



Asterousia

Benefits of the region's integration in the
MAB/UNESCO Network

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INTRODUCTION

In 2017, the Heraklion Development Agency S.A., in collaboration with the Region of Crete, collectively decided to submit a proposal to the MAB/UNESCO network council for the integration of Asterousia in the aforementioned network. Thus, the documentation study that is obligatory to accompany the request was appointed to the association “Kon/nos Pavlidis-NCC LLC” within the framework of the project named “Specialized Studies of the Special Development Program CRETE-GREEN DEVELOPMENT”, under declaration no. 845/ 29-11-2017. The Natural History Museum of Crete also participated in the study via specialized associates.

During the preparation of the request for the integration of Asterousia, the local authorities in charge (municipalities involved, the Region of Crete, the Decentralized Administration of Crete, the Forestry Service of Heraklion, the Ephorate of Antiquities of Heraklion and the Museum of Natural History of Crete) showed their support for this venture, both by their participation in the publication and consultation events that were organized in the region, as well as by their supportive epistles that were required for the submission of the request. Furthermore, the National Committee of UNESCO also played a principal role; it provided, due to its many years of experience, the necessary advisory support for the exemplary preparation of the support folder.

Within this framework, the Heraklion Development Agency, with the present edition, funded by the Region of Crete, within the framework of the Special Development Program “CRETE-GREEN DEVELOPMENT”, primarily aims to inform the local population of Asterousia about the importance of the natural and cultural capital of the region. These assets, in combination with numerous traditions and customs that exist up until today, were the characteristics on which the formulation of the proposal for the integration of Asterousia in the MAB/UNESCO network was based on.

Subsequently, the benefits that will be gained by the residents and citizens utilizing the region, due to the conservation of the rich natural and cultural reserve of the region and the formation of a sustainable and viable development model should be noted. This model will be achieved with the balance between the actions of local private and public bodies that are involved in the management of the region.

The local population of Asterousia must be informed that the integration of Asterousia in the MAB/UNESCO Network does not equate with direct activation of funding for the region, but may constitute the driving force for initiatives and action plans that concern the region, seeing as the international characterization of “Biosphere Reserve”- UNESCO is a vital gateway for developmental action funding in the region.

What are Biosphere Reserves

Biosphere Reserves (BR) are declared by national governments and remain under the jurisdiction of the states to which they belong, but are recognised internationally by UNESCO. This recognition is determined by two important documents: the Statutory Framework of the World Network of Biosphere Reserves and the Seville Strategy for Biosphere Reserves (UNESCO 1996). The network facilitates the exchange of information and experience between regions. Thus far, there are 669 Biosphere Reserves in 120 countries, including 16 cross-border regions.

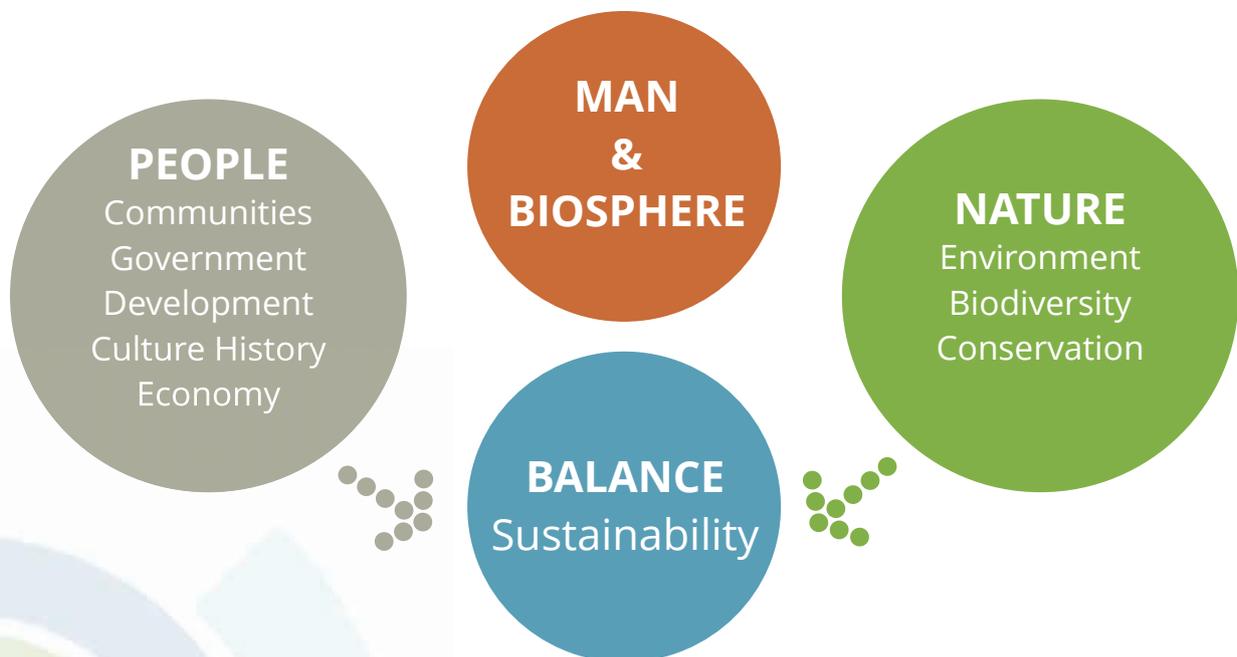


In Greece, to date, there have been two Biosphere Reserves since 1981, Mount Olympos and Samaria Gorge.

UNESCO sees Biosphere Reserves as a huge natural laboratory of global scope, in which protection of the natural environment is combined with research, education, demonstration, local participation and sustainable development.

The **Man and Biosphere-MAB Program** is an interdisciplinary research and capability development program that aims to improve the relationship between humans and the environment on a global scale. It was inaugurated in the beginning of the 1970s. Its main objectives are:

- (i) Contribution to the minimization of biodiversity loss by utilizing ecological and biodiversity sciences in legislation and decision-making.
- (ii) Environmental sustainability advocacy through the Global Network of Biosphere Reserves.
- (iii) Reinforcement of the interconnection between cultural and biological diversity.



The case of Asterousia

For the integration of a region into the MAB Network, a file is submitted to the UNESCO committee in charge. The file includes the proposal to the Committee, accompanied by a documentation study in which all the elements of the natural and cultural environment of the candidate region that render it appropriate for integration in the MAB/UNESCO World Network are recorded.

The documentation study that accompanied the proposal for the integration of Asterousia in the MAB/UNESCO Network was executed by the association "Kon/nos Pavlidis-NCC LLC" and was supported by the local authorities in charge (Municipalities, Region, Forestry Service) and the Greek National Committee for UNESCO.



BIOSPHERE RESERVE NOMINATION FORM
(January 2011)

INTRODUCTION

Biosphere reserves are areas of terrestrial and coastal/marine ecosystems, or a combination thereof, which are internationally recognized within the framework of UNESCO's Programme on Man and the Biosphere (MAB). They are established to promote and demonstrate a balanced relationship between humans and the Biosphere. Biosphere reserves are designated by the International Coordinating Council of the MAB Programme at the request of the State concerned. Individual biosphere reserves receive the approval/authorization of the State where they are situated. Collectively, all biosphere reserves form a World Network in which participants are free to volunteer.

The World Network is governed by the Statutory Framework adopted by the UNESCO General Conference in 1971 which provided the definition, objectives, criteria and the designation procedure for biosphere reserves. The articles recommended for the implementation of biosphere reserves are set out in the "Statutory Framework" and were further developed in the United Action Plan (2011). These documents should be read in their entirety for the completion of this nomination form.

The information presented on this nomination form will be used in a number of ways by UNESCO:

- (a) the nomination of the site by the International Advisory Committee for Biosphere Reserves; and by the Bureau of the MAB International Coordinating Council;
- (b) the use in a multi-media accessible information system, namely the UNESCO-MABnet and publications, facilitating communication and education amongst persons interested in biosphere reserves throughout the world.

The nomination form consists of three parts:

Part one is a summary indicating how the nominated area responds to the Statutory Framework and criteria for biosphere reserves, set out in the Statutory Framework, and presents the signature of endorsement for the nomination from the authorities concerned. Part two is more descriptive and detailed, referring to the location, physical and biological characteristics as well as to the administrative aspects. Part three consists of two annexes: the first annex will be used to update the Directory of Biosphere Reserves on the MABnet, once the site has been approved as a biosphere reserve. The second annex will be used to provide promotional and informative materials of the biosphere reserve. Tables, diagrams and maps, as appropriate throughout the nomination form are welcomed.

The form should be completed in English, French or Spanish. Two copies should be sent to the Secretariat, in addition:

1. The original hard copy, with the original signatures, letters of endorsement, resolution copy and supporting documents. This should be sent to the Secretariat through the Official UNESCO channels, via the UN.
2. An electronic version (in PDF format) of the nomination form, together with the supporting documents. This should be sent to the Secretariat through the Official UNESCO channels, via the UN.

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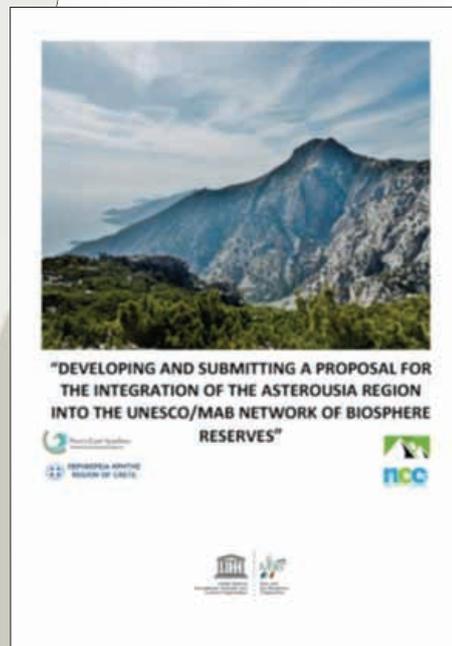
PART I: SUMMARY

- 1. Proposed Name of the Biosphere Reserve
- 2. Name of the Country
- 3. Fulfillment of the Three Functions of Biosphere Reserves
- 4. Criteria for Designation as a Biosphere Reserve

PART II: DESCRIPTION

- 5. Location
- 6. Date of Designation
- 7. Biogeographical Region
- 8. Land Use
- 9. Nature
- 10. Species Population of the Proposed Biosphere Reserve
- 11. Environmental Services
- 12. Environmental Characteristics
- 13. Mass Observation for the Proposed Biosphere Reserve's Designation
- 14. Developmental Factors
- 15. Logistical Support Factors
- 16. Special Designation
- 17. Special Designation
- 18. Special Designation
- 19. Special Designation
- 20. Supporting Documents
- 21. Address
- 22. Annex I: MABnet Directory of the Biosphere Reserves
- 23. Annex II: Promotional and Communication Materials

UNESCO - MAB and



Bodies that supported the integration

From the first moment that the effort for the integration of Asterousia into the MaB/UNESCO Network as a BR was announced, the support of local bodies was immense. Notably, local municipal units which are included in the limits of the candidate BR, demonstrated their support and readiness from the first informational meetings for this venture.

The main bodies that were actively involved in the integration procedure of the region in the MaB network are:

- Region of Crete
- Municipalities of Viannou, MinoaPediada, Archanes-Asterousia, Gortyna and Phaistos
- Decentralized Administration of Crete
- Forestry Service of Heraklion
- Ephorate of Antiquities of Heraklion

- Management Body for the Protected Areas of Central and Eastern Crete
- Natural History Museum of Crete
- Geotechnical Chamber of Greece-Branch of Crete
- Technical Chamber of Greece-Branch of East Crete
- Environmental Education Center of Archanes - Rouvas -Gouves

Notably, the Natural History Museum of Crete also participated in preparing the documentation study for the integration of Asterousia in the MAB/UNESCO Network, through the collaboration of specialized scientists with the study team. Also, many cultural and professional local associations supported the integration of the region in the MAB/UNESCO network through epistiles.

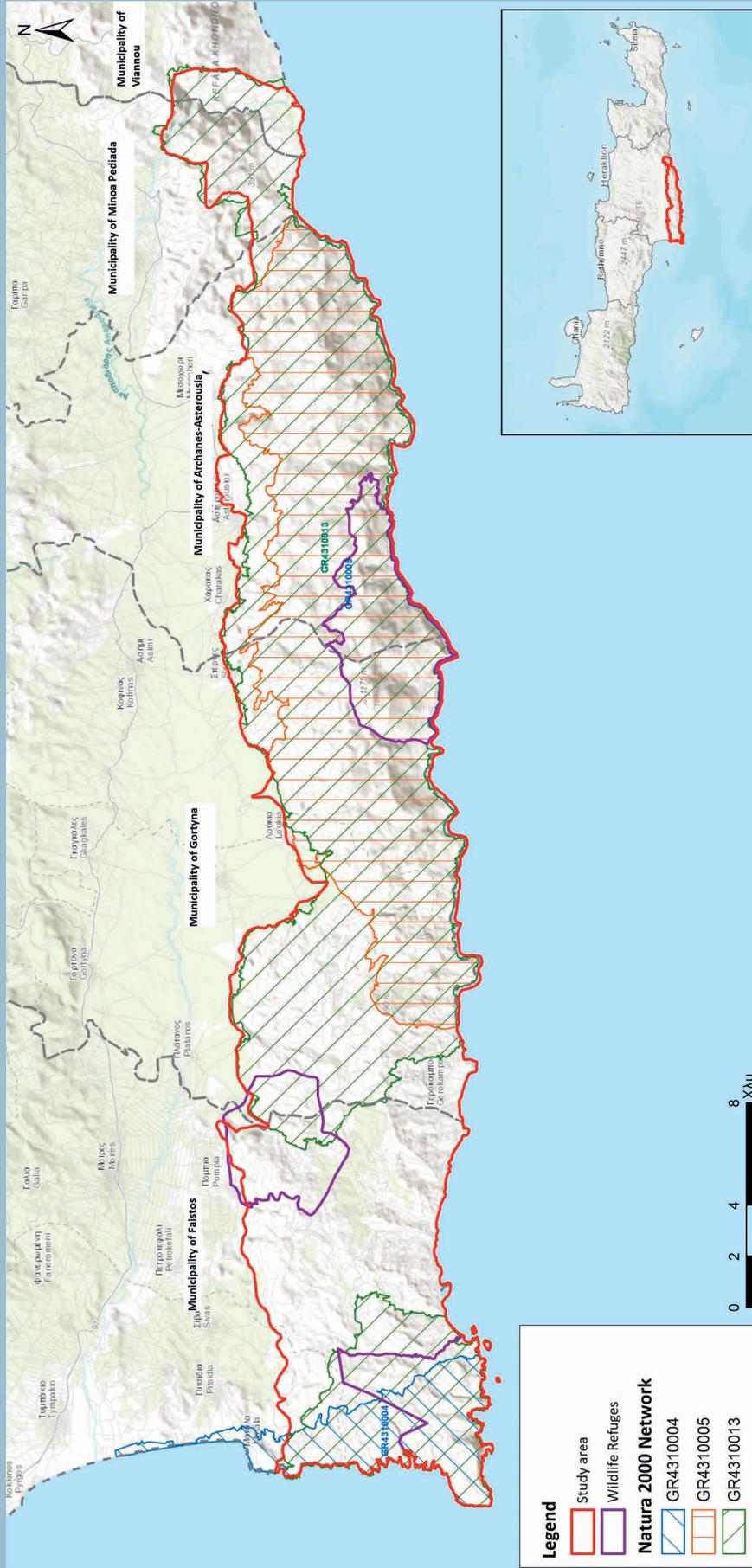


Why Asterousia

The BR region of Asterousia is located in the southern part of the Regional Unit of Heraklion, in the central part of Crete. It is a semi mountainous-mountainous zone, 5-15 km wide and over 55 km long, with altitudes ranging from 0 m at sea level in the coastal areas, to 1,231 m at Kofinas, the highest peak of the mountain range.

Asterousia **fulfill the criteria of their integration in the MaB network** and serve the three functions (conservation, development, support) as is stipulated.

Biosphere Reserve Region of Asterousia

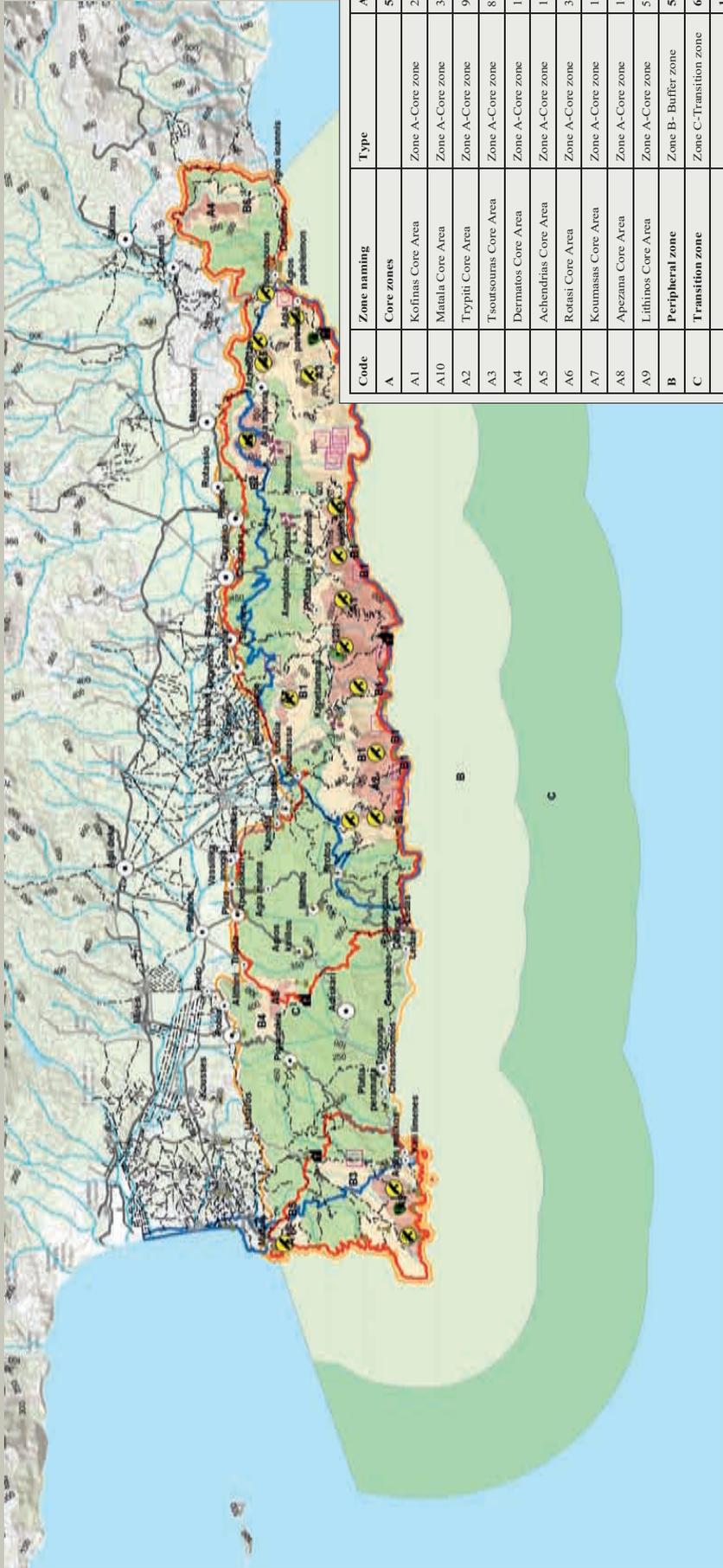


Legend

- Study area
- Wildlife Refuges

Natura 2000 Network

- GR4310004
- GR4310005
- GR4310013



Based on the Program's instructions, within the candidate BR, these three zones must exist:

Core zone of sufficient size, that aims to conserve the ecosystems, the landscapes but also biodiversity.

Buffer zone which will enclose the cores, with mild activities compatible with

the conservation objectives of the natural and cultural environment and landscape.

Transition area, where sustainable natural resource utilization and management practices are developed. This is the zone where activities and settlements are mainly supported and developed.

Map of proposed zones in the area of the Astreocystis Biosphere Reserve

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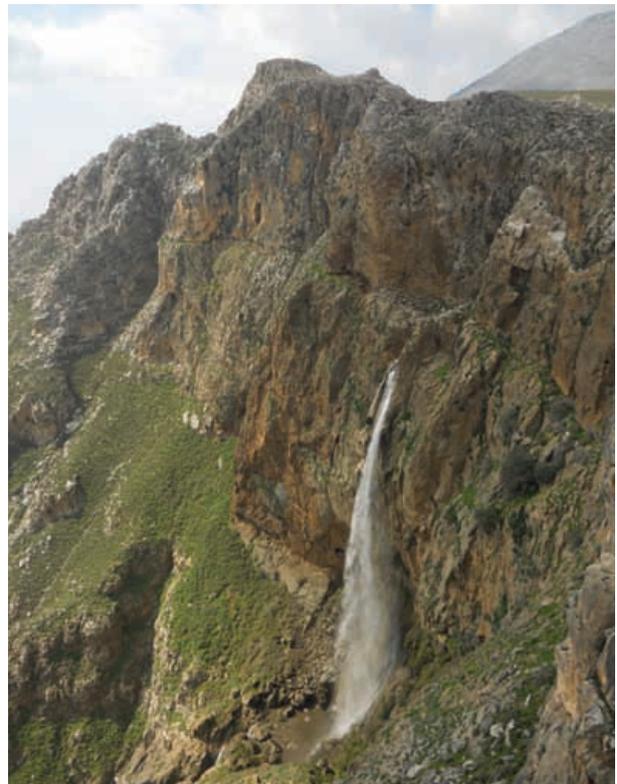
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What the integration of Asterousia in the MAB/UNESCO network offers

Conservation of the natural and cultural environment of Asterousia

Unification and systematic organization of the different established levels of protection. Formation of a network for all components involved in the management of the region (natural and cultural environment) for the reinforcement of the protection of these elements in a sustainable manner including moderate promotion.



Conservation of Biodiversity

Crete is one of the most important areas not only in Greece but in all the Mediterranean in relation to biodiversity. In Crete, about 1800 plant species have been recorded, of which 180 are steno-endemic of Crete, meaning they are only present in this area and nowhere else in the world. Additionally, the area is located in the southernmost part of Europe and involves many important habitat types of the Mediterranean biogeographical zone to which it belongs.

In the Asterousia BR important areas concerning biodiversity and conservation of the natural environment are included. Specifically, the largest part of the region is included in protected Natura network sites:

- One Special Protection Area (SPA) for the avifauna, under code GR4310013- "Asterousia Ori" and
- Two Special Areas of Conservation (SACs) for the flora, fauna and ecosystems under code GR4310005- "Asterousia" and part of the SAC under code GR4310004- "Dytika Asterousia".

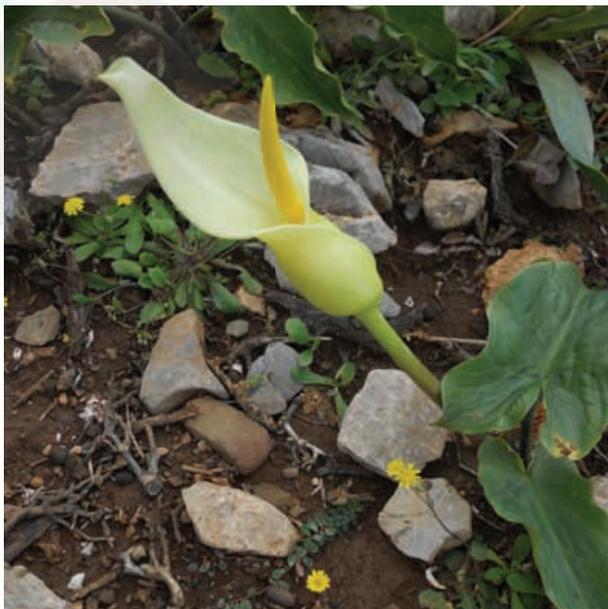
Also, in the area there have been recorded

- 3 Wildlife Refuges (WR): K706- Asterousia, Municipality of Asterousia and Kofinas, K587 Vigla-Kryo Nero (Antiskari), K806 West Asterousia-Agiofarago of the Municipality of Moires.
- 18 habitat types of community interest, of which three are priority habitats, like Palm Tree Forests with Phoenix theophrasti since only a few tree stands have been recorded on the island and in two areas (Agios Antonios Achendria and Agios Nikitas) in the candidate BR.





- **a number of important fauna and flora species** that are protected by national and community legislation. Concisely, there have been located: 30 endemic plants, in which *Lomelosia minoana* subsp. *asterusica* is included, a steno-endemic of Crete which has in fact only been recorded at the top of Kofinas at Asterousia, 8 endemic species of invertebrates and 29 important species of vertebrates (3 amphibians, 9 reptiles, 12 mammals), including the Cretan Wildcat for which there have been recorded observations in the Asterousia region, 4 bat species protected by national and international legislature and the renowned marine species of turtle *Caretta caretta* and mediterranean seal *Monachus monachus* that have been recorded on the sandy beaches and the coastal zone of the region.
- A specific mention should be made to the avifauna of the region. 192 bird species which are important (eg. the Bearded Vulture, the Eurasian Griffon Vulture, the Bonelli's Eagle, the Golden Eagle) and protected by national or international legislation have been recorded in the region by specialized scientists of the Natural History Museum of Crete.



Prominence of Cultural Importance

Briefly, it could be said that Asterousia are characterized by three components: time, space and man who connects and binds them.

What differentiates the Asterousia mountain range from the rest of the mountainous regions of Crete is the **long lasting and constant human presence**, which is confirmed from the Neolithic time period. For more than 4,000 years, man along with nature have co-configured the mountainous landscape of this mostly amiable mountain. Constant residency and incessant use of its natural resources have left today a variety of materials and also intangible residues. Areas that today are uninhabited or very sparsely inhabited, for long periods of time in the past were densely populated and full of life.

Important archeological sites of all historical time periods of the island are scattered in all the mountainous mass. Neolithic residence locations, Minoan settlements, sacred summits, worship caves, asclepieions, infrastructures and mainly cemeteries with the prominent arched graves, are found in the coastal front as well as the semi-mountainous zone. Today, above or near the ancient religious sites, an array of Christian places of worship can be found, which keep the sacred memory of the mountain range alive.



Sustainable development

a sustainable tourism model, which combines the value of the natural environment with visitations to cultural and archeological sites of the region and the experience of traditional activities, local customs involving music, local cuisine, folklore and agricultural-livestock products of the area.



The new tourism model can be accomplished with the **support of green economy development in all sectors**, the promotion of inclusiveness and sustainable production and **creation of new businesses**, and professional opportunities through conservation and local development actions.



Elements on which the model of sustainable development can be based on

The sanctity of the region, continuous human activity, the rich natural environment, the relative isolation of the communities in combination with the terrain of the mountainous mass, all have contributed to the creation of a distinct cultural reserve with a large number of traditions and customs, many of which have primeval roots or are remnants of the Minoan and pre-Christian religion.

Traditions and customs with roots in Minoan and pre-Christian religion: tree worshipping of Kofina, sacred dreams in Kapetaniana and the perischinismo (girding) of the settlement in Paranymfoi.

The art of weaving of Asterousia was integrated as an Intangible Element of Cultural Heritage of Greece, registered in the National Index of Intangible Cultural Heritage of Greece in February of 2018 (Protocol No. Ministry of Economy and Finance/47527/32281 /160/29/1-2-2018 Ministerial Decision “The Traditional Art of Asterousia Weaving”).

Recently, the “Wild edible greens of Crete and national botanical practices (recognition, selection, collection, processing, preservation, preparation and consumption of wild edible Cretan flora (“greens”))” were incorporated in the National Index of Intangible Cultural Heritage of Greece, a basic factor of the nutritional culture of Crete, as well as the social and customary characteristics associated with them.



Folk Architecture: Houses that made up the villages of Asterousia were built with four materials: stone, water, wood and earth. There is nothing that is not completely integrated with the landscape.



This heritage is reflected in most of the mountainous settlements, especially those that have been described as traditional, but also in more than 40 villages and hamlets that are scattered in the mountainous mass.

Established traditional settlements in the acceding BR site region are the villages of Matala and Listaros in the west (Municipality of Phaestos), Kapetaniana, Miamou and the settlement center of Lendas in central Asterousia (Municipality of Gortynas) and the settlements of Ethia and Prinias in the east (Municipality of Archanes-Asterousia).





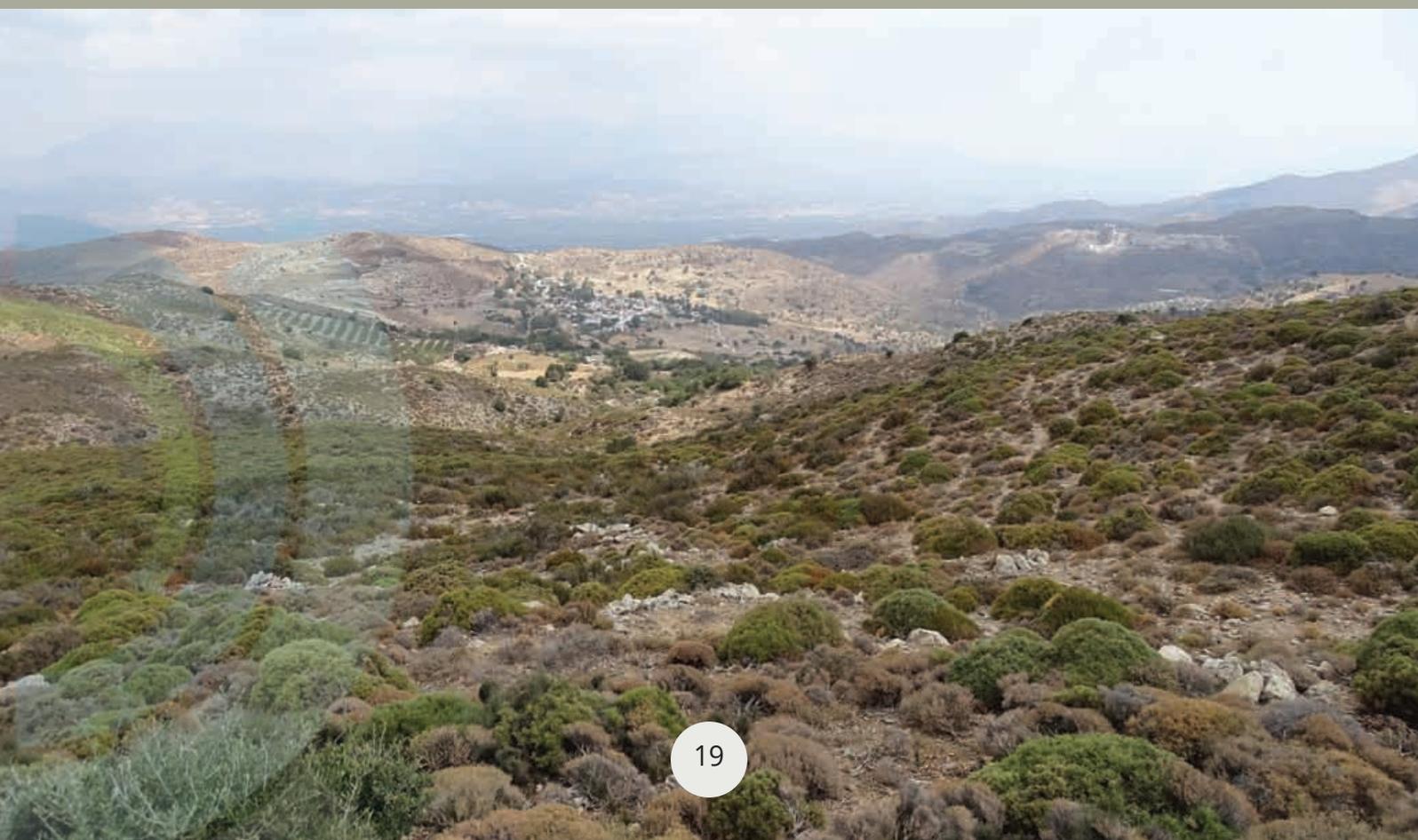
Organized settlements and especially traditional ones (stores selling local food products, traditional accommodations) will constitute core areas for the implementation of business activities.

Reintroduction of traditional practices in activities of the primary sector in the region





(re-use of terraces with local varieties, the cultivation of fodder plants and legumes in particular, as well as the extensification of livestock farming in the region) will strengthen the economically viable model of rural landscape management compatible with the conservation of biodiversity of the region.





**Promotion of the agri-food identity of the region,
enhancing organic practices and local,
exceptional agricultural and livestock products**

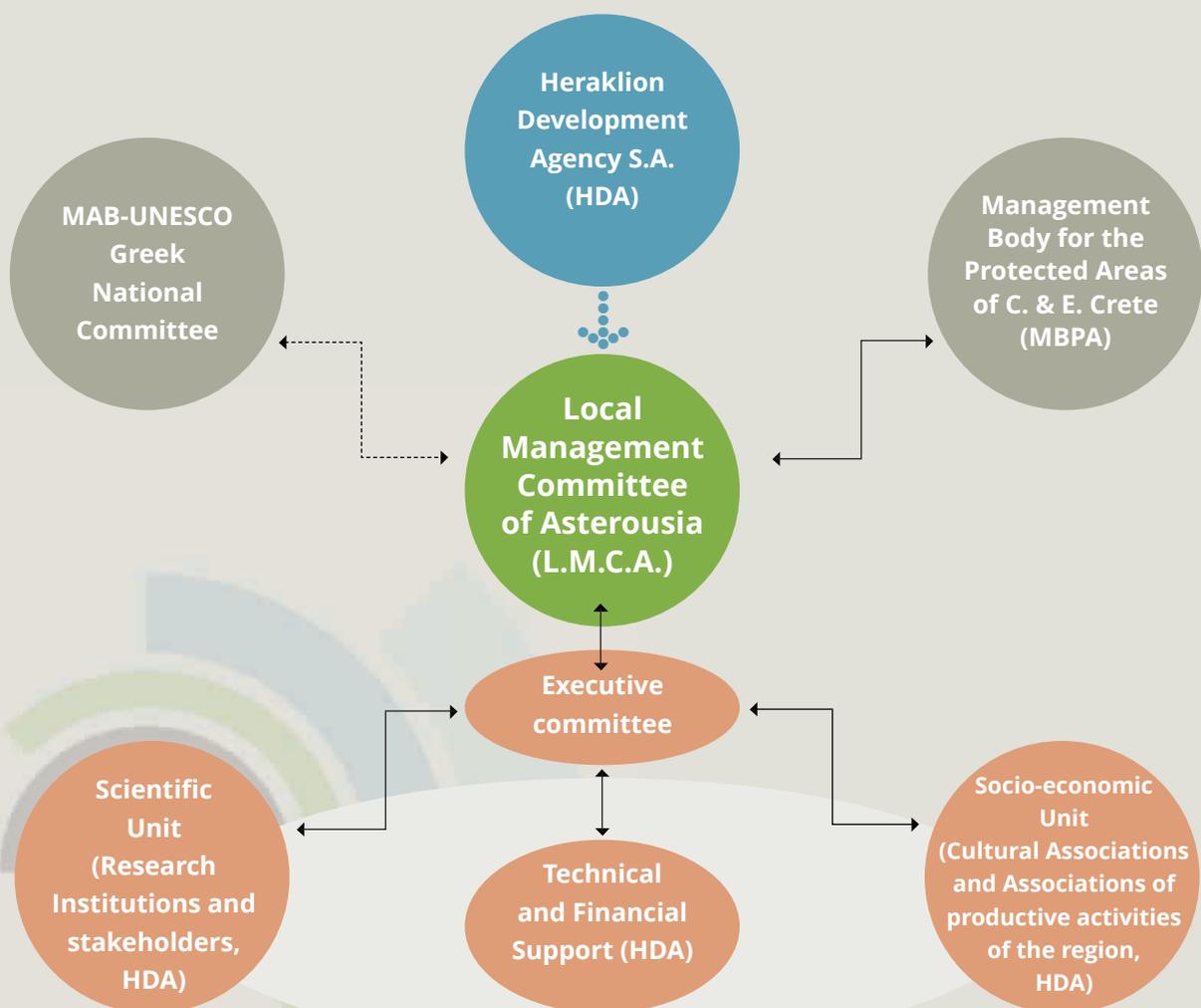
The Biosphere Reserve, through the utilization of the brand name of the MaB network, will develop a complex regional marketing plan that will be associated with the products and services produced in the region through sustainable practices and will explore the potential for certification of local products.



Support

The Asterousia BR balances the actions of public and private bodies that already operate in the region under study, for the promotion of sustainable local development through the utilization of knowledge and local human resources.

This is achieved through its Management Plan and the bodies it includes:



The targets of the MAB/UNESCO Network are common with those of the Region of Crete and the Local Decentralized Authority of the region, and are summarized in a common Development Plan of the mountainous mass of Asterousia with the collaboration of all bodies and the participation of residents and users of the region

MAB/UNESCO

The international characterization of “Biosphere Reserve”-UNESCO is a vital gateway for funding of development actions in the region. Though it does not entail immediate funding, it may be the driving force for future regional initiatives and action plans





The present edition was funded
by the Region of Crete

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Special Development Program
CRETE-GREEN DEVELOPMENT