

24-27 Septiembre 2018  
24-27 Setembro 2018



## Seminario Biogeográfico de la Región Macaronésica de la Red Natura 2000

### *Seminário Biogeográfico da Região Macaronésica da Rede Natura 2000*



Colégio dos Jesuítas  
Reitoria da Universidade da Madeira  
Funchal (Madeira-Portugal)



## *Knowledge Market*

**25 de September – 18:30 / 20:30**

### Project Description



# 1. LIFE Projects



1. LIFE Maciço Montanhoso (LIFE11 NAT/PT/000327) – Recuperação e conservação de espécies e habitats do Maciço montanhoso Central da Madeira.

**Recovery and conservation of species and habitats on the Madeiran Central Massif**

<https://lifemm.madeira.gov.pt/>

The main objectives of the project are:

- Produce a distribution cartography for the target species and habitats as well as for the invasive species;
- Promote the establishment and expansion of the target habitats, restoring the areas where these habitats have their natural conditions and are now dominated by invasive vegetation;
- Reintroduce and/or strengthen the populations of the target species that were destroyed by the fire and minimize the threat of the invasive vegetation;
- Monitor and survey new breeding areas of the Zino's petrel *Pterodroma madeira* at the Mountain Massif;
- Improve the conservation status of the species of land snails exclusive to the Mountain Massif;
- Develop a public awareness program for the general public drawing its attention to the natural resources of the Mountain Massif and to the importance of its conservation.

In August 2010 a very large fire burned approximately 80% of the Madeira Eastern mountain massif and destroyed a significant proportion of the fauna, flora, vegetation and habitats. Among the values lost special mention should be made to destruction that affected endemic species namely of the largest area of *Sorbus madeirensis*, a species restricted to this mountain massif, as well as the loss of several individuals of *Taxus baccata* and destruction of an area with a tall stand of *Erica arborea*, a community endemic to the Madeira island included in the habitat Endemic Macaronesia Heaths.

After the fire, although the natural restoration was following its course, a fast expansion of an invasive non-native species *Cytisus scoparius* subsp. *scoparius* was on the way dominating areas where it previously coexisted with the native vegetation and occupying areas where the native vegetation was dominant. This invasion is extremely aggressive at the Mountain Massif and is not allowing the restoration and re-establishment of the natural habitats that characterise the area, affecting the functions and equilibrium of the ecosystems.

Given these circumstances the former Regional Direction for Forests and Nature Conservation (DFRCN) together with the Madeira Natural Park Service, now defunct, submitted this Nature project. The project started in August 2012 and was concluded in 2017. It had a total budget of €1.225.022,00, with a 48,45% EU participation and the remaining 51,55% from the Madeira Regional Government.

The project had approximately 40 actions, directed towards three habitats of conservation priority namely Endemic Macaronesia Heathlands (4050\*), Endemic forests with *Juniperus* spp. (9560\*) and Mediterranean *Taxus baccata* woods (9580\*), as well as 11 plant species (*Sorbus maderensis*, *Plantago malato-belizii*, *Anthyllis lemmaniana*, *Berberis maderensis*, *Bunium brevifolium*, *Deschampsia maderensis*, *Echium candicans*, *Melanoselinum decipiens*, *Odontites holliana*, *Orchis scopulorum*, *Viola paradoxa*) and two animal species (a bird *Pterodroma madeira* and a snail *Leiostryla cassida*) of special conservation interest at the EU and listed at the Habitats Directive.



## 2. LIFE Recover Natura (LIFE12 NAT/PT/000195) - Recuperação de espécies e habitats terrestres dos sítios da Rede Natura 2000 da Ponta de São Lourenço e Ilhas Desertas.

### Recovery of the species and land habitats of the Natura 2000 sites Ponta de São Lourenço and Desertas islands.

<https://liferecovernatura.madeira.gov.pt/>

The main objective is to ensure that the habitats of the targeted Natura 2000 network sites (Ponta de São Lourenço and Ilhas Desertas) reach a stable, '*favourable*' and self-sustaining conservation status by recovery of the habitats and species present in these areas, through the eradication and control of introduced vertebrates, invertebrates and plants.

The objective will be achieved through the promotion of conditions for the restoration of habitats and their characteristic species, with eradication and control of the introduced vertebrates, invertebrates and plant species, or any other invasive species, and promoting studies to minimize the erosion in these areas.

The specific objectives are:

2. To create an area free of introduced vertebrates at Ponta de São Lourenço (safety belts were already installed in the area and are regularly monitored);
3. Eradication of the rabbit population;
4. Promote a significant reduction in the numbers of rats and mice;
5. Control of the goat population at Desertas;
6. Promote a significant reduction of invasive plant species;
7. Control and level-off the Yellow-legged gull population;
8. Control of the Argentinian ant population;
9. Removal of the power line that crosses the São Lourenço ZEC;
10. Implementation of specific action plans for the species of conservation concern;
11. Promote a strong public support for the conservation of these Natura 2000 sites, improving the visiting conditions and dissemination of information on these Sites;
12. Create consultation and scientific commissions.

Actions underway:

- Monitoring the response to the conservation actions already in place;
- Promotional videos highlighting the main objectives of the project;
- Construction of a greenhouse in Deserta Grande (to grow native plants);
- Restoration of the São Lourenço trail.

The LIFE Recover Natura is funded by LIFE+ and started in October 2013 to end in 2019. It has a budget of € 1.344.044, with a 49% participation from the EU.

The beneficiary coordinator is the Instituto das Florestas e Conservação da Natureza, IP-RAM (IFCN, IP-RAM). It has SPEA as partner and the support of several public and private institutions as well as individual researchers.





### 3. LIFE Fura-bardos (LIFE12 NAT/PT/000402) - Conservação do Fura-bardos e habitat de Laurissilva, na ilha da Madeira.

#### Conservation of Macaronesian Sparrowhawk and Laurissilva habitat in Madeira Island

<http://life-furabardos.spea.pt/pt/>

This project has as its main objective the conservation of the Macaronesia sparrow hawk, a local subspecies *Accipiter nisus granti*, and aims to restore and protect its main habitat the Madeira laurel forest.

The restoration of its habitat, together with acquiring knowledge on its distribution, ecology and population trend of this bird of prey both in Madeira and in five islands of the Canaries archipelago, allowed for the implementation of conservation measures for this annex I species.

This project was developed by SPEA (Sociedade Portuguesa para o Estudo das Aves) in partnership with IFCN (Instituto das Florestas e Conservação da Natureza) and SEO/BirdLife (Sociedade Espanhola de Ornitologia).



### 4. LIFE Cetáceos da Madeira (LIFE99 NAT/P/006432) - Conservação dos cetáceos no Atquipélago da Madeira.

#### Conservation of cetaceans in Madeira Archipelago.

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

Objectives of the project CETACEOSMADEIRA II

- Identify the areas of importance for the bottlenose dolphin in the coastal waters of Madeira archipelago, with the aim of establishing adequate marine Nature 2000 sites for this species;
- Define areas of operation for the whale-watching boats in Madeira archipelago waters and establish the respective carrying capacity;
- Surveillance of the conservation status of cetaceans' species in Madeira offshore waters;

The project team faced many challenges, some expected like limitations in field work due to weather constraints, others unpredictable or unexpected at the time of the project application, like the financial crisis that Portugal faced, with all the administrative and financial implications that it had. Eventually all the problems were overcome, sometimes with results that exceeded the expectations. All project activities were carried out, the deliverables produced and project objectives achieved within the approved budget, in spite the problems the project team had to deal with and delays.

The project generated knowledge and tools to be used in conservation policies directed to cetaceans in Madeira waters, for the Madeira Regional Government. The project impacts are already being felt, through legislation already in place and through the knowledge acquired that will set a reference for future comparison in the evaluation of the conservation status of cetaceans, for example within the reporting framework of Habitat Directive or the Marine Strategy Framework Directive. Such is the case of the establishment of areas of operation for WW and its respective carrying capacity (objective 2) adopted by the Madeira Government through "Portaria nº 46/2014 (22 April), based on the technical/scientific recommendations of this project (See Deliverable A.7-II/A.7-IIA). The same applies to the project resources that will continue to be used in the study and monitoring of cetaceans in Madeira waters for conservation purposes. The creation of a SAC for the bottlenose dolphin and other cetaceans, based on the technical/scientific recommendations of this project (See Deliverable A.7-I/A.7-IA), is also assumed by the Regional government, through the resolution 699/2016 that creates the Sítio Cetáceos da Madeira. The proposal has been sent to the National Government and submitted to EU for integration as a site of the Natura 2000 network.



## 5. LIFE VIDALIA (LIFE NAT/PT/000510 – LIFE VIDALIA) - *Valorização e Inovação Dirigidos à Azorina e Lotus nas Ilhas Açorianas*

### Conservation and innovation for *Azorina* and *Lotus*

The main objective of this project is the conservation of two species of the endemic flora *Azorina vidalii* and *Lotus azoricus*, both of them of conservation priority and included in the annex II of the Habitats Directive.

The conservation status of these two species was assessed in 2013 and considered as Unfavourable – Inadequate for *Azorina vidalii* and Unfavourable – Bad for *Lotus azoricus*, following a negative trend. The first one is listed as Endangered by IUCN and the second one was not yet evaluated.

Apart from a decrease in the numbers of individuals, circumstances contribute to the unfavourable conservation status of these two species: the presence of invasive species, the reduction of habitat quality and the lack of awareness/knowledge on the relevance of these species within the frame of the global biodiversity conservation objectives.

The project aims to act on three of the islands of the Azores Archipelago where the species is present – Pico, Faial and S. Jorge - in order to upgrade their conservation status to Favourable. Conservation works will take place in all the Natura 2000 sites of those islands.

DRA is the beneficiary-coordinator and AZORINA is the associated beneficiary.

The project started officially in July 2018 and will end in June 2023.

The total budget is €1.757.577,00 with 75% contribution from the EU. The beneficiary coordinator is DRA (Direcção Regional de Ambiente / Açores) and Azorina is the associated beneficiary.



## 6. LIFE IBA's Marinhas (LIFE04NAT/PT/000213) – Áreas Importantes para as Aves Marinhas em Portugal.

### Important Marine Bird Areas in Portugal.

<http://lifeibasmarinhas.spea.pt/pt/>

This LIFE project was coordinated by SPEA and its main goal was the identification of the most important areas for seabirds in Portugal at different times of the year.

The main objectives were as follows:

- To map the distribution and abundance of seabirds in mainland Portugal as well as in the Madeira and Açores archipelagos;
- To identify the factors that influence the distribution patterns of seabirds at sea;
- To identify general methodologies for the identification of Important Bird Areas and define criteria that can be applied to the IBA Program;
- To identify the marine IBA's that meet the designation criteria, including threats, conservation measures and management;
- To publish the National marine IBA list that can support a future SPA designation.



**7. LIFE Ilhas Santuário para as Aves Marinhas (LIFE 07/NAT/000649 - 2009-2012) – Projeto pioneiro para a conservação das colónias de aves marinhas nos Açores**

**Initiating the restoration of seabird-driven ecosystems in the Azores**

<http://life-corvo.spea.pt/pt/>

This pioneer project aimed at the conservation of seabirds in the Açores through the restoration of their habitat together with the control and eradication of introduced invasive species and introduced predators on the Island of Corvo and the islet of Vila Franca do Campo.

The project was coordinated by SPEA in partnership with the Secretaria Regional do Ambiente e do Mar (SRAM), the Câmara Municipal do Corvo and the Royal Society for the Protection of Birds (RSPB)



**8. LIFE EuroSAP (LIFE14 PRE/UK/000002) - Coordinated Efforts for International Species Recovery**

**Esforços coordenados para a recuperação de espécies ao nível internacional**

<http://www.birdlife.org/europe-and-central-asia/project/life-eurosap>

This project joins ten countries, including Portugal, and aims to use the synergy created by this association to face new challenges and threats for some of the more iconic species. The project has 13 partners, with SPEA representing Portugal. The main objective in what concerns Portugal was to assess the present situation of the Monteiro's petrel and to develop an Action Plan for this species.



**9. LIFE+ GARAJONAY VIVE (LIFE 13 NAT/ES/000240) - Restauración ecológica del Parque Nacional de Garajonay y su entorno después del gran incendio de 2012.**

**Ecological restoration works on the Garajonay National Park and surrounding area following the devastating forest fire in 2012.**

<http://lifegarajonayvive.com/>

On August 4, 2012, on the island of La Gomera the worst forest fire occurred of the last decades on the Canary Islands. This fire has affected the largest area of laurel forests in the Canary Islands, including important areas of centennial forests of great ecological value, an unprecedented fact.

The total burnt surface area amounted upto 3,616 hectares, affecting 33% of 7 Special Conservation Areas (SACs). The area affected in the Garajonay National Park was 741.7 ha, meaning the 19 % of its surface.

The fire has had serious environmental repercussions, having affected extensive vegetation masses, including ancient laurel forests located in the Garajonay National Park, a Unesco World Heritage Site. It also directly affected the populations of many threatened species and resulted in loss of high-quality soils and a serious deterioration in water capture functions and regularization of the hydrological cycle of forests, of which the island of La Gomera depends.

The project under the acronym "Garajonay Vive" began in September 2014, it was promoted by the National Park of Garajonay and supported by the General Direction of Nature Protection of the Government of Canary Islands. The overall objective of this project is to support the process of natural regeneration of fire-affected areas and the development and implementation of the necessary measures to reduce the risk of new fires occurring. During its four years, it has acted in 9 SACs of the





Natura 2000 network.

The project has launched a set of urgent actions for the ecological restoration of burned priority habitats, recovery of populations of threatened flora species, municipal actions of self-protection against forest fires, social participation and sensitization to prevent future wildfires in La Gomera. The dissemination activities include workshops and training sessions, exhibitions, bulletin boards, development of two documentaries, organizing an international conference, preparation of a layman report, and releases in the press, radio and television. On the web page of the project [www.lifegarajonayvive.com](http://www.lifegarajonayvive.com) brochures and leaflets are available for distribution.

The project is coordinated by TRAGSA, partnered with the University of La Laguna. Garajonay Vive has been one of the projects that benefitted from the program Life+ "Nature and Biodiversity" with 50% co-financing (1.511.494 €). The rest of the co-financers were the General Direction of Nature Protection of the Government of Canary Islands, through the managing body of the Garajonay National Park, with 443.314 €, the Cabildo of La Gomera with 113.569 €, the Municipality of Valle Gran Rey with 16.750 € and the municipality of Vallehermoso with 16.750 €.



**10. LIFE+PINZÓN (LIFE 14 NAT/ES000077): Proyecto de Ampliación del Área de Distribución y del Tamaño Poblacional de la Especie Prioritaria PINZÓN AZUL de Gran Canaria**

**Project of range expansion, and population size of the priority species *Fringilla teydea polatzeki*.**

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

The Project Life+ Pinzón: "range expansion, and population size of the priority species *Fringilla teydea polatzeki* (Blue Chaffinch of Gran Canaria)" is being implemented in Gran Canaria (Canary Islands) from 2015 to 2020.

The total budget of the project is €1,123,860, of which 60% is financed by the European Union through the LIFE programme. The public company Tragsa is the coordinator of the project and the Cabildo of Gran Canaria and the Government of the Canary Islands are partners.

The Blue Chaffinch of Gran Canaria is a forest endemic passerine assessed as "endangered" in the IUCN Red List of Threatened Species. The total population in 2017 is estimated at about 400 individuals, in two subpopulations (363 in the pine forests of Inagua, Ojeda and Pajonales, where the population source is, and 42 individuals in Cumbre Central). They feed mainly on Canary Pine (*Pinus canariensis*) sprockets and they nest on their branches, therefore its main habitat is Canary Pine forest (endemic Macaronesian pine forests, Habitat 9550 of Annex I of Directive 92/43/CEE). Its main threats are habitat fragmentation and allochthonous predators.

The objectives of the project focus on the development of ecological corridors through plantation of 80.000 pines and increasing the size of the population, by creating sustainable core population in the pine forests around Cumbre Central, the summit of Gran Canaria. Since 2001, the Cabildo of Gran Canaria is responsible for the captive breeding center of the Blue Finch of Gran Canaria, and produces also the canary pines and tagaste (*Chamaecitysus proliferus*) to be used in the afforestation.

The plantation, irrigation and maintenance of the afforestation are done by four field workers hired by the project Life+ Pinzon. It is private and public land, which requires contact with the private owners and preparation of agreements for forest planting. Two different methodologies are being used to promote the population growth of the Blue Finch: "soft release" of the individuals bred in captivity (they stay 3 to 6 days in acclimatization cages) and "hard release" with individuals translocated from the source population. So far, 27 captive-bred individuals have been released (12 in 2016 and 15 in 2017) and 27 translocated individuals from Inagua (20 in 2016 and 15 in 2017).

To monitor its dispersal and initial adaptation, radio-transmitters were used on 24 of the released birds (10 translocated birds in 2016 and 14 in 2017, including translocated and captive bred) and monitoring was carried out for 40 days. Permanent population monitoring is carried out throughout the year.



Another activity of the project is the control of allochthonous predators, especially in the area of release.

The dissemination activities developed with the project include presentations for children (with puppets) and adults (associations, NGOs, colleges, universities), afforestation activities with volunteers, information stands, workshops, and participation in radio programs. At the web page of the project [www.lifepinzon.org](http://www.lifepinzon.org) brochures and leaflets are available for distribution.



**11. LIFE+ GUGUY (LIFE12 NAT/ES/000286) Recuperación de los bosques endémicos de *Juniperus spp.*, y su flora y fauna, en la Reserva Natural Especial de Güigüí**

**Recover of native forests with *Juniperus spp.*, and its flora and fauna, in the Special Nature Reserve Güigüí**

<http://www.lifeguguay.com/>

The mountains of Güigüí, a Natura 2000 site on Gran Canaria, were covered by forests of Cedars, Junipers and Canary Pine, but the exploitation of the forest, the fires and wild goats destroyed them, and at the beginning of the project (2013) it was a deforested landscape with few scattered trees. Still, here was the only natural population of Canary Cedar (*Juniperus cedrus*) of the island of Gran Canaria, with just 50 specimens, and scattered Sabina (*Juniperus turbinata ssp. canariensis*), Acebuches (*Olea cerasiformis*), Heather (*Erica arborea*), Laurel (*Laurus novocanariensis*), Canary Pine (*Pinus canariensis*), and other species.

The project's main objective is to improve long-term perspectives for three priority habitats: 9560 \* (Forest endemic *Juniperus spp.*) and 4050 \* (endemic Macaronesian heaths) and 9550 (Canarian endemic pine forests).

The conservation and restoration of habitats has been developed on the highest and steepest areas, from 700 a.s.l., where several plots totalling 12 hectares have been afforested, 20,000 trees have been planted, including 1,233 Cedars and 4,651 Sabinas, with a success rate of 75% of the plantations. Given the steepness of the area the work has not been easy, and the use of donkeys and helicopters was necessary to carry the plants, water and different equipment.

The project also involved an intense work of recovery of seeds, plantations in nursery, genetic studies, ex situ conservation, and an intense awareness-raising campaign developed among the local population

It is a project of the Cabildo of Gran Canaria developed by GESPLAN.



**12. LIFE+ RABICHE (LIFE12NAT/ES/354) - Reintroducción de la paloma endémica *Columba junoniae*, paloma rabiche, en la isla de Gran Canaria**

**RABICHE. Reintroduction of endemic pigeon *Columba junoniae*, white-tailed laurel pigeon, on the island of Gran Canaria.**

<http://www.liferabiche.com/>

The exploitation of the forest in Gran Canaria made that at the beginning of the twentieth century there were hardly any wooded surfaces on the island. With it also the two endemic laurel pigeons, Bolle's Pigeon (*Columba bollii*) and white-tailed laurel pigeon (*Columba junoniae*) were threatened.

By the middle of the 20<sup>th</sup> century, the main reforestation efforts focused on the recovery of the pine forests. The interest in the recovery of the laurel forest began in the early Eighties, when the Cabildo of Gran Canaria acquires a land and begins to recover the forest. Simultaneously, there has been a process of rural abandonment which has allowed the gradual recovery of the forest in other areas.

The progressive recovery of the forest led to a study of the possibility of recovering also the white-tailed laurel pigeon. The Life Pigeon project was presented, led by the Council of the Environment of the Cabildo of Gran Canaria and managed by GESPLAN, in partnership with the local water council of Arucas and Fingas and in scientific collaboration with the University of La Laguna. Also the Cabildo de La Palma



collaborates in the project , that provides the breeding pigeons.

Restoring, expanding and improving laurel forest habitat. The project was developed in three Natura 2000 sites with a total of 1,047.8 ha and more forest has been improved on more than 220 hectares, with a plantation of 174,300 plants of 23 species of the laurel forest. The aim was linking woods providing continuity to the habitat. The afforestation was not without challenges, as some species have been difficult to replicate. It has also been used to recover some very rare and scarce species, e.g. Elder, of which only four wild specimens are known, and of which 582 specimens have been repopulated.

Since the laurel pigeon nests on the ground, it is very susceptible to introduced predators such as rats and cats. Therefore the project has included trapping of cats (39) and rats (>100).

A captive breeding centre was created in 2010 with 32 individuals from the island of La Palma. Because pigeons in captivity do not take care of eggs, turtledoves were used for incubation.

The first captive breed pigeons were released in 2012 and in next year the first reproduction in the wild was verified. A total of 219 laurel pigeons were released between 2012 and 2017. A total of 24 pigeons were radio-tagged, which allowed to study their dispersal and use of the habitat. By 2017 over 30 pigeons born in the wild have been reported.

Promoting the project's environmental values among locals involved 293 awareness raising activities, including lectures, talks with hunters and educational centres, volunteering activities, exhibitions, etc. in which 13,866 people have participated. An information centre has also been created that includes an educational path for the plant species of the island.

As a result of the project, in 2017 there were again two wild breeding nuclei of white-tailed laurel pigeon in Gran Canaria.

## 2. INTERREG Projects



14. INTERREG PLASMAR (INTERREG MAC/1.1a/030) - Bases para la PLANificación Sostenible de áreas MARinas en la Macaronesia / Bases para a planificação sustentável de área marinhas na Macaronésia

**Sustainable planning of marine areas in Macaronesia.**

<http://www.plasmar.eu/planificacion-sostenible-en-la-macaronesia/>

The **PLASMAR Project** is developed with the support of the European Union, co-financed by the European Regional Development Fund through the Operational Programme of Territorial Cooperation Madeira-Azores-Canary Islands (POMAC 2014-2020).

**PLASMAR** will define and propose robust scientific methodologies in support of **Maritime Spatial Planning** and **Blue Growth**, taking into consideration the biogeographic characteristics of the Macaronesian Region and searching for a balance between the diverse maritime sectors and the conservation of the natural marine heritage.



15. INTERREG LUMINAVES ( INTERREG MAC/4.6d/157) - Contaminación lumínica y conservación en los archipiélagos de la Macaronesia / Poluição luminosa e conservação de aves marinhas nos arquipélagos da Macaronésia.

**Light contamination and seabird conservation in the Macaronesia archipelagoes.**

<http://www.luminaves.com/index.php/es/>

Três objetivos principais: a) avaliação do estado de conservação das aves marinhas na Macaronésia; b) divulgação, proteção e salvamentos de aves marinhas acidentadas/encandeadas; c) reduzir o impacto da poluição luminosa sobre as colónias de aves marinhas (estratégia Macaronésica).

This INTERREG project has SEO/BirdLife as the principal beneficiary. At the Açores the partners were SPEA, DRAM and FRCT and had the participation of EDA and the Council of Corvo.



### 3. Other Projects



**16. MarSP: Macaronesian Maritime Spatial Planning (EASME/EMFF/2016/1.2.1.6/03/SI2.763106) – Developing Maritime Spatial Planning schemes in the three Outermost Regions of Macaronesia.**

**Promover o ordenamento do espaço marítimo nos arquipélagos da Região Atlântica da Macaronésia.**

<http://marsp.eu/>

The aim of the MarSP proposal is the establishment of Maritime Spatial Planning in the Outermost Regions of Macaronesia - Azores, Madeira, Canary Islands, in line with the EU Directive on MSP (2014/89/EU). The specific objectives of the MarSP are to develop concrete actions for the Member States - Portugal and Spain, to build the necessary capacities and tools to apply the MSP Directive in the Macaronesian region, including mechanisms for cross-border cooperation. This concrete actions are aimed to address the following priorities :

- Active involvement of all Macaronesian MSP competent authorities.
- Establish a privileged channel for exchange of information, methodologies and challenges related to the MSP Directive transposition and implementation on the Macaronesia level.
- Support the competent authorities to develop and implement the Maritime Spatial Plans, in accordance to the respective regional MSP status.
- Develop a planning method that addresses the current and potential uses, the needs for the MSP development options to be applicated regionally.
- Design and implement a strategy for effective engagement and participation of the Maritime Stakeholders at regional, national and Macaronesia level.
- Develop monitoring and evaluation indicators framework to ensure an effective and sustainable use of maritime space, including the land-sea interactions.
- Reinforce the Regional Information System to improve the available data and information for MSP according to the European Directives. A MSP platform will allow to the MSP authorities and users to identify the best information access mechanisms. The interoperability between the regional Information systems will be encouraged with the purpose of sharing information regarding the Macaronesia MSP.



**17. Mistic Seas II (No. 11.0661/2017/750679/SUB/ENV.C2) - Applying a sub-regional coherent and coordinated approach to the monitoring and assessment of marine biodiversity in Macaronesia for the second cycle of the MSFD.**

**Implementação de uma abordagem sub-regional coerente e coordenada para a monitorização e avaliação da biodiversidade marinha na Macaronésia para o segundo ciclo da Diretiva-Quadro Estratégia Marinha DQEM.**

<http://mistic-seas.madeira.gov.pt/en/content/mistic-seas-2>

MISTIC SEAS 2 aims to implement the common monitoring programs designed in MISTIC SEAS and reinforce regionally coherent, coordinated and consistent updates of the determinations of GES, as well as to prepare the next steps for 2nd cycle of the MSFD (revision of the initial assessments and of the definition of environmental targets by July 2018, in accordance with Article 17(2a and 2b), Article 5(2) and Article 3(5) of the Marine Strategy Framework Directive (2008/56/EC).

The project is organized into five Work Packages (WP), in order to answer the call's requirements: Monitoring Programs and Data Gathering (WP1); Towards a coherent update of initial assessment, GES and targets (WP2); Risk assessment and preparing next steps of the 2nd Cycle (WP3); Dissemination (WP4) and Coordination, Management and Sustainable Sub regional Cooperation(WP5).

Building on the work carried out during the current MISTIC SEAS project, the project coordinates the



monitoring for the Macaronesia sub-region through the development and setting up of the joint monitoring programs (for marine mammals, seabirds and marine turtles).



**18. Plano de Acção para a implementação do Pós-Projeto LIFE "Ilhas Santuário para as Aves Marinhas (Contrato Nº 5/DRAM/2015)**

**Post Project Action Plan.**

The implementation of this post-LIFE project is the result of a contract between SPEA and the Direcção Regional dos Assuntos do Mar (DRAM - Açores), the Regional government of Açores and the Câmara Municipal do Corvo.

The main objective of the project is the continuation of the work developed in the previous LIFE project at Corvo Island, namely managing and monitoring the Biological Reserve of Corvo and the Upland Biological Reserve. Specifically monitoring the seabird colonies, managing the native plants program, implementing public awareness actions, continuing the environmental education program and promoting the island's natural values.



**19. Projeto Painho-de-monteiro (PEP Prevention Extinctions Program / BirdLife) - Construir bases sólidas para a implementação de um plano de conservação a longo prazo**

**Building the basis for the implementation of a long term conservation plan**

**PREVENTING EXTINCTIONS**

The Monteiro's petrel project (phase 1) developed by SPEA with the support of the Graciosa Natural Park, the Department of Oceanography and Fisheries of the University of Açores and the Department of Life Sciences of the University of Coimbra.

The project was funded through the BirdLife International's Preventing Extinctions Programme (PEP), including the Monteiro's petrel in the Species Guardian Scheme. The main objective is the construction a solid base for the implementation of a conservation plan for this endemic species in the archipelago of Açores.



**20. BEST III Voluntary Scheme for Biodiversity and Ecosystems services in territories of European Overseas**

[http://ec.europa.eu/environment/nature/biodiversity/best/index\\_en.htm](http://ec.europa.eu/environment/nature/biodiversity/best/index_en.htm)

The KBA delineation process is, at its core, a simple one: pick a globally endangered species and draw a boundary around its range. Preserving that area will preserve the species. Problem solved? Not really. Many species are not classified as endangered but are known to have restricted ranges, or to critically depend on particular sites (for breeding, for instance). No worries: specific criteria have been devised for these situations, giving the KBA approach sufficient flexibility to be used as the support tool for many conservation actions worldwide.



However, marine species remain a particular challenge to the KBA approach<sup>1</sup>, mainly because of the lack of information on (1) the conservation status of most species and (2) the distribution and life histories of the known threatened species (and the recognized biases towards charismatic species and well-studied sites). To these we must add the challenge of taxonomic ignorance.

Although the high level of Macaronesian endemism is thought to be smaller in marine biota, because of the connectivity provided by the water itself to the organisms and their reproductive stages, there are indications that there is still much to discover. Fishes have been thoroughly investigated, and 18 species are known to be restricted to Macaronesia, a few endemic to one of the archipelagos<sup>2</sup>. Taxonomic knowledge on marine invertebrates, on the other hand, is very incomplete. A recent check-list of the Azores marine gastropods<sup>3</sup> lists 36 species endemic to this archipelago, but no comprehensive studies are known for marine snails in the other archipelagos, or for the remaining molluscs, let alone other major invertebrate groups such as crustaceans or echinoderms. It is nevertheless sensible to estimate the number of endemic marine species in the hundreds, if not thousands.

In contrast to this known and perceived endemic richness, only two Macaronesian endemics are included in the Red List, the Island grouper and the Barred hogfish. Of the remaining 48 endangered species, 35 (including 5 species of whales) are either pelagic or deep sea dwellers, and therefore not prone to area-based conservation. The basis for the Macaronesian marine KBA exercise is therefore a reduced pool of only 13 species: the Monk seal, the Lobster and 11 commercial fish species.

The Monk seal is a success story<sup>4</sup>: from the large populations which existed throughout Macaronesia at the time of European colonization, it had to be rescued from the brink of (local) extinction in the 1980's by the creation of a strictly implemented Nature Reserve on its last holdout in the Desertas Islands, Madeira. The population has since rebounded from the minimum of 6-8 individuals to its present number of 20-30 adults, and monk seals can now be found routinely on the nearby Madeira Island. To acknowledge this situation, a corridor is being proposed to link the coast of Madeira Island with the Desertas KBA.

For the remaining species, however, the picture is less rosy. Although no reliable distribution data exists for the lobster, most of the fish species have been targeted by several research projects and included in voluntary surveys made by divers. There are thus scattered records of occurrence, although these are biased towards areas where studies have been conducted or diving resorts are located. On the other hand, several protection figures are in place in all three archipelagos, notably marine Important Bird Areas (IBAs) and Marine Protected Areas (MPAs).

Putting this information together, our approach was to consider as marine KBAs the IBAs and MPAs where the occurrence of at least one of the target species had been recorded. This was complemented with usually smaller areas where sound information of the occurrence of endangered species was also available.



**21. 30 years of conservation of the vegetation of the National Park Calderas de Taburiente.**

**30 years of conservation of the vegetation of the National Park Calderas de Taburiente.**

<sup>1</sup> Edgar, G. J., Langhammer, P. F., Allen, G., Brooks, T. M., Brodie, J., Crosse, W., ... & Mccosker, J. E. (2008). Key biodiversity areas as globally significant target sites for the conservation of marine biological diversity. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 18(6), 969-983.

<sup>2</sup> Brito, A., Falcón, J. M., & Herrera, R. (2007). Características zoogeográficas de la ictiofauna litoral de las Islas de Cabo Verde y comparación con los archipiélagos macaronésicos. *Rev. Acad. Canar. Cienc*, 18, 93-109.

<sup>3</sup> Cordeiro, R., Borges, J. P., Martins, A. M., & Ávila, S. P. Checklist of the littoral gastropods (Mollusca Gastropoda) from the Archipelago of the Azores (NE Atlantic). *Biodiversity Journal*, 6 (4): 855-900.

<sup>4</sup> Pires, R., Neves, H. C., & Karamanlidis, A. A. (2008). The critically endangered Mediterranean monk seal *Monachus monachus* in the archipelago of Madeira: Priorities for conservation. *Oryx*, 42(02), 278-285.

Shortly after the arrival of the Spaniards to the island of La Palma, in the fifteenth century, they became aware of the importance of preserving the vegetation of the Caldera de Taburiente, to guarantee some of the scarcest resources of the island, the water. Ordinances were issued that included strict protection of the forests inside the Caldera, prohibiting logging and the introduction of livestock.

Thanks to this early ecological awareness, born more than 400 years ago, the Caldera de Taburiente has come to our days with its natural resources almost intact, which in 1954 led to its declaration as a national park (4.690 ha). The most characteristic formation of the park are Canary pine forest (*Pinus canariensis*) and also supports a rich rocky cliff flora. But early efforts to protect them were insufficient to prevent the entry and proliferation of invasive herbivores (goat, rabbit, Barbary sheep).

In the Eighties, when the principles for the conservation of the park were established, the original vegetation is altered and some species were on the verge of extinction, including some endemics, as the Broom (*Genista benehoavensis*), the violet (*Viola palmensis*), *Bencomia exstipulata* and *Echium gentianoides*, the latter a priority species under the Habitats Directive. For that reason, since the decade of the 80s one of the objectives of the park, which is managed by the Government of the Canary Islands, has been to restore the original landscape.

The conservation plan of the summit habitats in Caldera de Taburiente has included, among others, the following actions:

- Protection of all specimens within the natural limits of their distribution
- Ensure the existence of a sufficient seed bank in the potential area of each species
- Progressive restoration of the most degraded areas using fenced plots
- Research and monitoring to improve conservation strategies
- Educational and awareness raising programs
- Control of exotic herbivores and illegal grazing

The results obtained include:

*Bencomia exstipulata*. At the beginning of the nineties on the island of La Palma only one location with a total of 20 specimens was known, of which 17 were adults. Thanks to the conservation programme at the end of 2016 there were 7,877 specimens of which 4,205 were adults.

*Echium gentianoides*. At the beginning of the eighties Arnaldo Santos quoted 4 locations with less than 50 specimen in total. At present there are 8,201 specimens, of which 4,104 are adults.

*Genista benehoavensis*. In the mid-eighties only 7 adult specimens were known. In 2016, 2,067 wild specimens were counted, which together with those introduced by the park add up to a total of 14,068.