a socio-territorial balance of tourism that drives tourism activity in new destinations, extending the socioeconomic benefits towards these.
- Improve the quality of the natural and cultural environment, reducing the impacts on the environment and the cultural and social conditions of the destinations that may induce the tourist activity, assuming the international commitments of adaptation and mitigation of climate change.
- Increase awareness of society and public administrations on the importance of supporting tourism as a guarantee of prosperity and improvement of living conditions.

OTHER SPANISH REGIONS - In the case of Balearic Islands, the Parliament approves the law that prohibits the circulation of diesel vehicles from 2025 and petrol from 2035, a rule that have been denounced by car manufacturers. These restrictions do not affect the citizens who reside in the archipelago, but the tourists who travel with their vehicle. The Balearic Islands have also approved the ecotax law whose objective is to create and regulate the elements of the tax on tourist stays in the Balearic Islands, the fund to promote sustainable tourism on the island and the Commission for the Promotion of Sustainable Tourism (Law No. 3494, 2016).

In 2017, the Cabildo de Gran Canaria, with the aim of achieving a more sustainable behavior in the tourism sector, responsible for the generation of a large amount of waste on the island, launched the Gran Canaria Sustainable Tourism Project. With it they have managed to transform the island into an example of sustainable waste management.

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Ministry for Gozo, August 2012. A vision for an eco-island: Synthesis of the public consultation process on the eco-Gozo vision. Actions on eco-Gozo started in 2008 with the intention of kicking off a community project with a long-term vision and a commitment from the grassroots. This

document brings together the information and feedback gained through the public consultation process launched by the Ministry for Gozo immediately upon the launch of this project.

Ministry for Gozo, November 2009. Eco-Gozo A Better Gozo: Proposed Action 2010-2012. Available at: https://www.ecogozo.com/docs/Eco-Gozo_proposed_action%202010_2012.pdf
The vision of the Maltese Government is that Gozo will become an eco-island by the year 2020 protecting the island's lifestyle environment, resources, culture and identity, and see that all these play a significant role in attracting more visitors and investors to the island.

...

There is no any special law or policy in Montenegro which effectively deals with the negative impact of tourism on the natural heritage on remote islands. Islands are small, without infrastructure, objects or inhabitants. National strategy for coastal area development predicts additional law and policies changes which will include remote islands protection.

...

Croatian Nature Protection Act, 3 have the status national park (Brijuni archipelago, island of Mljet); 2 are declared as nature parks (Telašćica bay, Lastovo archipelago).

Croatian Marine protected areas involved with the MedPan South Project are: Brijuni, Mljet, Kornati, Telašćica and Mljet.

Law on Islands – Republic of Croatia. The package of measures focusing on:

- demographic and economic revitalization
- raising the quality and living conditions of the island inhabitants
- self sustainability on the principles of smart islands

D. Implementation mechanisms for dealing with/reducing negative impacts of tourism

...

The good cooperation of the Ministry of Culture and Sport and the Ephorate of Ancient Antiquities with the Municipality of Elafonisos and the Region of Peloponnese, with the activation of the protection and promotion of the archaeological site Pavlopetriou, who also led to the recent (2018) decision to reconsider the archaeological site as well as the activities of projection of the archaeological site (underwater trips, events for Pavilion etc.)

The activation of local society and civil society (eg, International, Union Tulipa Gulimi, Archelon) for the protection and promotion of the archaeological site and the natural environment, The protection of the NATURA 2000 area was recently commissioned to the organisation under the name Protected Management Agency Regions of South Peloponnese – Kythira. The Ministry of Environment and Energy has recently been invited to tender - and the commissioning of the study for the "action-management plan" of NATURA 2000 Elafonisos-Neapolis is expected soon.

...

Protection of Natural Biodiversity: The Natura 2000 Network in Cyprus has a total of 40 Sites of Community Importance (SCI) and 30 Special Protection Areas (SPA) have been identified. In addition, 39 management plans have been prepared, including measures and actions for the conservation of natural habitats, species and the habitats of species. The Management Plan for the Akamas area is under preparation.

Strategy on Biological Diversity Pollution Control; water and soil pollution control, environmental permitting system, inspections and controls and water and soil pollution control.

Waste Management Strategy

...

The "Integrated planning area of the Mar Menor and the coastal strip of the Region of Murcia API02", is framed between the municipalities of Águilas, Mazarrón, Cartagena, Los Alcázares, San Javier, and San Pedro del Pinatar, and includes several figures of protection of Natura 2000 Network and Protected Natural Spaces, among which are included the 18 islands and islets of the Region of Murcia. Isla Plana was recognized as a protected area and is known as a Natural Park

Isla Hormigas was declared a Marine Reserve due to its high biodiversity and well-preserved ecosystems

...

...

The strategy for Gozo is built on the four pillars of sustainable development: economy, environment, society and culture and identity. These are some of the projects that are being undertaken as part of this initiative:

- **Alter Aqua – A non-conventional Water Resources Programme**

This program is a multi-stakeholder initiative aimed at mobilising Non Conventional Water Resources (NCWR) to increase water availability in a sustainable, cost-effective way and promote a new water culture, at both a local and a national level. Alter Aqua's main activities included the installation of four innovative rainwater harvesting systems (500,000-litres capacity) in four primary schools and the reinstatement of five existing rainwater harvesting systems (1.26 million litres capacity) in three primary schools and the Gozo Experimental Farm. Alter Aqua included an educational programme, led by Nature Trust Malta and included workshops and the development of educational material in English and Maltese. These activities were targeted at students, teachers and technicians but their effects are more widespread.

- The achievement of the Quality Coast Gold Award for Gozo and the establishing of Ramla as the first Blue Flag beach in Gozo ensure a stronger promotion of the high-quality coasts found in Gozo. These awards are an additional marketing boost for Gozo as a sustainable and quality tourism destination

- Provision of a better touristic product has been done through improvement of interpretation facilities in heritage buildings in Gozo and Comino by Din l-Art Helwa, the publication of a book by the Gozo Philatelic Society called Gozo in Philately, as well as the provision of equipment for the residence of Karmni Grima, limits of Gharb, which will soon be re-opened as a museum by the administration of the Ta' Pinu Sanctuary.

- The ecoGozo Action Plan, has provided support to the organization of both new and long-standing festivals, such as the International Folk Festival in Qala, which showcases Gozo's traditional customs and folklore. Assistance was also provided to high-quality festivals, such as Operas in Gozo, to improve their amenities and publicize their productions internationally, aiming to attract foreign visitors during the shoulder months

- The Ministry for Gozo is participating in an EU-funded project which aims at helping regional authorities across Europe to develop policies which promote the further development of the eco-accommodation sector and the attractiveness of rural territories for tourism purposes. This project, entitled "Innovative concept of eco-accommodation approach in rural regions: Public support policies for eco-investors" (Acronym: ICER) is financed under the INTERREG IVC Programme which forms part of the ERDF for a total funding of 1.4 million Euro. The project partnership is composed of rural authorities from France, Slovenia, Spain, Finland, Hungary, Ireland and Malta. Among others, the project will seek to analyze tourism development strategies for these regions, concrete policies for sustainable development, labelling policies, marketing tools, best practices in each region, and public policy support to private investment.

- **Public Gardens and the Gozo Biodiversity Explorer**

The historic Villa Rundle Gardens hosts a large variety of local and foreign trees and shrubs. The site was enhanced and beautified between 2009 and 2012 to provide recreational facilities and an

open space for families. The gardens are frequently used to host educational and social events in Gozo and act as one of the hubs of cultural activities in central Victoria.

An initiative – called the Gozo Biodiversity Explorer – was launched in 2015 to create a botanical database on all trees and shrubs in public gardens in Gozo. General information on the different species at Villa Rundle Gardens and Three Hills Gardens in Marsalforn were displayed publically on text-engraved acrylic plaques attached on selected trees. The greater vision of this initiative is to cover all public gardens in Gozo and to establish an online database hosted on the ecoGozo website.

- Restoration of Gozo’s Valley Systems

Gozo’s hill-and-valley landscape is one of its more prominent and important natural features. The valley systems of Gozo host a wide variety of flora and fauna, and certain valleys, such as Wied il-Lunzjata, have unique habitats and micro-ecosystems. These systems act as important watercourses and retain large amounts of rainwater that can be used in agriculture. Over time, the valley systems can become full of silt and debris, which can have adverse impacts on the surrounding area, including flooding and reduced rainwater storage capabilities.

Over the years, the Ministry for Gozo has aggressively addressed this issue in attempt to restore Gozo’s valley systems to its normal functionality and to facilitate a safe and productive environment for local farmers. To date, the Ministry for Gozo has intervened and helped to restore valley systems at Wied tar-Ramla, Wied Burumbara, Wied L-Infern, Wied tal-Grazzja, Wied ta’ Marsalforn and Wied il-Kbir – further valley systems have been shortlisted for intervention activities in the coming years.

...

- Prohibition of uses in the area: to cease the illegal fishing and snorkeling, anchoring, illegal camping, illegal parking lot, etc.
- Formation of walk tours to the archaeological site
- Rescue excavation at burials that are exposed in winter wave. The aim is to save the archaeological data and to remove any findings.
- Provision for the cleanliness of the area
- Limitation of the part of the declared archaeological site
- Study and rescue, fixation and restoration actions of submerged antiquities and antiquities on the coastline
- Monitoring and study of erosion and alteration of coastline as well as the effect of waves and sediments
- in the submerged archaeological remains.
- Study and rescue actions for the preservation, restoration and restoration of immersed antiquities and
- antiquities on the coastline.
- Mapping of coastal paths with appropriate, environmentally friendly markings.
- Placing information signs at appropriate points of the routes to the archaeological site.
- Operation of an information kiosk in the land part of the archaeological site

- Making sea routes for swimmers with a mask
- Maps with the points of interest of the wider region and the potential routes of visitors to the land and sea areas
- Development of a training program for acquaintance with Pavlopetri.
- Underwater guided tours to the public, in cooperation with local operators in regular basis
- Digital applications
- The archaeological site acquires a logo, site and pages on social networks, through which actions in the area are being promoted.
- Connection of the archaeological site with the findings at the Museum of Neapolis. Digital virtual visit to Pavlopetri and digital exhibition of findings from Pavilopri in Elafonisos, in an area managed by the Municipality of Elafonisos.
- It is encouraged to continue the scientific research on Pavilopetri and is part of the site's visitors with actions for visitors (open excavation).

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National Development Strategy 2030 - in progress and one of the objectives is the development of so-called smart islands along with existing Law on Croatian islands and nature conservation acts.

E. Best practices and effective measures implemented in remote island community

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- The most common measure to protect islands natural heritage from tourism impact is legislation and including them in some protected figure at regional or supra-regional level. For example, the Marine Reserve of “Isla de las Hormigas”.
- Planning of lighthouses maintenance out of bird breeding season. In “Isla de las Hormigas”, it has to be done out of the period between April 15th and September 15th.
- Planning all activities that are running or would be running at a certain period based on biological needs and tourism flow studies, even access prohibition in some periods to protect the natural heritage, for example birds breeding, seabed conservation, etc.
- Creation of diving quotas according to the season.
- In “Isla Grosa” there is a surveillance service that runs during Easter and Summer, it comprises one person and a boat with the aim of inform and watch over visitors to respect the environment and also ban boat to dock illegally.
- Installation of ecological anchorages.
- Establishment of ecotaxes for financial and dissuasive purposes on the market, as well as financing the improvement of tourist areas and the recovery of rural and natural spaces; investing the income obtained in sustainable tourism development. (In operation on the island of Mallorca from 2001 to 2003, when it was repealed, from the beginning there was rejection by companies and tour operators).
- Mechanisms of sustainable water management in Ibiza through the control of runoff water for the recharge of aquifers creating pools, as well as the reuse of purified water for urban, agricultural and environmental uses.
- "Alianza Mar Blava" campaign developed in Ibiza to promote the use of clean energy.
- Training campaigns in schools and in the fishing, nautical and tourist sector to raise awareness about the valuable resources of the islands and the need to act to protect them. For example, damage from uncontrolled anchorage and contamination by plastics in marine habitats.
- Creation of an App based on Google Maps or similar to help ships to anchor correctly. (Posidonia Maps App. Ibiza)

ADDITIONAL comments

In summary there is a vast legislation and figures of protection of the natural environment and its values at a general level, both for the land environment as for the maritime and coastal, which also include islands but not because of their status as islands per se, but because they are natural maritime spaces, so we have not found instruments or specific legislation objectively designed for the islands in our region.

Having expanded the search for information for the two most important archipelagos of our geography, which have the entity of Autonomous Communities, we can discern that there is legislation at the autonomous level but at the sectoral level of protection of the environment and spatial planning.

...

Eco-Gozo is a Local Sustainable Development strategy and action plan for the island of Gozo through which, the Maltese Government is enabling the Gozo island regional territory to move forward at a faster rate towards sustainable development when compared to the main island of Malta. The main beneficiaries of this strategy are the inhabitants of the island, visitors and the local enterprise. The objectives of this initiative are:

- Gozo to become an eco-island by 2020, supported by a keen and committed sustainable community
- better quality of life in Gozo improved further through education, economic development and social progress
- reduction in carbon and water footprints
- protection of the Gozitan lifestyle, the island's environment, resources, culture and identity, to attract more visitors and investors to the island

The Eco-Gozo action plan includes a total of 82 measures. These are some of the results achieved to date:

- creation of Jobs - professional environmental-related jobs have been created in both the public and private sectors. In the private sector these jobs are found in hotels and renewable energy and energy efficiency companies.
- 5km of restored rubble walls and 2,300 trees planted
- €2.4 million for Eco-Gozo projects by Local Councils and NGOs
- over 1,100 families granted subsidies to invest in photovoltaic systems and solar water heating
- 43 million litres of increased rainwater harvesting capacity on the island, through the competition of cleaning works in a number of key valleys
- €120,000 to promote Gozo as a unique diving destination
- €0.8 million direct investment by private enterprise in relation to the rainwater-harvesting project
- initiated discussions in the setting up of a Regional Youth Council in Gozo
- the creation of an ICT Platform for Gozo by the Gozo Business Chamber
- formulation of a Human Resources Strategy for Gozo
- substantial progress made in the development of 3 new Child Care Centres
- launch of the Public Art in Gozo project
- installation of 50.32 kWp in photovoltaic systems at the Ministry of Gozo.

In 2012, Gozo was awarded with a score of 8.1 on the Quality Coast Index. The main positive points recognized are:

- Most of the local food and dishes are 100% organic with Gozitan food production being one of the targets of "Gozo Eco-island 2020"

- Eco education programs are present in almost half of the schools in Gozo but also through different NGO programs. (NGO's support education as well)
- The bathing water quality in Gozo has "Excellent" status according to the EEA / EU Bathing Water Directive
- Natural heritage trails that recognize and safeguard the culture, heritage and identity of the island have been set up. These trails have helped to valorize the historical and cultural heritage of typical Gozitan villages and their surroundings and reduce seasonality in a sustainable manner.
- Since freshwater availability is a critical factor affecting tourism and other sectors on the island, the Ministry for Gozo is implementing a rehabilitation and cleaning of its valley basins with the aim to :
 1. attain a 2% reduction in the number of valley units that require intervention per year
 2. reduce the flow of large volumes of water flowing through valleys and the sea and thus reducing erosion of the coastline and sea water turbidity
 3. remove silt from dams in valleys, with a possibility of using such silt for agricultural purposes
 4. replenish soil material lost through erosion from the surrounding fields
 5. conserve the human aspect in terms of possible flooding problems especially when considering that the frequency of flash floods is increasing
 6. further protect the ecology of the various sites around the island including the diversity of habitats and to increase the potential of water storage which can be used for agricultural purposes
 7. improve and enhance the landscape making it more attractive for tourists and the locals.

ICER (Innovative concept of eco-accommodation approach in rural regions: Public support policies for eco-investors) is an INTERREG IVC project in which the Ministry for Gozo is participating. This project aims at helping regional authorities across Europe to develop policies which promote the further development of the eco-accommodation sector and the attractiveness of rural territories for tourism purposes. The following best practices form part of the efforts within ICER:

The role of the Eco-certification scheme established by the Malta Tourism Authority is to encourage hotels to deliver a better product to meet the demand of the increasingly environmentally aware tourist and at the same time to recognize hotels for their effort. The main areas covered by the certification criteria are: environmental management; waste management; procurement; energy; water; air quality; noise; building and green areas; local culture; information dissemination.

The Eco-Gozo strategy includes efforts in education and awareness for the wider society to become more conscious of the impact that their individual actions may have on the natural, social and cultural environment.

This strategy has supported the introduction of education for sustainable development and lifestyles awareness in schools including the distribution of textbooks throughout schools in Gozo. 90% of Gozo schools participate in eco-schools which is an international initiative developed by the Foundation for Environmental Education (FEE).

Through collaboration with the Institute of Sustainable Energy of the University of Malta, an environmental awareness campaign is being carried where trained personnel visit Gozitan households and provide free advice for reduction in electricity and water consumption, energy efficiency and renewable energy, and waste management.

The Eco-Gozo website (www.ecogozo.com) and the Eco-Gozo mascot for children (“Kikku”) together with the production of a series of TV programs for children entitled “Eco-kids” further increase the environmental awareness.

CENTRE FOR INNOVATION IN THE RURAL SCIENCES AND ENVIRONMENTAL MANAGEMENT, GOZO
This Centre provides the opportunity for two-way interaction between researchers and local stakeholders, particularly the farming community and those involved in the environment management on the island. The central mission is research, education and dissemination of knowledge and technologies in Mediterranean agriculture, food production and environmental management. The Centre focuses on various specialty aspects including Mediterranean agricultural sciences, agri-ecosystem management, agritourism, speciality/natural foods processing and certification, rural development, agricultural engineering and ecological restoration.

...

Support local community’s involvement in protection and promotion of the potential marine protected Area – Katic (Cross-border project, implemented by NGO Green Home in Montenegro)

Local initiative against objects building on the island St. Nicola near Budva, by local community and NGO’s, supported by Budva Municipality.

Local initiative by NGO Bokobran, against Mamula island devastation.

...

Photovoltaic power station on the island Unije.

F. Overview of workshop results

The online workshop was held on May 30th with the participation of ten experts. The purpose of the workshop was to discuss and agree upon the needs, the problems and the solutions for MED remote islands, that would serve as the input for the INHERIT approach implementation guide for MED remote islands.

Below are the main points structured in three sections:

1. Needs description
2. Problem description
3. Potential solutions

1. Needs description:

- necessary to reduce impact of tourism
- necessary to solve problems related to transport, both on the island itself as well as connectivity to the mainland
- necessary to identify more 'alternative locations/places/destinations' tourists can visit on the island
- necessary to try to preserve the natural heritage of these 'alternative locations/destinations'
- necessary to solve problem of seasonality – by balancing economic growth/ interest of local population

Other – more specific:

- anchorage points are installed – but there should be more
- analysis: how long do the tourist visit the area, do they stay overnight, how many boats are visiting the area/precise data regarding numbers of visitors and boats
- very low spending of visitors (bring their own food – rare visits to the local restaurant(s))
- the visitors stay only one day, no measures to tackle it, the boats are from other ports of other regions, there is no control from Puglia region
- the only way to earn money is with the boat tickets and the taxes

2. Problem description:

- an increase of population and increase of building facilities always leads to conflict with NGOs and other similar organizations
- tourists are mostly/often complaining about transport situation/most tourists use cars during their visit
- intentions are to turn Gozo into an Eco-island (introduce electr. cars – necessary infrastructure for that has to be provided, better public transport and other)
- problem of illegal/ "non-controlled" anchorage

- most tourists – don't spend their nights on boats around islands, they only spend the day or a few hours for bathing or diving

Other – more specific:

- problem of controlling diving quotas. Divers ask for permission but there is no control about it afterward the inquiry, so could lead to an overtake the maximum daily quota
- anchoring has a significant negative impact on meadows of Posidonia
- There is also a problem with organized tourist boat trips, that overtake the limits of the protected zone at "Isla Grosa" without permission
- visitors coming to the islands – come by own boats or tourism boats (limited nb. of seats)
- precise data regarding numbers of visitors and boats – do not exist, currently
- based on estimations – during high season – 5000 visitors/day (mostly daily visits)
- about the INHERIT Project - the attempts to involve local Stakeholders have had no result
- uncontrolled number of tourist visits/boats creates problems: water supply (unsuccessful desalination processes, danger of fire), waste management, threat for Mediterranean ecosystem (Posidonia oceanica meadows, coral reefs)
- main problems in general – water supply (attempts for desalination process – not very successful)
- the islands are dry (pine forests) and there is a risk of fire

3. Potential solutions:

- decreasing the number of tourists → is not really an option because of the interest of local politics and business
- it would be important to create better connectivity to the mainland (bridges, underwater bridges...) → still, there is always the problem of public resistance (f.ex. bridge to Gozo – business sector is pro, mainland inhabitants are against and Gozo inhabitants are partly pro and partly against it) → show the results of 'Social impact assessments/surveys'
- possible solution → a more intense government intervention
- also important: access roads to certain 'new' locations/destinations
- possible regulation of non-controlled anchorage:
introduction of measures for ecological anchorage
introduce quotas for tourist groups
one possible measure is to inform more visitors about the damage of anchorage
develop of an App to inform where are the ecological anchoring points and allow users to ask for permission to use them
- possibility to control/count the number of boats – cooperation with local fishermen?

Concepts and practices

2

Sustainability and “greening” practice in tourism seems to be slow, fragmented, and marginal compared to the main stream. Labeling, promotion and even naming of (mostly only partial) sustainability commitment, results in confusing, often inconsistent and numerous prefixes of initiatives and tourism products and services: eco, nature, rural, alternative, soft, slow, responsible, ethical, pro-poor, green, minimum impact, zero waste, clean/er, eco efficient, community, heritage, local, domestic, quality, etc.

Regardless to the greening efforts of individual providers and destinations that responsibly approached the sustainability, the results were, in general, most often:

- brief initiatives,
- confusion on the demand side, and
- "green wash".

The available literature is describing inefficiency of large-scale sustainability application in tourism and illustrating small-scale success case studies that do not replicate much (hence the system problem). The long presence of sustainability concept in policy, politics, international institutions and various stakeholders, adds to the puzzle how to go about implementing it.

Mihalič (2016) argued that there are three requirements or phases in sustainable tourism: the "awareness", "agenda" and "action". Hence, the core of the problem considered here is lack of, or very superficial, "awareness" that results in inefficient "agendas" and "actions".

In that sense, the implementation of INHERIT could be to propose directions and solutions in the form of the tourism greening approaches that would provide more clear understanding able to generate the needed change.



Figure: A model for generating change

² The following chapter is based on Carić H. (2018).

Figure presents a model for generating change that is initiated by an interest and information availability that generate knowledge (i.e. "awareness") that triggers a new cycle for more information on one hand and more concrete action on the other. Hence that change can (only) be achieved by:

- clarifying the concept (i.e. interest – information - awareness)
- depicting current policies behind it (i.e. the "agenda"),
- look into how to approach the practice (i.e. the "action").

"Greening" tourism makes tourism more competitive, innovative, employment diverse, and economically stable. Therefore, tourism must become the key part of green and circular economy concept that is advocated by EU and UNWTO (EC, 2015; Vella, 2016) by the means of placing in the focus:

- the decrease of ecological footprint (emissions and pollution, consumption of water, energy and other resources)
- goals of protection nature, tradition, and cultural heritage and
- tourism affirmation of named heritage.

Vision of green tourism on (INHERIT) Med remote islands is - environmentally responsible, ecologically informative and educational. In action, green tourism requires continuous and systematic measures and analysis of the impact of tourism activities in order to avoid, decrease, or mitigate negative environmental impacts. The improvements of environmental sustainability of tourism is based on destinations management, service/goods providers and most of all planning and legislative processes. It assumes quality and competitive tourism product that can only be based on the heritage and related uniqueness.

Croatian case-studies

In Croatia there are activities on different levels that apply and promote the concept of sustainable and green tourism. Below are examples of different levels and fields, from policy right through to those directed to science - research, local, and activist contexts.

Example of broad scale infrastructure setup of for nature heritage interpretation

EU Natura 2000 Integration Project (NIP)³ goals were (Ministry of Environment, 2016):

- (i) providing support for nature conservation institutions (in charge of national parks, nature parks and county level protected areas) in implementing goals of European ecological network NATURA 2000;
- (ii) strengthening capacities for monitoring state of biodiversity and reporting according to the EU requirements;
- (iii) involving wider group of stakeholders in the process of managing Natura 2000 network. During the period of 2011 – 2016 most significant portion of the funds were allocated for infrastructure (visitor centers, educational trails, information and interpretation platforms, etc.) that enable quality understanding of nature heritage.

Example of destination management based on the sustainability indicators

In 2014 Mali Lošinj have joined the group of around hundred European destinations in the EC pilot activity of establishing ETIS system and received in 2016 an awarded Sustainable and Responsible Management of Destination⁴. In the process of establishing tourism sustainability indicators Mali Lošinj build upon 27 obligatory and 40 tentative indicators and accumulated total of 130. The destination management plans are to improve the system of monitoring, improve the indicators (especially those authentic for the destination) and continue the work through NECSTour - The Network of European Regions for Competitive and Sustainable Tourism⁵.

Example of a small family hotel environmental sustainability

³ <http://projects.worldbank.org/P111205/eu-natura-2000-integration-project?lang=en>

⁴ https://ec.europa.eu/growth/sectors/tourism/offer/sustainable/indicators_en

⁵ <http://www.necstour.eu/>

Hotel Vila Dvor Omiš⁶ is composting biodegradable waste and produce approximately 2,000 liters of humus annually that is used in the hotel's vegetable garden. Water savings realized back in 2007 have realized decrease of water consumption by 30% and the current indicator is 228 liters per overnight (including restaurant and laundry). Besides optimal use of insulation and sensors, hotel is being cooled with the heat exchange system that uses nearby river Cetina. Electric energy is produced with the 24 kW photovoltaic system of and warm water is produced by 5 kW solar water heating system, making the carbon footprint savings of 30.8 tons of CO₂ a year (estimate by SolarLog). In 2012 elevator was enabled with 3.9 kW electric energy production (during the decent) making the annual production of cca 60 kWh. Ćurlin family, who is managing the hotel and participated in the design of the above, represents almost ideal example for all accommodation types (hotels, private apartments and houses). It can serve as the model for decreasing ecological footprint that simultaneously generates financial savings.

Tourism carrying capacity

Carrying capacity analysis are crucial for picturing more precisely risks and deliberating development and management options, especially in nature protection sites. From that perspective research community conducts various activities and projects out of which are the most visible those of Institute for tourism (island of Vis, Dubrovnik, Bol, Crikvenica, Kamenjak, Split-Dalmatia County), Archeological faculty (island of Mljet, Dubrovnik, National Park Plitvice lakes) and Institute Ruđer Bošković (National Park Krka and Nature Park Telašćica). The carrying capacity research take under consideration aspects of: visitor crowding perception in correlation to the recreation activities, satisfaction, motivation and spending; environmental risks; ecosystem services and spatial planning parameters and indicators.

Civic society as the promoter of sustainability and public interest

Across Europe civic society is active as an advocate and safeguard of public interest and resources but also as tourism innovator. There are number of projects where nature and traditional heritages are sustainably utilized and here are presented those that on the basis of their long term effort and credibility create added value contents and protect key values.

Blue World Institute (BWI) is conducting of activities related to research and protection of bottlenose dolphins conducted through decades long Adriatic Dolphin Project, marine environment education, and first Marine Educational Centre. Besides lecturing, public events, publications, exhibitions, etc., BWI develops and implements innovative methods of public participation in environmental and endangered species protection through citizen science models – development of web platforms for smart phones by which citizens and tourist can

⁶ <http://www.hotel-villadvor.hr/en/eco-friendly-hotel>

report their sightings of individual species and inform themselves on values and importance of the sea ecology.

It is becoming more visible in Croatia the importance of civic initiatives in advocating transparency of governance in planning and decision-making processes but also contributing to better protection of resources and public interest through juridical mechanisms. Maybe the most visible, in the recent period, were the achievements of the Srđ NGO (Dubrovnik initiative concerned with expanding tourism accommodation) and Green Action NGO that have via public advocacy campaigns tackled the importance of standing up to the development projects that have no clear purpose of contributing to the sustainability of local economy and community. Furthermore, through legal mechanisms they managed to successfully litigate prevention of mass tourism projects that were based on illegal rescripts: spatial plan manipulations, environmental impact assessment, and building permits. This represents important example (even precedent) for all that deal with public interests and resources in Croatian context because it stresses significance of civic activism use in synergy with informed use of legal mechanisms.

Directions

7

Greening of tourism in the remote island context should consider the following priorities:

(1) Sustainable tourism needs to be communicate simply and clearly:

- ✓ what is not good for the environment and local community, is not good for tourism;
- ✓ how much tourism is enough for sustainability
- ✓ sustainability = exploitation < regeneration (Carić 2016).

(2) Increasing the multiplying factor of tourism for island economy with application of the concepts of green and circular economy, hence the green tourism concept;

(3) Diminishing the ecological footprint because it is simultaneously environmentally sustainable and cost-efficient (for example, decrease of water use or waste generation decreases costs to the companies).

(4) Developing innovative products and services based on the heritage values (nature, tradition, culture, history, architecture, archeology) can:

- be very competitive on the market
- contribute to the goals of nature and environmental protection
- contribute to the sustainability of local communities
- find contribute through EU funds and create new business opportunities.

Although the above priorities can be seen in the strategic and legislative documents but also with other key stakeholders (administration, destinations and sights, academia, civic and business initiatives) there is still a need to work on the implementation of continual improvement mechanisms. The human capital is crucial for delivering sustainability agendas horizontally and vertically. Decision and policy makers need to develop framework for motivating, supporting, but also protecting from un-transparent/un-sustainable and particular interest.

(5) Developing capacity building, technical assistance and advice for remote (emphasis on monitoring tools for sustainability indicators and local spatial planning processes):

- island authorities
- DMOs
- local community representatives and sustainability initiatives.

⁷ The following chapter is based on Carić H. (2018).

Examples of related actions

Partnership and capacity development

- stakeholder informing and awareness raising on sustainable tourism practices;
- exchange of experiences and knowledge through networking and platforms;
- local partnerships for mobilizing private and civil sectors aiming to raise quality and diversity of tourism offer;
- development of capacities for planning and development of tourism based on the natural heritage;

Support

- sustainable use of nature heritage in tourism so all stakeholders (business, visitors, community) could benefit;
- state of the art interpretation of traditional heritage of rural areas through wider promotion of local heritage concepts such as eco museums;
- green certification in tourism – as the market instrument and the framework for systemic improvements of business practice;
- investments in the development of necessary tourist and communal infrastructure that will ensure successful interpretation of the heritage and its preservation from the unwanted tourism impacts;
- promoting sustainability on the destination and local community level;

Management

- monitoring, measuring and improving environmental sustainability of tourism on the levels of destinations and regions;
- monitoring, measuring and improving use of nature heritage in tourism;
- standardizing quality, tourism products networking and promotion on the designated markets;
- promotion of green tourism offer.

(5) Build on existing initiatives (see chapter on EU, Mediterranean, policy and thematic programs). Here is an example of topics and targets that have been developed by the Thematic Staring Group 4 (sustainable tourism) of the EU Strategy for the Adriatic-Ionian Region⁸

TOPIC 1	TARGETS
Diversified Tourism Offer	
Development of sustainable and thematic routes	1. Diversification and increase – natural and cultural assets (e.g. archaeological, historical, festivals, thermal, wellness, wine, thematic routes, cycling, walking/hiking, sailing).
Fostering Adriatic-Ionian cultural heritage	1. Diversification of products. 2. Synergies (creative/cultural industries and SMEs + hospitality sector). 3. Valorization of archaeological heritage.
Improvement of SMEs performance and growth-diversification	1. National and transnational clusters and SMEs . 2. Joint regional and transnational entrepreneurial projects and researches. 3. Local communities involved.
TOPIC 2	
Sus. & Resp.Tour.Mgmt.	

⁸ <https://www.adriatic-ionician.eu/>

Training and skills in the field of tourism businesses (vocational and entrepreneurial skills)

New programmes for training and new projects in the field of education for:

- education professionals,
- SME employees;
- unemployed.

Expanding the tourist season to **all-year round**

1. Development of special interest tourism: MICE, rural, alternative tourism, etc.;
2. Exchange of good practices; (events, performances, entrepreneurship and SMEs)

Developing **network** of sustainable tourism businesses and clusters

1. Networks of creative industries.
2. Networks promoting and sharing best practices in env. mgmt.
3. Tourism clusters for EMAS, ETIS and other Green (sustainable) Certification / Systems.

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