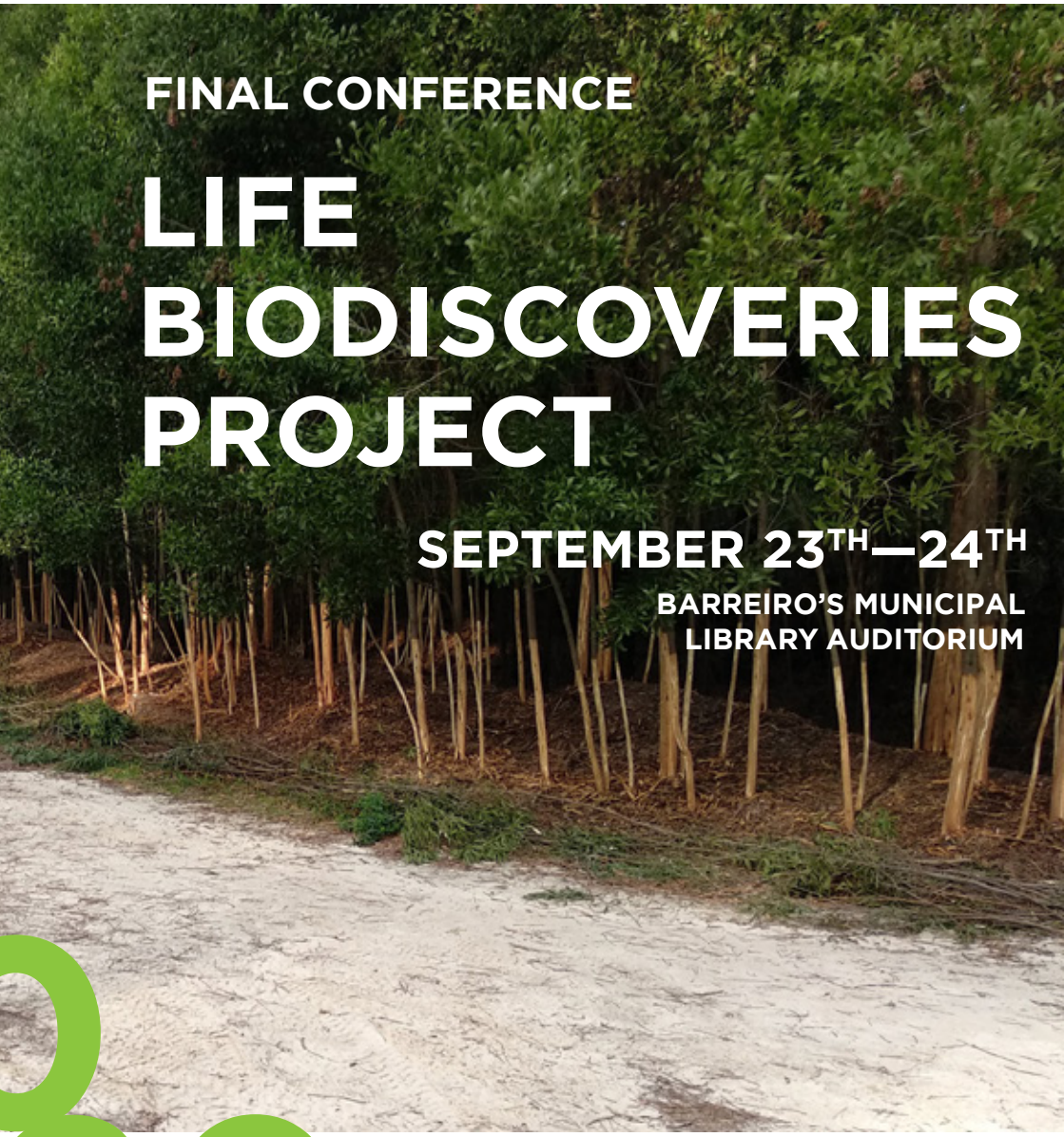


FINAL CONFERENCE

# LIFE BIODISCOVERIES PROJECT

## SEPTEMBER 23TH—24TH

BARREIRO'S MUNICIPAL LIBRARY AUDITORIUM

20

Biodiscoveries
Mata da Machada e Sapal do Rio Coina

Life


PROJET
BIODIS
20

# BRUNO VITORINO

## CITY COUNCILOR RESPONSIBLE FOR THE DIVISION OF ENVIRONMENTAL SUSTAINABILITY AND ENERGY EFFICIENCY BARREIRO CITY HALL

Responsible for the Environmental Sustainability and Energy Efficiency Division, the Councilman Bruno Vitorino has been responsible for the LIFE Biodiscoveries project since its implementation.

Over the years, efforts have been made to preserve the protected area of the Local Natural Reserve (RNL) of the Coina River Saltmarsh and the Machada Woods, with actions that promote understanding and respect for local biodiversity.

The LIFE Biodiscoveries Project made it possible to take the name of RNL further, to raise awareness of the population about the natural values of this space, and for the urgency and responsibility of each of us to support and care for what is considered the “green lung” of the Barreiro.

It is a joint and continuous effort that the Municipality will undoubtedly continue to develop, in the name of a more ecological and balanced future.

**CINDY LOUREIRO**
ACHLI—Associação de Conservação do Habitat do Lobo Ibérico

# INVASIVE PLANTS PILOT-PROJECT SILKY HAKEA *(HAKEA SERICEA)*

The silky hakea is a species of evergreen shrub, with robust and prickly needles, originally from southern Australia, which forms dense and impenetrable forests, preventing the growth of native vegetation and the use of spaces by wild fauna. In Portugal, it has the status of an invasive species, listed in Annex I of Decree No. 565/99.

The pilot project intends to control the compensatory measure "Management of Forest Spaces for Conservation" developed by ACHLI, within the scope of the Fundo do Lobo (Wolf Fund). The pilot project has the objective of controlling the presence of hakea in a parcel of 7.40 ha of the vacant land of Arga S. João, in Caminha.

This project, started in 2017 is based on the application of 4 different treatments to the hakea, in order to determine which ones are replicable, effective and with the best cost-benefit for the control of this species. The project is currently underway, namely in the analysis phase of the results obtained from the treatments carried out.

**ANA SOFIA PALMA E CLÁUDIA ALMEIDA**
ICNF - Instituto da Conservação da Natureza e das Florestas

# REMOVAL OF INVASIVE SPECIES WITHIN PROTECTED AREAS

In classified areas, the control of invasive species represents a huge challenge, related to the high capacity of re-invasion of these plants and the costs of intervention.

Since 2015, a volunteer project has been taking place in the Arrábida Natural Park, for the removal of the invasive species *Ipomea indica*, *Senecio angulatus* and *Carpobrotus edulis*.

The Sintra-Cascais Natural Park has been developing voluntary actions to control invasive species since 2003, and in 2009 started the first project involving the local population - "Biodiversity - Act to Preserve", an initiative of the Colares schools group. The involvement of civil society, companies and NGOs has been a constant since that time, always with the technical support of ICNF and the municipalities of Sintra and Cascais.

Volunteering actions to control invasive species allow to ensure the continuity of interventions in a medium and long term, and to raise awareness among citizens about this threat to biodiversity.

**PEDRO SERAFIM**
Altri Florestal

# ALTRI DIVERSITY, CONSERVATION AND PROMOTION STRATEGY OF BIODIVERSITY AND LANDSCAPE

Altri Florestal is responsible for the forest management of about 80,000 hectares in Portugal, of which about 10% of this area is classified with the function of preserving the natural values here existing.

This project emerges as an instrument that aims to reflect and review the company's attitude towards the protection and enhancement of the natural spaces present in the forest areas under its management. This strategy results from the experience acquired, in the relations established with other entities, and in the observations resulting from the forest certification processes. The medium and long-term direction established, fits the company's attitude and initiatives for the protection and enhancement of natural spaces present in forest areas, whether taken in isolation or in partnership and collaboration with third parties.

**JOÃO MELO**
Cascais Ambiente - Empresa Municipal de Ambiente de Cascais

# THE NATURE CONSERVATION AND THE ECOLOGICAL RESTORATION OF SINTRA'S MOUNTAIN IN CASCAIS

Considering its geographical location, Cascais has one third of the territory inserted in the Natural Park of Sintra-Cascais, RN2000.

However, the pressures on natural spaces are increasingand getting more diverse, as well as the challenges for their preservation. Thus, habitat management for protected areas with a peri-urban character, must incorporate new dynamics and take advantage of the community's motivation and sensitivity, whether to involve it in conservation actions or to raise awareness of the impact of certain activities, including the citizen as a driving force that contributes to the implementation of management measures in harmony with the general objectives.

In Cascais, projects were developed to establish a basis of reference in terms of knowledge of natural values and respective threats, as well as a platform for community involvement through volunteering, which fosters the population's connection with natural values.

**JAIME L. FRAILE JIMÉNEZ DE MUÑANA**
Proyecto LIFE+RIPISILVANATURA

# PROJECT LIFE+RIPISILVANATURA AND THE STRUGGLE AGAINST IAS IN RIVERINE ECOSYSTEMS

LIFE+RIPISILVANATURA targets Alien Invasive Species (IAS) that colonize riverine ecosystems.
The three main approaches:

1. Directly removing AIS, testing new techniques
   - •Giant Reed Elimination technique - native species plantation, and periodic reed trimming. 10 hectares of riverbanks restored, planting over 14.000 native specimens.
   - •Tree AIS removal – cut and replace with native species. 1,5ha are AIS free.
   - •Detection and removal of animal IAS - A training program for environmental agents was carried out to identify and remove exotic fish, crayfish and red-eared sliders
2. Developing tools to manage AIS prevention and control
   - •Creation of a mobile app “Exoticas Murcia”, by the Regional Authority, allowing citizens to report the presence of possible IAS to the authorities, providing photos and geolocalization.
   - •Development of planning documents and tools that will guide future management of AIS regarding its prevention and control, such as a management handbook.
3. Raising awareness of the problems posed by AIS. More than 400.000 people reached through:
   - •Information campaign targeting: pet stores, vet clinics and plant nurseries.
   - •Seminars aimed at Primary & secondary school alumni.
   - •Environmental education workshops at city halls.
   - •Website, twitter, facebook, magazine publications and features in national TV, radios and newspapers.
   - •Design and production of leaflets, posters, pens, t-shirts and information panels for dissemination.
   - •Volunteer works to support the project implementation.

**HENRIQUE PEREIRA DOS SANTOS**
LIFE Biodiscoveries

# INVASIVE SPECIES WITHIN BARREIRO'S LOCAL NATURAL RESERVE

For many decades, the management of the Machada Woods was the subject of some classic interventions and aligned with the knowledge of the time.

Within these, the transformation of the Zebro stream into a forest ditch, occupying its flood bed with trees that were believed to be able to help solve the problem of mosquitoes associated with a set of complicated diseases at the time, had a relevant side effect: the planting of an important area with acacias, along the stream.

Over time, and with some interventions that, from a certain point on, tried to control the problem, the ice plant and specially the acacias expanded, in an almost opposite physiographic situation: hills and the upper third of the slopes.

The LIFE Biodiscoveries project, recognizing not only the problem, but also the need for long-term invasive control interventions, was designed to test the role that technically supported volunteering could play in controlling the invasion, and this presentation will synthesize the results so far, after six years of project, as well as the prospects for post-project continuity.

**MIGUEL NOVOA**
PALOMBAR - Associação de Conservação da Natureza e do Património Rural

# VOLUNTEERS, COMMUNITIES AND HERITAGE: THE TRANSFORMING ACTION OF VOLUNTEERING

Volunteering as a driving force for individual, community, cultural and environmental transformation is a key element in a society that lacks community sense and values that support active citizenship. Enhancing the development of all the intervening parties, from the action of volunteering, solutions that face several problems simultaneously, emerge.

In Transmontano Northeast territory, where Palombar develops its mission of conserving nature and rural heritage, there are many components that can benefit from volunteering: isolation and desertification; the loss of natural, cultural and built heritage; the lack of social cohesion. Thus, through different typologies, Palombar incorporates volunteering in its structure and action plan, seeking to contribute to the construction of citizens and communities that are increasingly participative, active and cooperating for the development of the territory, in its human and ecological components.

**CARLA LOURENÇO**
Ciência Viva

# FROM THE SEA, UP THE RIVER

There are several threats to which terrestrial and aquatic ecosystems are exposed to. Thus, it is important to join efforts that promote a greater connection between human beings and nature, so that they actively participate in its conservation.

Through routes in nature, actions for cleaning rivers and streams, training for teachers and technicians of environmental education, sustainable gatherings on the riverside and several other actions, the RioAcima project promoted the valorization of freshwater ecosystems, involving local communities, companies , schools, scientific institutions, associations, Ciência Viva Centers and other entities.

During the project, about 2500 participants explored 51 rivers and streams, identified about 370 species of plants and animals and collected more than 2 tons of garbage. At the riverside social gatherings, the public had the opportunity to discuss with researchers and other specialists, topics such as water quality, ecosystem services and climate change.

**MARGARIDA SILVA**
Montis

# VOLUNTEERS FOR NATURE

Montis – Association for the conservation of nature, has its main goal in the management of marginal lands for the increasing of biodiversity, according to natural processes; for example, looking at a regenerating burnt oak that would naturally grow, we try to accelerate that growth by pruning the branches we choose.

We currently manage about 178 ha of land in the Centre – North of Portugal and are committed to bringing people to the ground and bringing management of properties closer to people.

We develop several activities of volunteering in which the tasks always vary, depending on the property management needs at that time of the volunteering. The works can range from planting, sowing, controlling invasive species, conducting the natural regeneration trough pruning, maintaining of paths, creating structures for sediment retention in water lines, registering and identifying of fauna and flora, etc.

**AZUCENA MARTIN**
SPEA - Sociedade Portuguesa para o Estudo das Aves

# VOLUNTEERS FOR NATURE CONSERVATION - THE LIFE VOLUNTEER ESCAPES EXPERIENCE IN TERRAS DO PRIOLO

SPEA, as a non-governmental environment organization, since its founding, it has counted on the precious help of volunteers to carry out many tasks, from field actions to bird censuses, which are still entirely carried out by volunteers today and provide valuable information on the state of avifauna in Portugal.

However, over time, SPEA has also developed a professional component in nature conservation, through the implementation of LIFE projects, among others. In the Azores, since the first project started in 2003, SPEA had interns through several programs to support these projects. The LIFE Volunteer Escapes Project represented, in the Azores, a first experience of working with volunteers in these most demanding conservation projects.

This communication analyzes the results of the first group of volunteers received and the advantages and disadvantages of this model for this type of projects.

**HÉLIA MARCHANTE**
Escola Superior Agrária do Instituto Politécnico
de Coimbra/ Centro de Ecologia Funcional

# INVASIVE PLANTS: A THREAT THAT CHALLENGES CITIZENS

Invasive species threaten biodiversity and cause negative impacts on ecosystems and considerable economic losses. Goal 15.8 of the SDGs focuses on preventing the introduction and reducing the impact of invasive species on ecosystems and controlling or eradicating priority species.

To this end, participatory citizens and awareness to the problem are crucial: citizens introduce and disseminate invasive species and, on the other hand, contribute to preventing and controlling them. However, most citizens are unaware of the problem! To counter this ignorance, we have bet on involving citizens in the prevention and control of invasive plants, through citizen science projects.

In 2013 we created a platform for citizens to map invasive plants in Portugal, including an APP, associated with the invasoras.pt portal and various awareness-raising activities. In 2018, we launched 3 new Challenges: citizens register the life cycle of invasive plants, detect new species or communicate about the problem. The results of the various approaches and the difficulties in maintaining them will be discussed.

**CALLUM SINCLAIR**
Scottish Invasive Species Initiative (SISI)

# SCOTTISH INVASIVE SPECIES INITIATIVE - WORKING WITH VOLUNTEERS ACROSS HUGE LANDSCAPES

The Scottish Invasive Species Initiative (SISI) is an exciting and ambitious partnership project, which is delivering an innovative community-based strategic approach to the management of Invasive Non-Native Species (INNS) in rivers and watercourses in northern Scotland. The project is working at a huge landscape scale - across at total area of total 29,500km$^2$.

The Initiative is:

- raising awareness about INNS and biosecurity,
- engaging local communities with their local freshwater environments,
- working with volunteers to deliver invasive plant and American mink control across an area encompassing over a third of Scotland, and
- benefiting Scotland's landscapes and biodiversity.

The 4-year project commenced in November 2017 and employs a team of 6 full-time and 2 seasonal staff. It is led by Scottish Natural Heritage, working with ten delivery partners (local fishery trusts) and one academic partner (University of Aberdeen).

The project is targeting American mink and a number of riparian invasive plant species.

**PAULO DOMINGUES**
Projeto Cabeço Santo

# CABEÇO SANTO: ECOLOGICAL RECOVERY AND LANDSCAPE IN THE HEART OF THE EUCALYPTUS FOREST

The Cabeço Santo Project was created in 2006, after a major fire. Its first purpose was to recover and protect scarce nuclei of native vegetation that were scattered throughout the immense eucalyptus forest, in a small town in the municipality of Águeda - Belazaima do Chão.

Thanks to a fruitful collaboration with the company Altri Florestal and the City Hall of Águeda, with whom a protocol was signed, the project also started to include areas previously cultivated, which have thus been restored to native vegetation. Over time, other areas were added, trying to create a continuous stain around the main waterline.

The main challenges of the project are the invasive species removal, especially of the Acacia genus, and their replacement by well adapted and resilient formations of native species. For this, the project has professional teams, but also volunteers, who are called to the field about 20 days a year.

More information at www.ecosanto.com.

**MARIANA DIAS**
Plantar uma Árvore

# TO PLANT A TREE: MOBILIZING SOCIETY FOR THE RECOVERY OF NATIVE FORESTS

With more than 10 years of experience managing and mobilizing civil society to volunteer for nature conservation, in particular, for the recovery of native forests in mainland Portugal and islands, the association's path has been long, full of learning, challenges and results.

Considering the national territory with scarce areas of native forest, resilient and in balance and a generalized ignorance of citizens about their main problems and ways of intervening, we share the actions that have been developed and, here also within the scope of the Life Biodiscoveries Project in the Machada National Forest.

**CÁTIA CORREIA E JOANA GONÇALVES**
LIFE Biodiscoveries

# THE CONTRIBUTION OF VOLUNTEERS TO THE MANAGEMENT OF INVASIVE SPECIES IN BARREIRO'S LOCAL NATURAL RESERVE

The Biodiscoveries Project - Invasive species control through public participation started in 2014, with the objective of controlling the invasive species existing in the Barreiro Local Natural Reserve. Within the scope of the project, this control would be done through the involvement of the population through volunteering actions, promoting the creation of bonds between people and the natural heritage of the Machada Woods and the Coina River Saltmarsh.

After six years, and after receiving about 5160 volunteers and involving more than 3000 people in awareness-raising activities, we can only thank them for their support in this difficult but also very important task, which is the control of invasive species. But how do you manage a project based on actions with volunteers? What did we have to change, over the course of six years, to maintain the community's interest and adherence to the actions developed? Revisit with us the history of the volunteers who were part of the LIFE Biodiscoveries Project.

**ESTER SERRÃO**
Biomares-InforBiomares

# BIOMARES-INFORBIOMARES ARRÁBIDA'S CLASSIFIED ÁREAS MARINE BIODIVERSITY MONITORING

The marine park Prof. Luiz Saldanha (PMPLS), created in 1998 and its management plan established in 2005, is a biodiversity hotspot with more than 1700 described species and includes several classified habitats. The Biomares project, currently InforBiomares, emerged in 2007 with the aim of monitoring the different components of biodiversity, restoring habitats, raising consciousness for local communities and contributing to the promotion of good practices, as well as the creation of tools for a more efficient management of this MPA. The results of this project have been extremely positive with an increase in knowledge and recovery of the different components of biodiversity and habitats, and a greater awareness among local communities, policy makers and public managers. The implementation of this project in the long term is fundamental for the conservation of Nature, ensuring the maintenance of natural values and the socio-economic development of the region.

**MARIA JOÃO GOMES NARCISO CARDOSO**
Câmara Municipal de Santarém

# REDESIGNING RIVERS AND STREAMS ON THE PUBLIC AGENDA

Giving water resources the essential value for guaranteeing human well-being and balance of natural ecosystems requires redesigning rivers and streams on the public agenda. Local governments must assume the decisive role that leads to a change in the civilizational paradigm, translating into a revaluation of the position of protection and conservation of riparian habitats, giving opportunity to future generations to experience rivers and streams in good ecological status.

The environmental project Rehabilitate Section by Section (Reabilitar Troço a Troço - RTT) is a training project for innovation in the management of the ecological status of rivers and streams, leading to a scheduling of the problem in the political agenda of water resources, committed to a dynamic of active participation of citizens in conservation of riverside habitats and the demonstration of good river restoration practices using natural engineering techniques.

The development of this project since 2010 has enabled the creation of a River Rehabilitation Route (Rota de Reabilitação de Rios - RRR) of an environmental nature with identification of the biodiversity of the 20 stretches of rivers and streams rehabilitated, with 3107 meters of water lines conserved in more than half of the parishes in the municipality of Santarém and with the involvement of more than 3,500 citizens who have acquired skills to make river rehabilitation happen on their property or to be an active voice in the demand for a good ecological status of rivers and streams, leading to a scheduling of the problem on the political agenda.

**ALEXIA FISH**
RAPID

# THE RAPID LIFE PROJECT

RAPID Life (Reducing and Preventing IAS Dispersal) is part of the EU's Life program and is a 3-year project (2017-2020) that aims to bring an innovative, holistic approach to the management of IAS in aquatic ecosystems (freshwater, riparian, and coastal) in England, whilst demonstrating the efficacy of this approach for replication across Europe. RAPID has engaged regional stakeholders in the production and implementation of five Regional IAS Management Plans (RIMPS) that aim to deliver consistent, regionally tailored prevention, early warning, rapid response, eradication and control of IAS throughout England. RAPID has also produced education and awareness-raising resources on IAS prevention and management for a variety of user groups, and has helped to update and promote the "Check, Clean, Dry" biosecurity campaign. The RAPID Life project is being led by Great Britain's Animal and Plant Health Agency (APHA).

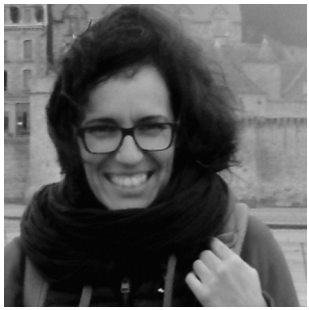
For more information, visit www.nonnativespecies.org/rapid

**MANUEL MALVA**
MilVoz - Associação da Proteção e Conservação da Natureza

# MILVOZ: THE BIRTH OF THE SENHORA DA ALEGRIA BIO-RESERVE

The 'MilVoz - Association for the Protection and Conservation of Nature ', created in May 2019, arises from the desire of a group of citizens to give voice and represent the natural heritage of the region of Coimbra, ensuring its preservation. The association aims to enhance, protect and expand areas of high ecological value, not only by creating a network of natural reserves in areas of rich biodiversity and portuguese native forest, as well as preserving the landscape and the countryside.

To this end, the Association proposes to acquire land for management and conservation purposes, to promote volunteering, socializing and learning initiatives involving the population, to promote environmental education with a didactic and scientific character and to carry out biodiversity study projects with benefits for nature conservation. The first space acquired, located in Almalaguês, gave rise to the Association's first reserve, the Bio-Reserve of Senhora da Alegria.



**ALICE NUNES E PATRICIA RODRÍGUEZ-GONZÁLEZ**
Rede Portuguesa de Restauro Ecológico

# CONNECTING ECOLOGICAL RESTORATION IN PORTUGAL: PROSPECTS FOR THE PORTUGUESE RESTORATION NETWORK

There are many public and private entities involved in the restoration of degraded ecosystems in Portugal, but information about the projects developed is neither centralized nor available. It is urgent to foster communication/knowledge exchange between professionals and entities working in this area, in line with the recent declaration of the Decade of Ecosystem Restoration (2021-2030), by the UN.

Thus, the Portuguese Ecological Restoration Network was officially launched in August 2019. It already has more than 250 members from all the country, mostly researchers, but also professionals from public administration, public and private companies, NGOs, and civil society. They represent various restoration sectors from the recovery of terrestrial ecosystems (e.g. post-fire, quarries, mines), to rivers and wetlands, coastal, marine and island ecosystems. The main functions, priorities, and the next steps of the Network were defined, aimed at promoting Ecological Restoration in Portugal.

**MAURO HILÁRIO**
LIFE Biodiscoveries

# RIBEIRA DE ZEBRO: A STREAM UNDER RESTORATION

Especially during the last century, natural ecosystems have been under pressure from human activities. The changes they are subjected to, lead to loss of biodiversity and changes in their roles within the food chain. In the LIFE Biodiscoveries Project, part of the effort developed has been allocated to the restoration of Ribeira do Zebro. By removing invasive species, planting native species and natural engineering actions, we try to help to correct mistakes made in the past. In recent years, there are already significant differences in the landscape of the stream. This presentation will prove that the work of volunteers, over time, serves to restore natural areas, making possible the recovery of habitats, calling back vital fauna and flora.


OVERIES
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# LIFE BIODISCOVERIES 2

Reserva Natural Local
Sapal do Rio Coina
Mata da Machada

Rede Portuguesa de Restauro Ecológico