MEDSEA
foundation
FIRST REPORT
2017 - 2022

Cover photo: Andrea Alvito

Together
to protect our sea

We want to accelerate a process of change that is already underway and make sure the ecological transition would be fast enough to reach the ultimate goal of stopping the loss of biodiversity, by maintaining our **Mediterranean sea** clean, healthy and productive.

Photo: Cristiana Lodigiani

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MEDSEA started with a dream, that of a group of researchers who a few years ago decided to commit themselves to the protection and sustainable management of the marine and coastal resources of Sardinia and the Mediterranean Sea. We had in mind something unique and on the ground, which looked at needs and results, which included all the necessary skills in teams. We wanted to create something right here and now, in Sardinia and uncompromisingly.

Looking back all these years, I sometimes can barely believe how far we have come. To see the team grow and feed on its collective intelligence every day, compete with international realities and partners, develop local activities that have become a model for the entire Mediterranean basin, trigger "Glocal" change processes, from local to global.

The coming decades present us with enormous challenges in an interconnected ecosystem for which we feel responsible. Ongoing climate change and the loss of biodiversity are two truly central issues for humanity and require all of our timing. Lucid, analytical, responsible. We have demonstrated over the years that the best solutions to adapt to these processes are based on nature. Coastal wetlands as natural solutions to cope with extreme and sometimes unforeseen events such as floods, store CO2 and retain the increasingly scarce freshwater water resources, or Posidonia oceanica meadows as “lungs of the sea” for the storage of blue carbon, protecting biodiversity and also coastal erosion. Protecting these ecosystems and enhancing them is the only tool we have to mitigate climate change and prevent emergencies. We will continue to do so by bringing together all the necessary resources, tools and skills, and accelerating the processes of change.

Alessio Satta

President at MEDSEA Foundation

The European Commission, in the Biodiversity Strategy to 2030, indicates that over half of the world's GDP derives from nature and that the protection of nature is essential to protect economies from climate change.

Protecting natural capital is essential in order not to lose the benefits provided by ecosystems, vice versa, the protection of ecosystem services is essential for economies, especially in sectors that depend on fishing and aquaculture, on breeding and agriculture and tourism, as in Sardinia.

The ecological transition itself is fundamental to guarantee the survival of the planet and human civilization.

For us at MEDSEA it was immediately clear that in order to better orient decisions and accelerate decision-making processes it was necessary to highlight nature's capital value, to be able to identify the services and, therefore, the benefits that individual ecosystems offer to communities. In recent years, we have begun to accompany Sardinian companies in the ecological transition to achieve excellence by investing in environmental quality, for the benefit of the product, consumers, the territory and the reference community. From this awareness and from the need to make sustainable development more real, our recent experience of the MEDSEA Blue Community was born, a community of companies committed to reducing their environmental impact and making environmental quality the key element of their brand. As MEDSEA we are happy to have given life to this path, capitalising on the resources and the work done in the Oristano area within the Maristanis Project and expanding it to reach all of Sardinia and beyond. The call for all companies that want to become sustainability pioneers in their sector is open, the future is in our hands. We are waiting for you!

Vania Statzu

Vice President at MEDSEA Foundation

MEDSEA Foundation

Photo: Andrea Alvito

2017-2022

Protected species with concrete conservation solutions	47
Hectares of restored habitats of the high ecological value	9840
Kg of plastics collected and removed	52000
Volunteers involved in field in the Clean-up events	950

WHO WE ARE

MEDSEA is a non-profit foundation that works to create an innovative ecological hub in Sardinia, as an expression of a creative, collective, but - above all - operational intelligence.

Our mission is to work for the conservation and enhancement of the marine and coastal ecosystems of the Mediterranean by implementing virtuous models of nature-based solutions that from the island can positively contaminate other realities in the Mediterranean.

We finance local projects and organisations to improve the conservation status of the environment, the sea and the coasts in Sardinia.

We design new solutions for adaptation to climate change and to invert the trend of the loss of biodiversity in the Mediterranean.

We attract funding to ensure the long-term conservation of the marine and coastal environment of Sardinia.

OUR PRIORITIES

When we imagine Sardinia and the Mediterranean Sea in 2050, we picture a series of interconnected coastal marine ecosystems that have benefited from each other's experiences. With a better state of conservation than today thanks to activities that will be the routine and not the exception, thriving with marine life and well distributed in its productions. An environment loved and protected by its communities, individuals and businesses, supported by institutions.

We imagine a healthy and productive ecosystem that helps to establish the right economic balance of the region and of the whole Mediterranean basin.

To achieve this, however, we need:

- integrated and flexible governance models
- sustainable and low impact productions and activities
- communities and businesses at the forefront

These three work lines are certainly our priorities. In recent years we have started working in increasingly vertical fields to bring practical solutions to companies in reducing impacts. Such as in the reuse of waste in mussel farming to obtain eco-design objects, as well as in the reduction of water waste with the adoption of monitoring systems with the aid of the drone.

Integrated and flexible governance models

Current environmental challenges and the complexity of systems that often paralyse urgent actions, increasingly require adaptive management of natural, marine and coastal resources. With bottom-up decision-making processes and flexible and multilevel governance models that can be constantly adapted in the face of uncertainties, results and events.

Sustainable and low impact productions and activities

Fishing, agriculture, boating and tourism are among the sectors that exert the greatest pressure on our coasts and on maintaining the good state of our ecosystems. We believe that there are effective ways to reduce the impact of these sectors on the environment while helping them to thrive. Our goal is to accompany them in their ecological transformation, especially by encouraging companies that want to lead change.

Communities and businesses at the forefront of the sea and the environment

Promoting "ocean literacy" or bringing marine science research to everyone's reach enables us to make people understand the interdependent and direct relationship between man and the ocean. The more we know about the sea, which covers over 70% of the earth's surface, the more we are able to behave correctly, and incentive policies aimed at keeping it in good health. Good education and information in schools, business clubs and communities with a common mission, and - last but not least - clean up and awareness events can bring people closer to the issues and improve the overall engagement and actions.

GLOBAL STRATEGY

- ✓ Ocean Literacy
- ✓ Blue Economy
- ✓ Inclusive participatory processes

KEY RESOURCES

- ✓ Knowledge
- ✓ Cohesion and involvement
- ✓ Economic resources

Financing partners

MEDSEA Foundation

Local organisations
and design experts

We protect the marine
and coastal ecosystems
of Sardinia and strengthen
the resilience of the Mediterranean

HOW WE WORK

We like to imagine ourselves as a collaborative platform where researchers, thinkers and leaders come together to raise awareness about the protection of our sea and collaborate on **projects to preserve biodiversity and tackle the climate crisis.**

MEDSEA is a space for research and application of concrete solutions to bring about a change for nature. We see Sardinia as the innovative ecological hub where we experiment and implement these models.

We collaborate with a vast **network of experts, local organisations and international foundations**, on projects that allow us to address the pressing challenges in the Mediterranean due to the effects of ongoing climate change.

We think that every contribution makes a difference, we strongly believe in the power of collective intelligence and local resources, but we work above all to bring projects into reality and give them "legs and head" to walk even beyond contingencies.

100% of each donation directly supports conservation initiatives to protect marine, coastal and rural ecosystems.

By strengthening the resilience of ecosystems and taking action to restore them, we can respond quickly to negative impacts and **provide solutions to climate and biodiversity crises.**

OUR TEAM

The MEDSEA foundation was born from the will of a group of researchers who have decided to commit themselves to the protection and sustainable management of the marine and coastal resources of Sardinia and the Mediterranean Sea. MEDSEA is also a space where professionals and experts from different disciplines meet together to collaborate on projects capable of halting the loss of natural resources and to develop alternative models and ecologically sustainable products.

ALESSIO SATTA I President
Alessio is a researcher in climate change, specialised in assessing the vulnerability of coastal areas and adaptation. He coordinates MedWet, the Ramsar Convention Initiative for the Mediterranean. For the past 20 years, he has been director general of the Conservatory agency of the coasts of Sardinia, has collaborated with various United Nations agencies, with the World Bank and with the main governments of the Mediterranean countries.

VANIA STATZU I Vice president
Vania Statzu is an environmental economist expert in environmental policies and sustainability, specialised in the economics of water and energy, in sustainability actions and in the study of social capital. She coordinates the main projects of the Foundation to support production activities to reduce the impacts and pressures on natural resources. She is an environmental promoter in events, seminars, academic articles, newspapers and magazines.

ANTONIO FERRO I Founder
Antonio has a degree in health engineering, he is a freelance journalist, director and owner of the Extra communication agency, he was a pioneer of environmental and social corporate communication in Italy, one of the founders of Legambiente. He founded, chaired and directed several organisations, including Gaia, Hill & Knowlton Gaia, Ecobilancio Italia, Assorel. At MEDSEA he deals with public relations and communication projects.

FRANCESCA FRAU I Founder
Francesca is a marine biologist, specialised in sciences and technologies of biological monitoring. She has been involved in monitoring and researching sensitive marine habitats and species, developing scientific protocols for monitoring marine litter and restoring threatened habitats. She collaborates with the MPA Capo Carbonara. At MEDSEA she is the scientific manager of activities at the sea and coordinator of the reforestation projects of Posidonia oceanica in the Mediterranean and of several European projects.

PIERA PALA I Founder
Piera is an environmental lawyer, specialised in integrated management models in coastal areas. She worked in Brussels for the European Committee of the Regions dealing with the environment, and energy. At MEDSEA, in addition to taking care of all the legal aspects of the foundation, she coordinates the main governance projects related to the implementation of the River Contracts.

MANUELA PUDDU I Founder
Manuela is a Construction Engineer with a focus on urban and coastal planning and sustainable tourism. She worked at the Polytechnic University of Catalunya and at the Regional Coastal Conservation Agency in Sardinia. At MEDSEA she coordinates various research projects on the impacts of climate change and projects for the enhancement of the natural and cultural heritage of wetlands.

MARIA PINA USAI I Founder
Maria Pina Usai is an architect, expert in Extraordinary Landscapes, she has worked between Genoa, Cagliari and London. She founded Linkinart - art I architecture for urban redevelopment, co-founded Paesaggi Connessi and collaborated with the Conservatory agency of the coasts of Sardinia. Since 2015 she has been the artistic director of Zones Portuaires / Genova.

Collaborators

FRANCESCA MUSCAS
Administrative manager

FEDERICA SATTA
Webmaster and graphic designer

GIULIA EREMITA
Communication expert

LUCA FOSCHI
Journalist, PhD in Political Science

FRANCESCA ETZI
Construction engineer

MARIA PALA
Expert in Environmental Sciences

MATTIA SOI
Project officer

GIORGIO MASSARO
Expert in Environmental Sciences

GIORGIA LOI
Project Manager

ANDREA ALVITO
Marine Biologist

Scientific Committee

HUSSEIN ABAZA
Architectural engineering expert

FRANÇOISE BRETON
Expert in governance, sustainable development

PIERRE ALAIN CROSET
Architectural engineering expert

DANIELA DUCATO
Sustainable design expert

ALESSANDRO GALLI
Expert in ecological indicators relating to water

YVES HENOCQUE
Expert in maritime policy and governance

SPYROS KOUVELIS
Expert in sustainable development

MARIA SNOUSSI
Coastal Geosciences Expert

MEDSEA Ambassadors

Corrado Sorrentino - Swimming champion
Sofia Bonicalza - Olympic athlete
Sara Segantin - Writer
Giancarlo Gusmaroli - Olympic windsurfer
Sara Maggetti - Environmental engineer

Projects

Photo: Andrea Alvito

COASTAL MANAGEMENT

Marine Protected Areas play a central role in the conservation of marine - coastal biodiversity. In 2016, the MedPan organisation identified 1,215 MPAs and other effective spatial conservation measures (Other Effective Area-based Measures, OECMs) in the Mediterranean Sea.
However, these ensure the protection of only about 5% of the total surface of the basin, partially cover hydro geographic systems, different but connected to each other, often lacking an integrated strategy between the multiple players in the area and a long-term vision.

Hence the need to experiment with new governance models that respond to the current need to accelerate adaptation to climate change with decentralised and integrated management of financing and management plans, thus strengthening the goal of protecting biodiversity.

Among these, the "Maristanis" pilot projects, in the Oristano area, which in 2021 led to the Contract for Oristanese coastal wetlands putting at the same table 11 municipalities falling in the 6 coastal wetlands of international importance RAMSAR, province, region, reclamation consortium and Sinis Marine Protected Area. Likewise Tune Up - Interreg MED project aims at a strategic and collaborative approach for the management of Marine Protected Areas (MPAs) and for the protection of biodiversity, through the experimentation and use of a governance involving various stakeholders.

Photo: Andrea Alvito

Photo: Livio Mura

MARISTANIS

Financing partner: Fondazione MAVA
Project duration: 2017-2022
Website: www.maristanis.org

Since 2017, MEDSEA has been working for the six Ramsar sites surrounding the gulf of Oristano and the communities living around them. Conservation and restoration of biodiversity, as well as the parallel attempt to establish a model for sustainable development, were slowly and carefully built through a constant presence in the area. Research centers, political institutions, artisans, entrepreneurs, fishermen and environmentalist organisations have been involved in a constellation of meetings and activities, in a round of analyses, doubts and solutions.

Funded by the **MAVA foundation**, Maristanis has developed projects of **circular economy** involving artisans, fishermen and tourist operators, accompanied important aquaculture enterprises in their path toward sustainability, collaborated with agricultural businesses to promote the adoption of drones and other vanguard technologies, fundamental for the saving of water in a region threatened by climate change. Constantly interacting with the population, from all levels of the school system to the political representatives, Maristanis has rebuilt the deep cultural bond that for centuries had seen the communities living organically with one of the most important wetlands of the Mediterranean. A real, solid bottom-up process that in 2021 resulted in a "**Coastal Contract**" capable of putting together 11 municipalities, the Oristano Province, the Reclamation Consortium, the Sardinia Regional Government and numerous representatives from civil and economic society in a new paradigm of integrated governance.

Cabras fishermen, Photo: Egidio trainito

Osprey, Photo: Iosto Doneddu

Visit to the Sal'e Porcus pond,
Photo: Jean Jalbert

Alessio Satta - President at MEDSEA Foundation

"Changing the cultural paradigm is a very long path, but I believe that with Maristanis MEDSEA has shaped a model which can become a source of inspiration for all those who will be willing to protect the wetlands throughout the Mediterranean."

TUNE UP

Project budget (total EU funds): 3.035.575,50 €
MEDSEA Budget : 360.670,00 €
Project duration: 11/2019 - 06/2022 (32 months)

The MEDSEA's participation to the TuneUp project stems from the awareness of having developed a know-how capable of involving communities in the conservation and sustainable development of environmental assets. TuneUp is co-financed by the European Transnational Cooperation Program, which involves 12 partners from 7 countries (Spain, France, Slovenia, Albania, Montenegro, Greece and Italy).

The project aims to improve the conservation status of biodiversity in the context of Mediterranean Marine Protected Areas, applying to the latter the integrated management principle that characterises the River and Coastal contracts, already studied and implemented by MEDSEA in the framework of the Maristanis project. The scenario has been the Marine Protected Area (MPA) of the Sinis Peninsula- Mal di Ventre Island, over 25 thousand hectares of surface extending around the Gulf of Oristano, which is framed by six Ramsar sites.

The "Marine Protected Area Contract" is the only tool that can **rebuild the balance between human activities and environmental integrity**. The future integrated management of such an extremely delicate stretch of water and its coastline was built together with the Sinis MPA and above all the Cabras Youth Council.

The MEDSEA experts organised and conducted "territorial laboratories". At the end of the process, the Consulta, the AMP and the Municipality of Cabras signed a "**Document of intent**", first fundamental step for the future establishment of the Marine Protected Area Contract.

Map of Tune Up partners

Mal di Ventre Island

Rosy seagull, Photo: Federico Pastore

Photo: Andrea Alvito

Piera Pala - Environmental Lawyer at MEDSEA Foundation

"The very strong need of the young people of the Council has emerged to urge effective and sustainable protection of the natural resources of the WAP. MEDSEA accompanied this path of awareness and comparison, formalizing the motivations and objectives of the Youth of the Council and of the Municipality of Cabras, as managing body of the WAP."

MEDARTSAL

Project budget: 3.299.001€
MEDSEA budget: 325.725 €
Project duration: 11/2019 - 10/2022 (36 months)

Saltworks host hundreds of plant and bird species, they are places of rare beauty, capable of finding a renewed balance between wealth and nature.

As with other traditional productions, the strips of land and sea where Mediterranean “white gold” is produced today suffer from industrialization, while the animal and plant species that inhabit them are threatened by coastal urbanisation.

For this reason, MEDSEA has decided to participate to the MedArtSal project, funded by the ENIC CBC MED program to promote the sustainable development of artisanal salt mines by providing concrete support on economic, environmental and governance issues. In four areas of the Mediterranean (Italy, Spain, Lebanon and Tunisia), the development of a **sustainable and replicable management model has been promoted, leading to the territorial enhancement of these fragile ecosystems**.

In four areas of the Mediterranean (Italy, Spain, Lebanon and Tunisia), the development of a sustainable and replicable management model has been supported, leading to the enhancement of delicate ecosystems. MEDSEA operated in the Italian context of Cervia and Trapani.

The engineering techniques were based on a **circular economy** approach and on ancient construction traditions. In addition to the restoration of the basic structures, the creation of a route that will be usable by tourists in the spring and summer seasons has been added.

Photo: MedArtSal

MedArtSal Conference

Flight of flamingos, Photo: Gianluca Furcas

Photo: MedArtSal

Manuela Puddu - Construction engineer at MEDSEA Foundation

“We are very satisfied with the projects developed in Cervia and Marsala. They are perfectly in line with the sustainability criteria that MedArtSal has developed after a long period of research and analysis..This is only a first step, of course, but a step in the rightdirection.”

ENSERES

Program: ENI CBC MED
Project duration: 2021-2023
Website: www.etc.uma.es/enseres/

Involving the communities in an integrated management of coastal marine areas is not only necessary for the preservation of environmental assets and the sustainable development of the economies. The new alliance between man and the environment is also needed to protect the communities.

The coastal areas of the Mediterranean basin are considered among the most exposed to climate change. They are subject to numerous phenomena, such as extreme meteorological events, scarcity of water resources, increased risk of fires and decreased capacity in carbon storage. The experience accumulated through various projects has made **MEDSEA** a subject capable of proposing itself as a strategic partner in developing models of good practices. Hence the participation in the ENSERES project (2021-2023), funded by the ENI CBC MED program.

ENSERES intends to promote innovative coastal zone planning and management models that will allow local communities to face and adapt to global changes. MEDSEA, in particular, has brought to ENSERES the knowledge necessary to lead local and regional stakeholders in merging into a unified management, as well as implementing transformative actions aimed at protecting, restoring and developing marine and coastal areas in a sustainable way. Under the coordination of the University of Malaga, MEDSEA is also contributing to the creation and implementation of the communication strategy. The City of Sfax in Tunisia and the Coastal Nature Reserve of Tire in Lebanon are the recipients of the relocation activities.

Photo: ENSERES

Photo: Enseres

Photo: ENSERES

Piera Pala - Environmental lawyer at MEDSEA Foundation

"The ENSERES project was an important moment of verification for the MEDSEA foundation. The model of sustainable integrated management of marine-coastal areas that we have developed in the Gulf of Oristano has interacted with the Tunisian and Lebanese partners, who are also committed to finding a solution to anthropogenic pressures and climate change."

MPA NEW GUINEA

Funding partner: Democratic Republic of São Tomé and Príncipe - Unité de Gestion du PAPAC
Project duration: 2015-2016

The project involved the realisation of a **feasibility study for the creation of two Marine Protected Areas**: one around the islet of Bombom on the island of Príncipe, the other around the rocks of Sete Pedras in the south of the island of São Tomé.

The goal was to **preserve the productivity of marine ecosystems and ecological processes** through sustainable management of activities related to fishing and tourism.

The bibliographic analysis and the inspections made it possible to define the general and specific objectives for each pilot area, the dimensions and regulations for each protection and management area (permitted and restricted uses, mitigation measures for uses, etc.)

The study also describes how the management of marine resources and the maintenance of biodiversity levels must be achieved through the **involvement of local populations, an adequate level of control and monitoring and the application of a management system** that allows the actions to be carried out. and the most appropriate interventions.

Sao Tomé Island

Sao Tomé Island

Principe island

Alessio Satta - President at MEDSEA Foundation

"Working for the creation of two Marine Protected Areas around the islands of São Tomé and Príncipe in the Atlantic Ocean with the involvement of local populations has been a great training for us. Preserve productivity, and biodiversity levels of marine ecosystems through management sustainability have become an integral part of our modus operandi."

CONSERVATION OF BIODIVERSITY

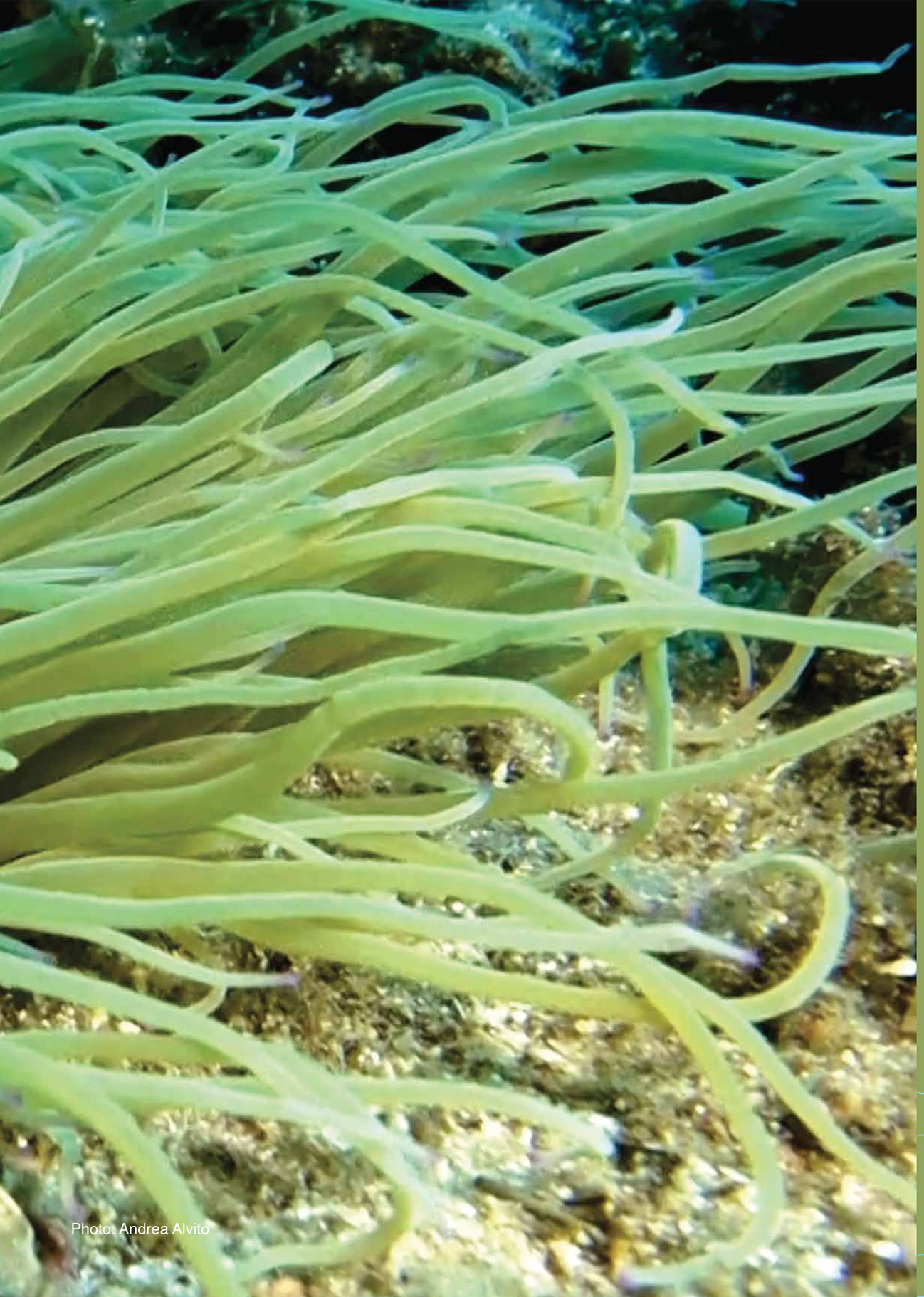


Photo: Andrea Alvito

Marine biodiversity is threatened in the seas of Europe due to multiple pressures that affect species and habitats, leading to cumulative impacts on seas that reduce their own overall resilience.The Italian red lists indicates that **43% of the 202 policy species of our flora** - among the species protected by the Berne Convention and the Habitats Directive 92/43 / EC), are threatened and at risk of extinction.

According to the World Red Lists, in Italy **over 240 species are at high risk of disappearing forever**. In recent years we have focused mainly on interventions at sea, to improve the state of the marine meadows of Posidonia oceanica, degraded by human activities such as fishing, illegal trawling or wrong and wild anchorages, through constant reforestation activities for the ecological enhancement of ecosystems.

Thanks to the **MedSeaGrass** project we intervened off the Sinis Peninsula for the reforestation of **350 m2 of Posidonia oceanica** meadows and we coordinated the construction of a Bluemooring.org platform for the smart management of moorings. Protecting the seagrass, in addition to the multiple and beneficial functions of thermoregulation and oxygenation of the waters means providing shelter for hundreds of different species of fish and protecting its own biodiversity.

MEDSEAGRASS

Funding partner: MAVA Foundation
Project duration: 2020-2022
Website: www.togetherforthemed.org

The MEDSEAGRASS project, funded by the MAVA Foundation, is a laboratory focused on the **restoration of Posidonia oceanica meadows and the creation of tools for its protection**. MEDSEAGRASS can be considered a spin-off of the conservation actions carried out within the Maristanis project and, for this reason, is developed within the Marine Protected Area Sinis Peninsula-Mal di Ventre Island, at once scenario and partner of the project.

The first phase of the project has been characterised by a **mapping of the seabed**, essential for identifying the degraded areas of the Posidonia. Subsequently, several dives have been necessary to verify which was the most suitable technique for the planting. Several thousand Posidonia oceanica cuttings have been re-planted on **300 square meters** of the seabed, fixed to the substrate by staples that will be removed when the cuttings have taken root in the substrate. The chosen technique is eco-friendly: the artificial material will be completely removed.

The conservative intervention was followed by a subsequent governance activity which aims, through the use of an app, to nullify the impact of the moorings in the area. From January 2022 it is possible for boaters to know the availability of mooring buoys in real time, and to book them. Part of the gathered income will be used in conservation activities. For the staff of the Sinis MPA, partner in the MEDSEAGRASS project, the platform will also be a very useful tool for mapping all the activities taking place in the vast marine quadrant.

Preparation of cutting - Photo: Andrea Alvito

Grafting- Photo: Andrea Alvito

Photo: Andrea Alvito

Francesca Frau - Marine biologist at MEDSEA Foundation

"Posidonia is the most important habitat of the marine context. It can be compared to forests. It produces oxygen and absorbs carbon dioxide, hosts multitudes of species, stabilises the seabed and dampens the wave motion, reducing the erosive processes of the coast."

Photo: Andrea Alvito

REST-COAST

Program: HORIZON 2020
Project duration: 2021-2023
Sito Web: https://www.rest-coast.eu

Addressing the marine-coastal and river systems as different parts of an organic whole, to preserve integrity and improve ecosystem services, first of all the ability to mitigate the effects of climate change.

Thanks to the important experiences made in the past, MEDSEA Foundation is one of the partners of **REST-COAST, the Horizon 2020 project** of the European Union which brings together the energies and skills of 38 partners, coordinated by the Polytechnic University of Catalonia. The project goes beyond the philosophy of isolated interventions on single critical issues, and operates with a complex vision of the areas threatened by rising temperatures and sea levels.

An approach to integrated conservation and management that involves stakeholders and local communities, together committed in finding a long-term solution with the language and practices of scientific research. Nine sites have been chosen by the project in the marine areas that touch Europe, the Mediterranean, the Atlantic, the Black Sea and the Baltic Sea. **The newfound connectivity between river systems and coastal areas** consisting of dunes, wetlands and Posidonia meadows will improve the quality of ecosystem services that these environments can guarantee in terms of biodiversity, richness of fish stocks dedicated to fishing and the ability to mitigate extreme weather events such as floods and storms, often causing devastating effects on communities and the economy, especially the agriculture and fishing sectors.

Project REST-COAST

Project REST-COAST

Photo: Iosto Doneddu

Francesca Frau - Marine biologist at MEDSEA Foundation

"REST-COAST is based on the philosophy of solutions based on sustainable use of nature to address the social, economic and environmental challenges brought about by the climate crisis. Our role within the project is to provide knowledge and practices that we have accumulated over the years, in particular with the Maristanis, TuneUP and MedSeaGrass projects."

SATURN

Funding program: FEAMP 2014-2020
Project budget: € 296.465,90
Project duration: 2020 - 2022

SATURN "Anti-trawling structures for the protection e the Natural Restoration in the Marine Protected Area Sinis Peninsula - Mal di Ventre Island ”was designed to provide an answer to fishing activities and illegal trawling inside the compartment of Oristano and the Marine Area Protected of the Sinis. Activities detected thanks to a specific investigation conducted as part of the project MARISTANIS where it highlighted the widespread perception about the presence of this type of activity. All this despite the precise provisions of ban within the Marine Protected Area and the effort made by the authorities in charge of surveillance and control at sea.

The intervention has the specific objective of **activating actions to protect and restore the natural conditions of the threatened habitats from illegal trawling**, such as the Posidonia oceanica meadows and the coralligenous.

The installation of sea-friendly bollards on the sandy seabeds and close to the endangered area, always within the three-miles limit from the coastline; raising the awareness of the population on the subject of illegal fishing, one of the main causes of the stocks’ degradation and damage to ecosystems; promoting the sustainable development of the area, through the enhancement and protection of small and artisan fishing, an instrument of economic support and maintenance of local traditions and culture.

The project is in collaboration with the FLAG Pescando with the support of the Municipality of Cabras, the Marine Protected Area "Peninsula del Sinis - Isola di Mal di Ventre ".

Photo: Cristiano Atzori

Photo: Roberta Uras

Photo: Roberta Uras

Photo: Cristiano Atzori

Francesca Frau - Marine biologist at MEDSEA Foundation

“Fishermen are an integral part of the SATURN project in every phase of implementation. Respecting the habitats to preserve the production levels, honouring the community rules, respecting commitments and responsibilities towards the territory, are now increasingly essential aspects that determine the quality of the catch and the ethics of their work.”

ACTION FOR THE CLIMATE

The warning from the latest report from the IPCC, Intergovernmental Group on Climate Change, is now very clear. Since 1850 the global average temperature has increased by about 1C and since 1901 the sea level rose by about 0.2 m. Each of the past four decades has been warmer than the previous one. **Over the next twenty years it is reasonable to expect the 1.5C ° to be exceeded**, compared to pre-industrial temperatures, the maximum limit indicated by the Paris Agreement of 2015. Limit that already allows us to theorise irreversible effects on ecosystems, urban centers, infrastructure, food safety. **Hence the need to rethink the present in terms of adaptation to climate change, enhancing the planet's natural defences and promoting the resilience of ecosystems**. "Nature based solutions" promote the use of natural ecosystems through conservation or restoration, necessary actions to address the global social challenges such as climate change, reducing the risk of natural disasters (floods, fires, avalanches, etc.), food and water security, energy supplies and urban sprawl.

MEDSEA, among the various studies on climate change, created a map of the coastal vulnerability of the Mediterranean showing the susceptibility of coastal areas to extreme climatic impacts and their ability to recover, survive and adapt according to of the geomorphological, ecological and socio-economic characteristics.

TRANSFORMAR

Program: Horizon 2020
Project Duration: 2021-2025

In just 80 years, many coastal areas of the Mediterranean **could be submerged** due to the combined action of the phenomena triggered by climate change, triggering critical situations in the agricultural and food, infrastructural and ecosystem systems and serious risks to the well-being of societies.

An effective collective response depends on particular interventions. The TransformAr project (Horizon 2020) intends to implement a model of adaptation to climate change together with local communities, basing it on the combination of several tools: innovative technologies and financing, integrated land management, the construction of a new relationship between community and environment, the application of solutions based on the sustainable use of nature to address the social, economic and environmental challenges brought about by the climate crisis.

The MEDSEA Foundation, one of the 21 partners coordinated by the University of Antwerp, will work on the compendium of Marceddì-San Giovanni-Corru S'Ittiri, which for years has suffered from the occurrence of extreme climatic phenomena. The adaptation project is built on 3 main actions. An "intelligent" mechanism of openings to the sea will be created, capable of **facilitating the flow during alluvial phenomena**. Extreme atmospheric phenomena will be identified beforehand and in their local declination through a small and efficient weather station. To make the intervention more durable, the reforestation of the banks in strategically important points will be carried out.

Photo: Federico Deidda

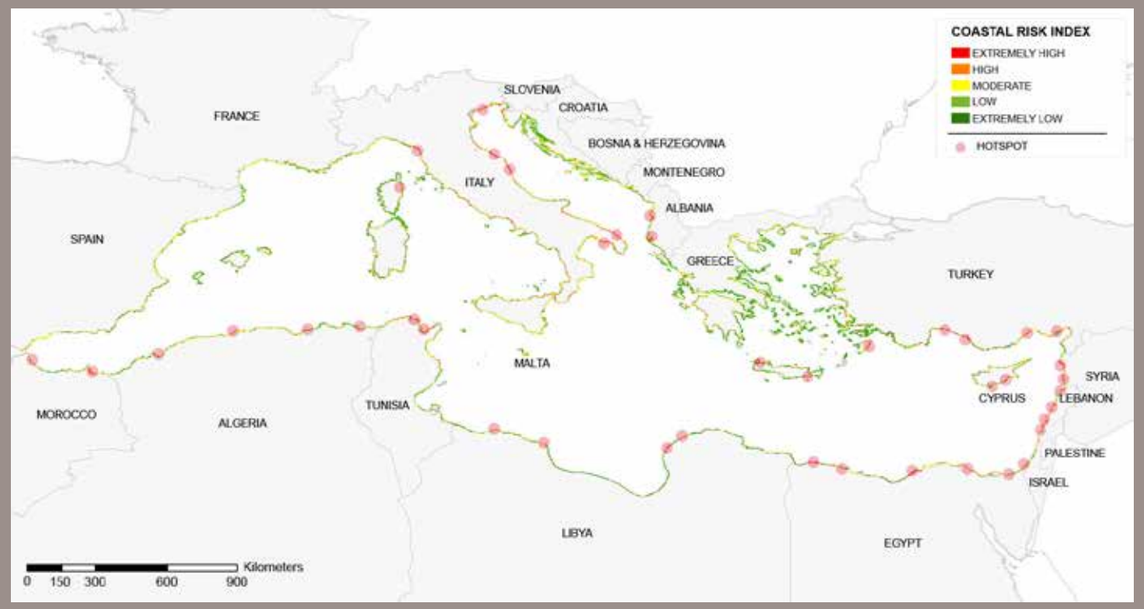
Project TransformAr

Project TransformAr

Manuela Puddu - Construction engineer at MEDSEA Foundation

"The ecosystem of San Giovanni is cyclically affected by floods and droughts. One of the most serious consequences consists in the fragility of the fish species that the they live. The technology brought by TransformAR will allow anglers and institutions to constantly monitor the increase in water levels, and to adapt the economic life around it."

Photo: Livio Mura



"Climate change represents the emergency framework within which they develop all the other projects. For MEDSEA it immediately seemed necessary to build specific knowledge, based on different methods and paradigms. Giving substance to the actions of conservation and development means having a broad and articulated knowledge of environmental specificities and social aspects of the places where we are called to operate."

MEDSEA Foundation

STUDIES ON CLIMATE RISKS

The implementation of projects in the territories in which MEDSEA operates has always been preceded by rigorous scientific studies. One of the issues on which the attention of our researchers has focused is the **analysis of the risks that the Mediterranean is facing due to climate change**. Risk analysis is fundamental in climate adaptation planning, and it cannot certainly limit itself to a perspective that takes into consideration disjoint factors. For this reason, the MEDSEA group has developed a coastal risk index within the **ClimVar**, a Coastal and multilevel risk index, operating on a Mediterranean scale (CRI-MED), coordinated by the Plan Bleu.

The study showed that risk hotspots are always areas of extreme vulnerability, but It is not a one-to-one relationship. In fact, not all such areas can be considered hotspots, due to the interaction with the effects of climate forcing and exposure. MEDSEA researchers were involved in another project promoted by Plan Bleu, that one which focused on the transformation of the RAMOGE area, framing the maritime areas of Provence-Alpes-Côte d'Azur, Principality of Monaco, Liguria, in an innovative model for the management of the impacts of climate change. In particular, the MEDSEA research group of has been involved in developing a "**RAMOGE index**", which made it possible to evaluate, in terms of exposure and vulnerability, the impacts produced by climate change. The innovative aspect of this index is to relate the impacts of climate change with the reduction of the economic value of natural ecosystems. The "alert zone" in which the index is applied includes the following coastal ecosystems and marine: beaches, coastal wetlands, coastal forests, Posidonia oceanica meadows and the coralligenous. Previously, MEDSEA had already carried out similar analyses on the French coast.

In 2015 and 2016, the Foundation applied a risk index on a local scale (CRI-LS) in the **Var Department**. The territorial maps obtained from the implementation of the index allow to geographically identify the stretches of the Var coast most at risk due to climate change.

Finally, in 2021, the accumulated experience had a way of finding further application in the climate risk assessments existing in the region of Tanger-Tetouan-Al Hoceima in Morocco. The study is not limited to the usual risk analysis and impact on the coastal ecosystem, but declines the latter on the specifics of types, considering current and future scenarios. Not just conservation and adaptation to climate change, therefore, but planning a sustainable economic development, starting from the most fragile categories.

On the topics of climate change, ecosystem services assessment and governance tools, the MEDSEA researchers also took part to several activities with scholars from different university departments and research centers at European level

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CIRCULAR ECONOMY

The circular economy is the only possible way to solve problems such as marine pollution at the root: with the efficient use of resources both in the production and consumption phases, we can reduce the amount of raw materials that become waste. With the BLUEfasma project we have brought the culture of the circular economy to the fishing and aquaculture sectors to promote the growth of the blue economy in the insular and coastal areas of the Mediterranean.

In the GRRinPORT project, which promotes a sustainable and circular management model of port waste and effluents in three pilot ports in the Mediterranean, we have made available our experience in the management of communication processes and communication channels, in the organisation of events, in the creation and dissemination of an app, a guide for boaters for the correct management of waste and waste water.

GRRINPORT

Financing program: Italy-France Maritime PO
Project duration: 2018-2021
Project budget: 1.276.054,12€
MEDSEA budget: 137.300,00€

Maritime traffic and port activity are two important sources of pollution for the Mediterranean. The GRRinPort project, funded by the Interreg Marittimo Italy-France fund, has developed a **waste management model** based on the principles of the circular economy that is at disposal for all managing bodies and users of Mediterranean ports.

From the optimization in the collection of wastewater to the remediation of sediments generated by hydrocarbons, from the accurate analysis of the water to the socio- economic investigations capable of identifying **new strategies in the disposal of waste by fishermen**, boaters and passengers: the activities carried out in the ports of **Cagliari, Bastia and Livorno** have built an interdisciplinary and cross-border approach, capable of analysing the specific criticalities of the sites and imagining the infrastructures and sustainable practices of the future.

Within the GRRinPort project MEDSEA has brought its experience in the management of communication processes, implementing the contents of the plan dissemination, dealing with the management of social network and the website, as well as the drafting of press releases, the organisation of the project events and the creation of the App project, a guide for boaters who dock in the ports through which they can correctly manage waste and waste water.

Project GRRinPORT

Project GRRinPORT

Project GRRinPORT

Vania Statzu - Environmental economist at MEDSEA Foundation

"Communication is paramount in facilitating the transition to sustainable management models. I believe that the good practices brought by GRRinPort represent an excellent model for the sustainable management of port throughout the Mediterranean."

BLUEFASMA

Program: Interreg Mediterraneo
Project Budget: 2.800.000€
MEDSEA Budget: 47.000€
Duration: 32 months
Website: https://bluefasma.interreg-med.eu/

Weaving a network with the threads of ideas, creating a synergy that makes **the fishing and aquaculture** sectors increasingly characterised by the principles of the circular economy.

Changing our relationship with the environmental heritage of marine-coastal areas also means improving the interaction that has always linked nature and economic activities. The Interreg MED BLUEfasma project has given to operators in the sector a leading role: private and institutional subjects gathered around the assemblies organized within the "**BLUEfasma Living Labs**", where the new circular economy models and the good practices already in place were discussed and shared.

14 partners of different nationalities operated throughout the Mediterranean basin, threatened by the continuous deterioration of fish stocks and natural resources, polluted by unsustainable quantities of waste. The MEDSEA Foundation participated in Sardinia as an external expert of the International Marine Center (IMC) of Torregrande (Cabras, Oristano). The MEDSEA's role consisted in the selection of the participants, in the planning and implementation of the workshops. The foundation has also prepared the White Paper, an attempt to respond to the many obstacles that the circular economy encounters in the fishing and aquaculture sectors at European level. MEDSEA oversaw the organisation of the national capitalization event and gave its support in the drafting of the Policy Recommendations at regional level.

Project BlueFasma

Photo: Livio Mura

Photo: Iosto Doneddu

Vania Statzu - Environmental economist at MEDSEA Foundation

"It was very important to bring together the sector's representatives and facilitate the birth of a synergy. Too often we think that the economy and the environment are structurally in conflict. BLUEfasma demonstrates how it is possible to trigger the transition to a circular economy. Listening, dialogue and collaboration are the basis of any lasting change."

Campaigns

Photo: Andrea Alvito

A SEA FOREST

Partners: AMP Capo Carbonara, AMP Sinis Mal di Ventre, MAVA, Blueseeds, Prada Group, Luna Rossa, Sotheby's, Extreme-e

Mission: To restore degraded marine ecosystems on large scale and ensure the recovery of Posidonia oceanica meadows by planting cuttings of the same plant.

Goal: Recovery of at least 1 million seedlings of Posidonia oceanica in the Mediterranean Sea by 2050

Sustainable Development Goals:

The Campaign
Posidonia oceanica meadows recorded a general tendency to regress in the entire Mediterranean Sea. Between 13% and 38% of the seagrass area has been lost since 1960.

Posidonia oceanica is a key element for the conservation of Mediterranean ecosystems providing crucial services such as regulating ocean acidity, fixing and sequestration of the carbon (up to 426.6 grams per m2 / year), stabilisation of the seabed and the damping of wave energy against coastal erosion. Its grasslands are a refuge for numerous marine organisms. The Planting activity of the MEDSEA team aims to r**estore the areas damaged Posidonia oceanica meadows, suffering from large-scale regressions**, often caused by man-made activities, such as free anchoring and illegal trawling.

The planting technique chosen by MEDSEA involves the use of Posidonia oceanica plants. These are anchored to the natural substrate with the use of small pegs which will then be removed after the formation of new roots. The plants are harvested in the areas adjacent to the areas of intervention by choosing only those naturally eradicated.

Do you want to join this campaign?
francescafrau@medseafoudation.org

Francesca Frau - Marine biologist at MEDSEA Foundation

"Taking action on damaged Posidonia meadows before there is an emergency is certainly the best way to avoid catastrophic effects on the marine ecosystem. The state of the prairies must be always maintained in perfect state. They are fundamental in contrasting the challenges of climate change".

Photo: Andrea Alvito

HOPE FOR SENNARIOLO

Partners: Comune di Sennariolo, Extreme-e, ENEL-X

Mission: Redevelop the ecosystem of olive groves in Sennariolo to recover the lost forest and protect biodiversity

Goal: Restoration of at least 2 hectares of olive groves through reversal of soil degradation, renewal of the existing biocoenosis and replanting of olive trees.

Sustainable Development Goals:

The Campaign
In Sardinia, on July 24, 2021, large and persistent wildfires crossed the territory of Montiferru and Planargia for 60 hours at very high temperatures. Eleven municipalities were affected in varying degrees, intensity and altitudes.The very intense fire reached the olive groves, among the oldest in the region, destroying local production and three quarters of the territory. Among the most stricken areas, the little one municipality of Sennariolo.

Climate change, characterised by a substantial increase in temperatures and drought conditions are playing, along with human activities, an increasing role in determining the regimes of fires. Future climate variability will further aggravate specific components of the risk of fires in many areas of Europe, with consequent impacts on people, goods and ecosystems exposed in the most vulnerable areas.
With Hope for Sennariolo we are working to restore the ecosystem of olive groves with direct interventions both on the vegetation and on the soil, in order to improve the overall resilience of the area to potential climatic events such as fires, floods and waves of heat.

Do you want to join this campaign?
alessiosatta@medseafoudation.org

Alessio Satta - President at MEDSEA Foundation

"Redeveloping the ecosystem of olive groves destroyed by the devastating fire of Montiferru in the summer of 2021, we recover the ancient wood, to protect the biodiversity and the territory from extreme events".

PLASTIC FREE MED

Partners: Parley for the Oceans, HALEVAI

Mission: Reduce plastic pollution in the Mediterranean Sea

Goal: Remove an average of 10,000 kg of sea plastic per year

Sustainable Development Goals:

The Campaign

The Mediterranean Sea, with its coastline of 2.6 million sq km, is home to about 7% of the world population It is also at the crossroads of 30% of global maritime traffic (UNEP / MAP, 2011; Eurostat, 2017). Every day a lot of waste such as plastic, glass, wood, rubber, is released on beaches and on the seabed of this sea of ours.

Plastic represents 95% of waste:

Europe pours into the sea every year between **150 and 500 thousand tons of macro plastics to which between 70 and 130 tons of microplastics produced by crushing must be added**. A serious threat to hundreds of marine species and to human health.

Faced with this environmental emergency, the MEDSEA Foundation activated the campaign #PlasticFreeMed, which includes a series of initiatives to clean the seabed and beaches from waste due to anthropogenic source, as well as raising awareness of the population on this environmental problem in various locations in the Mediterranean.

Among the most important MEDSEA initiatives on the subject:

Puliamo la Sella!, the great collective event organised by MEDSEA since 2018, to clean up the beaches and the sea around La Sella del Diavolo, the promontory symbol of the city of Cagliari. The event involves an average of 3-400 volunteers including divers, freedivers, sportsmen in kayak and SUP as well as children and teenagers of all ages.

Plastic Hunt is a planetary challenge launched by the athlete and marine biologist Sofia Bonicalza in 2020. Plastic Hunt is a real hunt for plastic, a challenge to those who collect the most waste abandoned on the beaches.

Do you want to join this campaign?

pierapala@medseafoudation.org

Piera Pala - Environmental lawyer at MEDSEA Foundation

"The activities of the foundation to raise awareness on plastic and sea pollution are constant and continuous in Sardinia as well as in the whole Mediterranean. Among our objectives, the collection of 10 tons of plastics per year, both from the sea as well as from the coast."

BUILDING A SHELTER FOR MIGRATORY BIRDS IN THE ISLAND OF SAN PIETRO

Partners: Municipality of Carloforte, LIPU, Patagonia

Sustainable Development Goals:

Mission: Enhancing the protection of migratory birds which are wintering and nesting in Carloforte.

Goal: Creating sighting spots, within the pedestrian tour of the saltworks, for birdwatching activities aimed raising awareness on migratory species and contribute to their conservation.

The Campaign

In the past, many migratory waterbirds experienced mass destruction. Coastal urbanisation, risks seriously to endanger the extraordinary biodiversity of this area of Sardinia, which hosts 86 different species of birds, some of which they nest as the Avocetta and the Rosy Gull.

MEDSEA has started a collaboration with the municipality of Carloforte in the island of San Pietro and LIPU (Italian League for the Protection of Birds) to **preserve the natural site «Ex Saline di Stato di Carloforte» with the objective of conserving the precious natural habitat and its species**.

By restoring the banks inside the saltworks, we can create **nesting islands that will protect the species from the presence of numerous and persistent disturbances and threats** (rats, dogs, etc.). At the same time, building birdwatching sites inside the pedestrian tour of the salinas, we can raise awareness on migratory species. All of this will contribute to the protection of migratory birds that overwinter and nest in Carloforte, protecting its biodiversity.

Do you want to join this campaign?

alessiosatta@medseafoudation.org

Alessio Satta - President at MEDSEA Foundation

"Specific protection laws, combined with effective governance, have led to a notable recovery of breeding populations in some countries of the EU. Some species have also benefited from the creation of artificial wetlands, such as rice fields, salt pans and gravel pits, which can constitute habitats complementary to natural wetlands."

CONSERVATION OF THE DUNE SYSTEM IN THE TERRITORY OF TEULADA

Photo: Fabrizio Crisafio

Mission: Increasing the resilience of the Porto Pino coastline through the protection of the dunes ecosystem.

Goal: Protection of 2.5 km of sandy beach and dune habitat, against storm surges and coastal erosion.

Sustainable Development Goals:

The Campaign

The dunes of the “Is Arenas Biancas” beach in the territory of Teulada are included in the Site of Community Importance (SCI) called “Promontorio, dune e zona umida di Porto Pino”. The environmental system is characterised by an extensive sandy shoreline with dunes reaching a height of 30 metres and framed by the Mediterranean scrub in the back. An important wetlands system characterises the landscape, making it a perfect spot for the feeding and nesting of numerous migratory birds.

MEDSEA, in close collaboration with the Municipality of Teulada, has defined a solution based on **the installation of sand fencing along the newly constituted dunes**. This will prevent trampling across the area and will avoid **the creation of vulnerable canals, as well as protecting the vegetation**. In a few cases, an intervention with innovative techniques will be necessary to restore degraded areas with sand traps and jute nets.
Such activities include actions to redirect the flow of users towards paths predefined through information and educational panels.

Do you want to join this campaign?
info@medseafoudation.org

Francesca Etzi - Engineer and restoration expert

“The coastal dunes, habitats protected by the Natura 2000 Directive, are a system in motion that protects the territory from coastal storms and prevents coastal erosion. The coastal dune ecosystem is fragile due to human action. With this project we want to protect one of the most important dune systems and among the most fragile dune systems in Sardinia”

BLUE COMMUNITY

In 2021, MEDSEA responded to the call of many companies asking to be accompanied and supported in the path towards ecological transition and sustainable innovation. We decide to name this new synergy the "Blue Community". A network of companies, each a leader in its sector, committed to protecting the sea and the environment in Sardinia with the specific goal of experimenting with circular economy models. This implied the reduction of environmental impacts, energy and water efficiency, and the recovery of waste production.

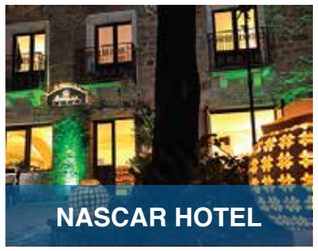
The companies belonging to the MEDSEA Blue Community achieved a better degree of efficiency and quality in productions and services, and to improved the general knowledge of good practices for their target market.

The MEDSEA Blue Community is a place where individuals and entrepreneurs share a vision that works for a solid circular economy, responsible and respectful of nature. The Blue Community is a laboratory of inspiration that puts into practice eco-innovative solutions to environmental challenges and models of sustainable and equitable consumption and production.

"Blue Waves", is the first event dedicated to the circular economy of the coastal-marine areas and wetlands. Every year the Blue community observatory traces an assessment of the accomplished goal and the upcoming challenges.

Photo: Andrea Alvito

BLUE COMMUNITY COMPANIES



Do you want to join the MEDSEA Blue Community?
alessiosatta@medseafoudation.org

“We must preserve the infinite beauties of Sardinia in synergy, together with the tourist, nautical and cultural sectors. A collective care that becomes a legacy for the generations to come, the thread that bonds tradition and future”

Elisabetta Falchi (Azienda Falchi) at Blue Waves 2021

"Talking about sustainability has always meant talking about quality of food and production. Quality begins to be the starting point for the consumer, the real question now is: what is the right and necessary degree of sustainability in order to achieve this quality? "

Lino Tammaro, (Cooperativa produttori Arborea) at Blue Waves 2021

Help us keep our Mediterranean Sea clean, healthy and productive!

Contact us at info@medseafoundation.org and see www.medseafoundation.org

Your support

We want to speed up the change process already underway, and make sure that the ecological transition is quick enough to halt the loss of biodiversity. But we can't do all of this alone. We need the help of other foundations, patrons, sponsors and private donors.

Our responsibility

The actions we will continue to carry out together over the next decade will affect the future of our planet for centuries to come: we feel we have a great responsibility towards the planet, towards ourselves and towards future generations.

Every euro is invested in conservation

100% of each donation directly supports conservation initiatives focused on protecting marine and coastal ecosystems. By strengthening their resilience, we can respond promptly to negative impacts and provide solutions to climate and biodiversity crises. Each contribution makes a difference.

Experience in the field

Prestigious foundations and international companies rely on the MEDSEA Team experience for the realisation of innovative projects of conservation in marine, wetlands and coastal environments. Scientific rigour, discipline, versatility and field operations are the qualities that distinguish us.