

Restoration of deep-sea habitats to rebuild European Seas

REDRESS NEWSLETTER 2

Project Number: 101135492

1 February 2024 - 31 January 2028

Coordinator: **Polytechnic University of Marche - Italy**

1 August 2024 - 31 January 2025

In this issue

REDRESS restoration interventions in the Mediterranean Sea; synergies with economists and policymakers, dissemination and outreach; new generation of researchers, forthcoming events...



**Funded by
the European Union**



Editorial

Roberto Danovaro [UNIVPM]
REDRESS coordinator



REDRESS: The challenge to restore deep-sea habitats along the EU Seas

The first year of the REDRESS project has just concluded, and all partners have promptly started their activities, demonstrating their full commitment to the project objectives. All work packages (WPs) and tasks planned for the first year began without delay, and we are working hard to achieve our initial goals:

1. Identifying priority areas for deep-sea restoration to support future EU policies and investments (e.g., Biodiversity Strategy 2030 and the European Mission “Restore Our Ocean and Waters by 2030”).
2. Upscaling marine restoration across the EU and beyond.
3. Demonstrating technological readiness for deep-sea ecosystem restoration.
4. Implementing low-cost monitoring systems to assess the success of deep-sea ecosystem restoration.
5. Providing the tools needed to empower society and governance to support sustainable and effective marine restoration activities in the mid- and long-term.

Restoration interventions and related monitoring are currently underway in the Atlantic (Azores) and the Mediterranean Sea (Catalan Margin, Tyrrhenian Sea, and Eastern Mediterranean). We will soon convene for our first annual meeting to refine our priorities and coordinate our field efforts. The REDRESS project creates exciting opportunities to collaborate across all European seas and to educate a new generation of scientists and experts in deep-sea restoration. Despite the uncertainties posed by the complex political landscape, we remain committed to covering all the geographic areas planned in the project, ensuring that all EU seas are included. REDRESS partners are also highly engaged in communication activities and have participated in several international events to disseminate project results and raise awareness of the importance of deep-sea ecosystem restoration, particularly in light of the Nature Restoration Law. We are pursuing a twofold objective: on one hand, advancing cutting-edge science to identify effective nature-based solutions, and on the other, engaging society to emphasize that our success is a step toward building a healthier ocean and ensuring the sustainable management of deep-sea ecosystems. Stay tuned—lots of exciting updates are coming soon!

FOLLOW US AT

Website: <https://redress-project.eu>

 redress.project.eu

 [RedressP](#)

 [redressproject2024](#)

 [redress-project-26b752305](#)

 [redressprojectcommunity](#)



REDRESS Newsletter content

REDRESS Objectives	4
Restoration Interventions	
First trials of transplantation in the Azores	5
Restoring Catalan Shelf (Western Mediterranean).....	7
Deep-Sea Restoration Efforts in the Southeastern Mediterranean Gas Seeps.....	9
14th Marine Economics and Policy Research Symposium Galway (Ireland) ...	11
Meeting with stakeholders in the Azores	13
REDRESS at International Conferences	
SERE 2024 - Tartu (Estonia)	14
All-Atlantic Forum 2024 - Ottawa (Canada).....	16
2 nd Mission for natural heritage Institutional Dialogue - Málaga (Spain)....	17
Deep-Sea Biology Symposium - Hong Kong (China)	18
European Researchers' Night 2024	20
A window on young REDRESS researchers	22
Forthcoming Events	25
REDRESS Consortium	27
REDRESS Management Office	28
REDRESS Advisory Board	28
REDRESS Steering Committee	29

REDRESS Objectives

The project “Restoration of deep-sea habitats to rebuild European Seas” (REDRESS) will conduct restoration actions in multiple deep-sea sites and previously neglected habitats, by providing solutions such as a roadmap for prioritization site selection (including habitat refugia), protocols on the best practices for restoration and monitoring the effects of actions, and by providing evidence of its cost-effectiveness and contribution to policy formulation. The project aims at reversing habitat degradation and biodiversity loss by actively restoring damaged deep-sea habitats and promoting passive recovery, developing an EU scalable plan, based on innovative or existing and tested solutions, and a process of commitments for deep-sea restoration within governance, financing systems and the public.

The ambition of REDRESS is to:

1. identify priority areas for deep-sea restoration to support future EU policies and investments (i.e., Biodiversity Strategy 2030 and European Mission “Restore our ocean and waters by 2030”);
2. allow the replicability of the upscaling of marine restoration across the EU and beyond;
3. demonstrate the technological readiness for the upscaling of deep-sea ecosystem restoration;
4. implement low-cost monitoring systems to assess the success of deep-sea ecosystem restoration;
5. provide the tools needed to empower society and governance to support sustainable and effective marine restoration activities in the mid- and long-term.

REDRESS aims at obtaining, in a relatively short timescale (48 months), tangible results for deep-sea habitats (with long-term benefits) from diverse and innovative restoration actions that will provide a step change in our ability to restore biodiversity and ecosystem services in damaged European deep-sea ecosystems where a need to do so has been demonstrated. REDRESS therefore will demonstrate the possibility and sustainability of success of deep-sea ecosystem restoration and will provide public authorities with solutions to plan and upscale restoration interventions.





Fig.1

Restoration Intervention

First trials of transplantation in the Azores

UAc and IMAR teams

During the past summer, the UAc and IMAR teams carried out the first trials at sea to test the transplantation of deep-sea benthic invertebrates using the badminton method (Montseny et al 2021) with the Bio-Liberator (BiLi) Releaser designed at the Institute of Marine Sciences of Barcelona (ICM-CSIC). The BiLi methodology is designed to assist during



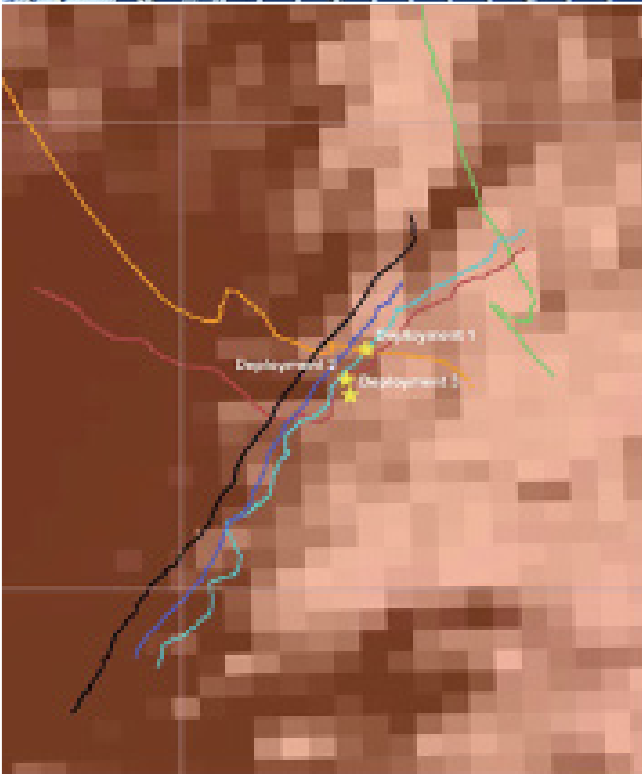
Tank used to transport organisms ready to be transplanted on board the small-sized research vessel. **Fig.1** Members of the IMAR and UAc teams deploying the BiLi Release system with the organisms ready to be transplanted.

the transplantation of bycaught sessile benthic organisms (e.g., corals, sponges, hydroids) recovered from long-line fishing activities. The organisms are attached to supporting cobbles and return to their natural habitat by means of a device that allows their precise release just a few meters above the sea floor (Figure 1). This methodology can release 15-20 specimens in each deployment, reducing the potential spread of the transplanted organisms over the seabed, hence facilitating the monitoring of their health condition during the following years. Following the deployment of the by-catch organisms, the low-cost underwater video system *Azor drift-cam* was successfully tested, proving that it can be an effective methodology for relocating the organisms deployed, evaluating their landing position and assessing their survival over time (Figure 2). During the work at sea conducted in August 2024, a total of 3 deployments with the BiLi Release were performed on the eastern side of Condor Seamount, releasing 62 specimens at

a depth of 300 m, of which 10 were large hydrozoa, 44 gorgonians of several species and 8 sponges. After the release, 6 dives with the Azor drift-cam were performed (Figure 3), with a total of 19 specimens filmed in the different transects, proving the capacity of this system to be used for regular monitoring. Although these first tests gave some satisfactory results, the Azor drift-cam fell short in several aspects, such as providing reliable measures (i.e., indicator variables) of the recovery and health status of the ecosystem

since it does not allow for targeted filming or to take close-up images of the organisms. This means that other classic video platforms (e.g., ROVs) should be used to measure fine-scale ecological indicators to assess the level of success of the restoration actions. After these first trials, the UAc and IMAR teams plan to continue improving the transplantation methodologies employed to be able to transplant a larger number of organisms during the summer of 2025.

▼ Images of the organisms inside the BiLi Releaser.



▼ Organisms relocated and filmed during the dives performed with the Azor drift-cam.



◀ Transects of the Azor drift-cam. Light and dark blue drifts were carried out with successful observation of transplanted corals. Red, orange and green transects did not drift as planned.



Restoration Intervention

Restoring the Catalan Shelf (Western Mediterranean)

Federico Gigli (NIOZ), Furu Mienis (NIOZ) & Jordi Grinyo (CSIC)

The first field campaign of the REDRESS project took place on the Catalan shelf, off the coast of Barcelona, from November 18th to 27th, 2024. This collaborative effort with the Institute of Marine Sciences of Barcelona (ICM-CSIC), more specifically with the EU LIFE Project ECOREST, investigated areas historically impacted by bottom trawling. The study aims to assess the efficacy of marine protected areas in facilitating the recovery of deep-sea ecosystems. Four marine protected areas (between 150 and 400 meters water depth) with a different age in the establishment of fishing closures were compared, providing a unique opportunity to examine the influence of protection time on benthic community restoration.

Our research strategy involved deploying two ALBEX benthic landers equipped with different sensor packages. One lander, scheduled for a long-term deployment until July 2025, was equipped with a broad set of sensors to continuously monitor key environmental parameters:

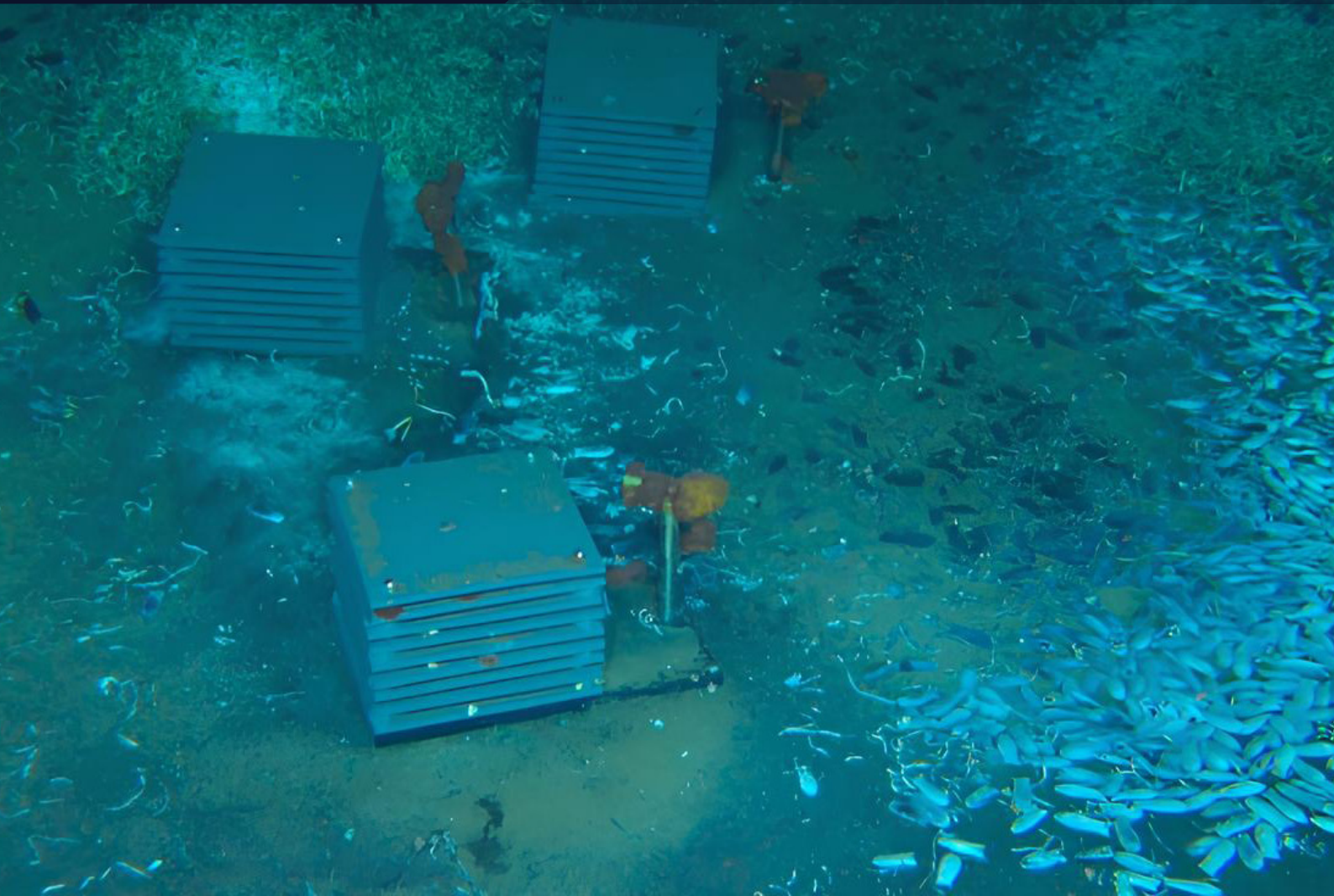
- **CTD:** Measuring conductivity, temperature, and depth to characterize the water column structure.
- **Optode:** Measuring dissolved oxygen concentrations.
- **Turbidity sensor:** Quantifying turbidity levels to assess sediment resuspension and transport.
- **Acoustic Doppler Current Profiler (ADCP):** Characterizing current speed and direction, influencing larval dispersal and sediment dynamics.
- **Sediment Trap:** Collecting settling particulate matter to analyze mass and organic carbon fluxes.
- **Camera System:** Providing time-lapse imagery of the benthic community, specifically monitoring transplanted coral (e.g., *Alcyonium palmatum*) and sea pen (e.g., *Pennatula rubra*) to assess survival, growth, and species interactions. A second lander, deployed for shorter durations at each site, housed three benthic incubation chambers. These chambers isolate sections of the seafloor,

allowing us to monitor changes in key sediment properties (e.g., organic matter content, and grain size distribution) within the MPAs. Sediment properties are particularly sensitive indicators of ecosystem recovery, often displaying changes more rapidly than other parameters, such as macrofaunal biodiversity. Analyzing these properties provides a valuable tool for assessing the effectiveness of MPAs in promoting seafloor recovery on shorter timescales. This approach will help us clarify the relationship between the duration of fishing closures and the re-establishment of benthic communities.

The Catalan shelf study represents the initial phase in a series of REDRESS field investigations and data collected through this study is expected to show significant results that can inform the development of effective and sustainable deep-sea conservation strategies. Upcoming newsletters will offer updates on the project's advancement.

Federico Gigli's PhD research within REDRESS focuses on monitoring the critical environmental conditions influencing benthic ecosystems and understanding how these parameters evolve throughout the restoration process. Following restorative interventions, this work will provide key insights into deep-sea ecosystem dynamics and functioning.





Restoration Intervention

Deep-Sea Restoration Efforts in the Southeastern Mediterranean Gas Seeps

Maxim Rubin Blum (IOLR, UH) and Yizhaq Makovsky (UH)

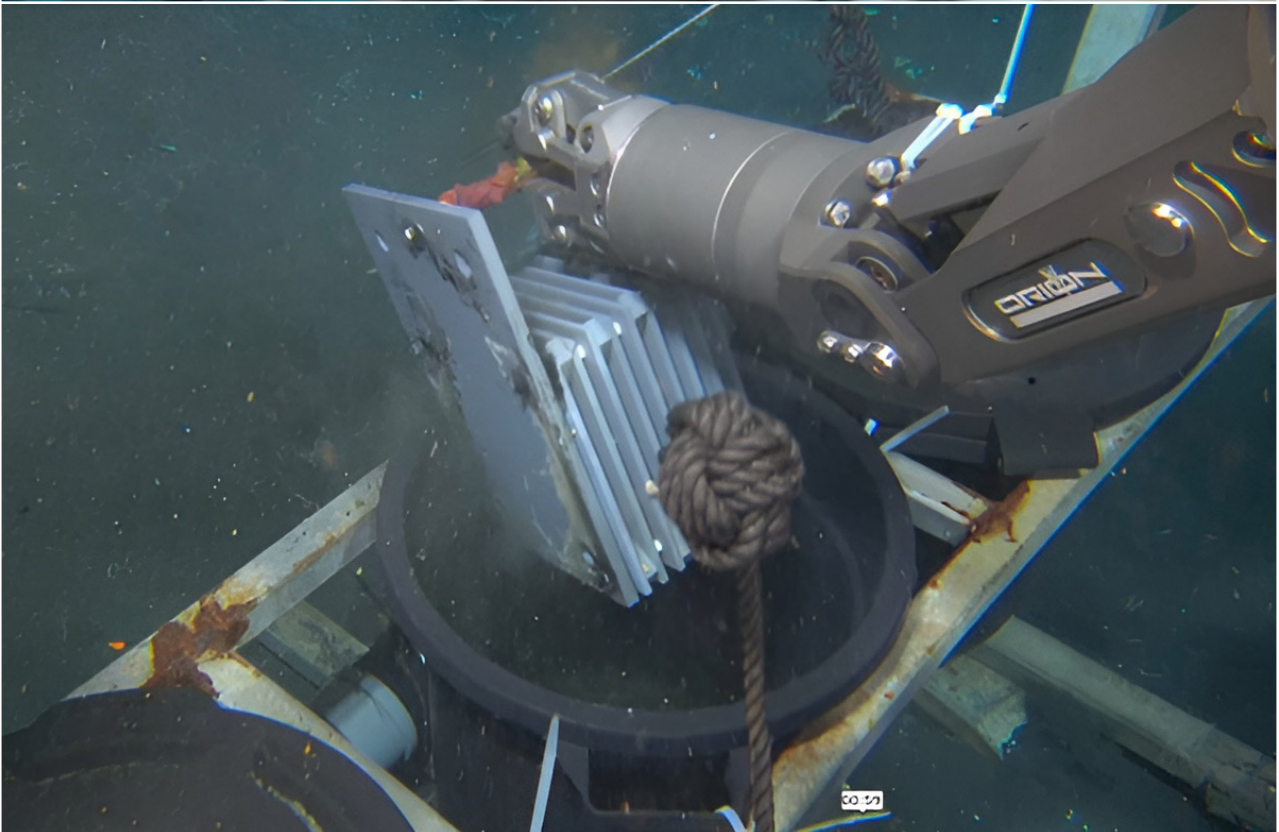
The latest deep-sea expedition, conducted as part of the REDRESS project, took place between the 12th and 17th of January, 2025, aboard the R/V Bat-Galim. This mission focused on deep-sea restoration efforts within the Palmahim Disturbance, a marine protected area located 60 km off the Tel Aviv coast in the southeastern Mediterranean Sea. The research team deployed the remotely operated vehicle (ROV) “Yona” to a depth of 1,150 meters to monitor the ecosystem status and assess restoration strategies. Marine scientists, engineers, and conservation experts wor-

ked together to implement restoration approaches under conservation efforts. The mission involved detailed observation and collection of Artificial Reef Monitoring Systems (ARMS), as well as deploying improved systems to test novel substrates for biodiversity recovery. This mission assessed the ecosystem status and monitored the recruitment of seep biota across environmental gradients, in habitats with marked gas emissions, such as the brine-infused sediments, tubeworm reefs and chemosynthetic clam fields. We collected exciting footage of deep-sea life, including deep-sea sharks and a myriad of their eggs. Using the 4K video capture, we observed how seep fauna and microbiota interact with ARMS. We observed the formation of biofilms, settlement of opportunistic fauna such as anemones, and wealth of grazers such as sea urchins and gastropod mollusks. Occasional visitors included deep-sea crabs, often hosting sulfur-oxidizing bacteria on their carapace. Videos on the deployment of ARMS and ROV



explorations were collected during the expedition to document the restoration efforts and enhance outreach. Collection of ARMS will allow precise assessment of recruited biodiversity and biomass using state-of-the-art molecular tools and expert opinion. This expedition represents a step forward to a better

understanding of ecology, conservation and restoration in these keystone deep-sea ecosystems, where unique biota plays a major role in sequestration of the greenhouse gas methane. Stay tuned for further updates and insights from this restoration initiative.





14th Marine Economics and Policy Research Symposium

Galway (Ireland)

Silvia Gallegati (UNIVPM)

Several members of the REDRESS WP4 working group met in Galway last December, hosted by NUI Galway and Professor Stephen Hynes. The meeting provided a great opportunity for collaboration and knowledge exchange within the group. Participants included Silvia Gallegati from UNIVPM, Ana Laura Trovao and Ana Hilario from UAveiro, and Sara Driscoll from NOC. The first day was dedicated to attending the 14th Marine Economics and Policy Research Symposium, organized by Prof Hynes, an event that brought together experts and scholars to discuss key topics in marine

management, governance, community engagement and ocean economics. The symposium allowed REDRESS members to interact with leading researchers in the field, gaining insights into current challenges and innovative solutions in marine policy. Over the next two days, the team visited the Socio-Economic Marine Research Unit at NUIG. Led by Professor Hynes and Dr Norton, the researchers explored survey techniques based on 'stated preference' methods. These discussions laid the foundation for new research initiatives, particularly in the design of public surveys focused on deep-sea restoration in the framework of REDRESS. In addition to research development, the meeting also facilitated collaborative work on the first WP4 output for REDRESS. This deliverable was successfully completed after the meeting and submitted at the end of January, marking a significant progress in the project. The productive working sessions held in those days highlighted the importance of interdisciplinary cooperation. REDRESS



Members left Galway not only with improved research strategies, but also with enthusiasm for future collaborations. The team looks forward to meeting all

the other REDRESS members in Heraklion for the annual meeting, ready to build on the foundations laid during this enriching workshop.





Meeting with stakeholders in the Azores

UAc and IMAR teams

In January 2025, the UAc and IMAR teams presented the objectives of the REDRESS project to key administrative directorates responsible for ocean, coastal, and fisheries management, as well as fisheries associations and local NGOs in the Azores. The goal of the meeting was to establish a knowledge transfer platform that bridges science and policy, ensuring the integration of scientific data into public policies aimed at the conservation and sustainable use of deep-sea ecosystems. The discussion centered on how the scientific knowledge generated through the REDRESS project can inform both European

and national policies, particularly the EU Biodiversity Strategy for 2030, sectoral policies resulting from the European Green Deal, and other policies directly related to ocean management, such as the Marine Strategy Framework Directive and the Nature Restoration Law. Additionally, the meeting discussed strategies for involving the fisheries sector in the application of low-cost experimental actions to restore deep-sea ecosystems developed for the Azores under the framework of REDRESS, and how the government could leverage this cooperation with fishers as a potential model for future restoration initiatives in the Azores.





REDRESS at International Conferences

SERE 2024 - Tartu (Estonia)

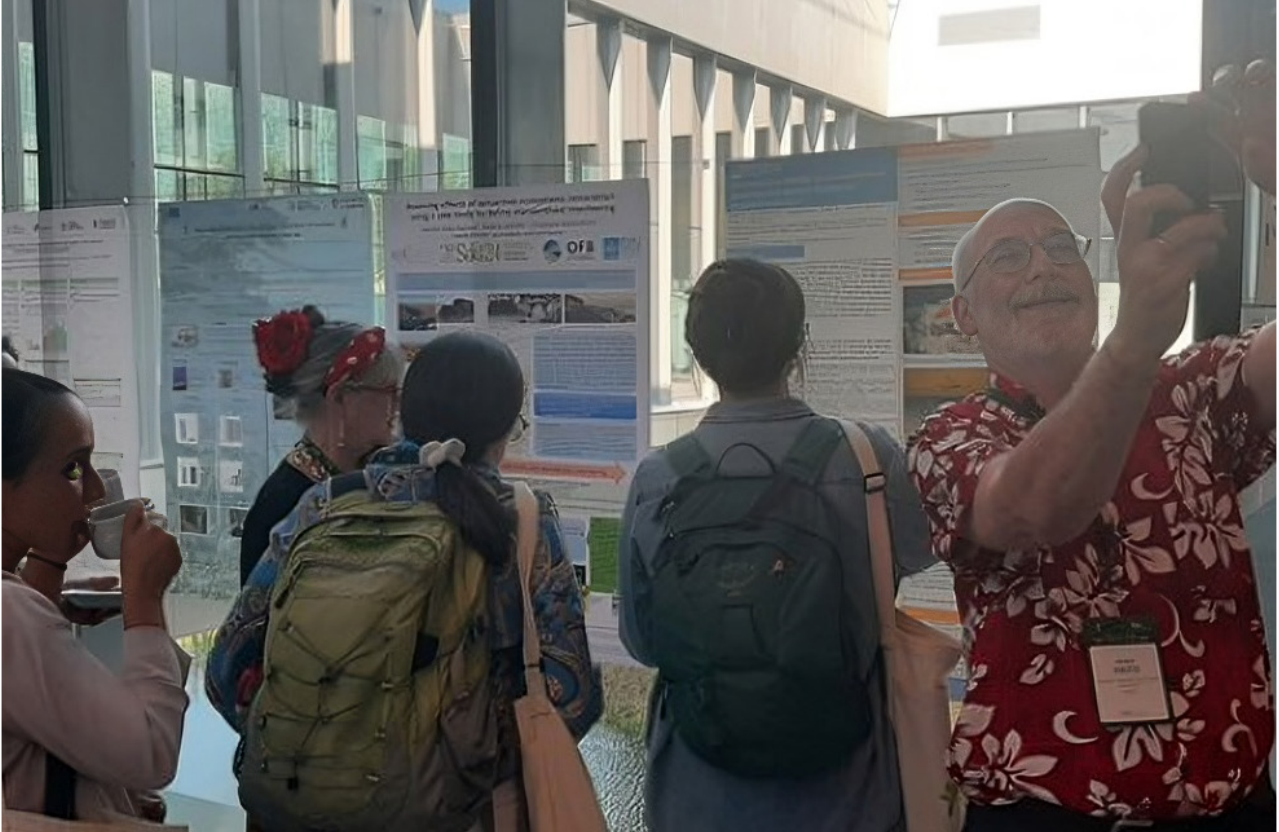
Cristina Gambi (UNIVPM)

The SERE 2024 Conference took place last 26-30 August at the Estonian National Museum in Tartu (Estonia). The meeting of the Society for Ecological Restoration – Europe saw the participation of more than 670 persons from 47 countries. Members of the REDRESS consortium contributed to the session “The ecological restoration in marine ecosystems: lessons learnt, challenges and opportunities” that consisted of 25 talks spreading from coastal to deep-sea habitats. Cristina Gambi (UNIVPM) opened the session with the contribution “Marine Ecosystem Restoration: new challenges from coastal to deep-sea habitats” providing a general presentation of the REDRESS project. Nadia Papadopoulou and Chris Smith (HCMR) presented “From Mercus to Redress: socio-economic data and natural capital accounting for deep-sea ecosystem restoration” and “From MERCES to REDRESS: do we need different governance arrangements for deep-sea ecosystem restoration?” with special focus on the REDRESS WP4 and WP5. Marco



Taviani (CNR-ISMAR) completed the session presenting the talk on “Valuable Deep-Sea Coral Habitats Around Italian Coasts in The Blue Economy: Actions and Perspectives”. Members left Galway not only with improved research strategies, but also with enthusias-

sm for future collaborations. The team looks forward to meeting all the other REDRESS members in Heraklion for the annual meeting, ready to build on the foundations laid during this enriching workshop.





REDRESS at International Conferences

All-Atlantic Forum 2024 - Ottawa (Canada)

Canada hosted the All-Atlantic Ocean Research and Innovation Alliance (AAORIA) Forum 2024 at the Canadian Museum of Nature in Ottawa, Ontario, October 8-10, 2024. This annual forum bridged together representatives of the Atlantic community, including AAORIA partners (i.e. Argentina, Brazil, Canada, Cape Verde, the European Union, Iceland, Morocco, Norway, South Africa, the United Kingdom and the United States). The 2024 Forum highlighted opportunities for collaborative science, including a focus on coordinating ocean observing efforts and increasing our understanding of the relationship between ocean and climate to support coastal resilience. Murray Roberts (UEDIN) participated in the conference presenting the EU projects: atlas, iAtlantic and REDRESS and acted as one of the speakers at the workshop on “Best practices for successful cooperation”. During this session the potential of ecological restoration and the impact of the REDRESS project were amplified to all participants, including scientists, politicians and economists.



CENTRO OCEANOGRÁFICO DE MÁLAGA 



REDRESS at International Conferences

2nd Mission for natural heritage Institutional Dialogue - Málaga (Spain)

Jacopo Aguzzi (CSIC) presented the REDRESS project at the conference “Marine and Coastal Restoration: Discussing Policy Solutions for the Euro-Mediterranean Region” in Malaga (28 November 2024). This event was organized in the framework of the 2nd Mission for Natural Heritage Institutional Dialogue supported by IUCN Centre for Mediterranean Cooperation. It was a great opportunity to present restoration interventions in the Catalan margin and stimulate discussion on the importance of ecosystem restoration. The audience ranged from policymakers, practitioners, and researchers to environmental NGOs from the North and the South of the Mediterranean, including authorities at macro-regional, national and sub-national levels responsible for restoring ecosystems in the deep sea.

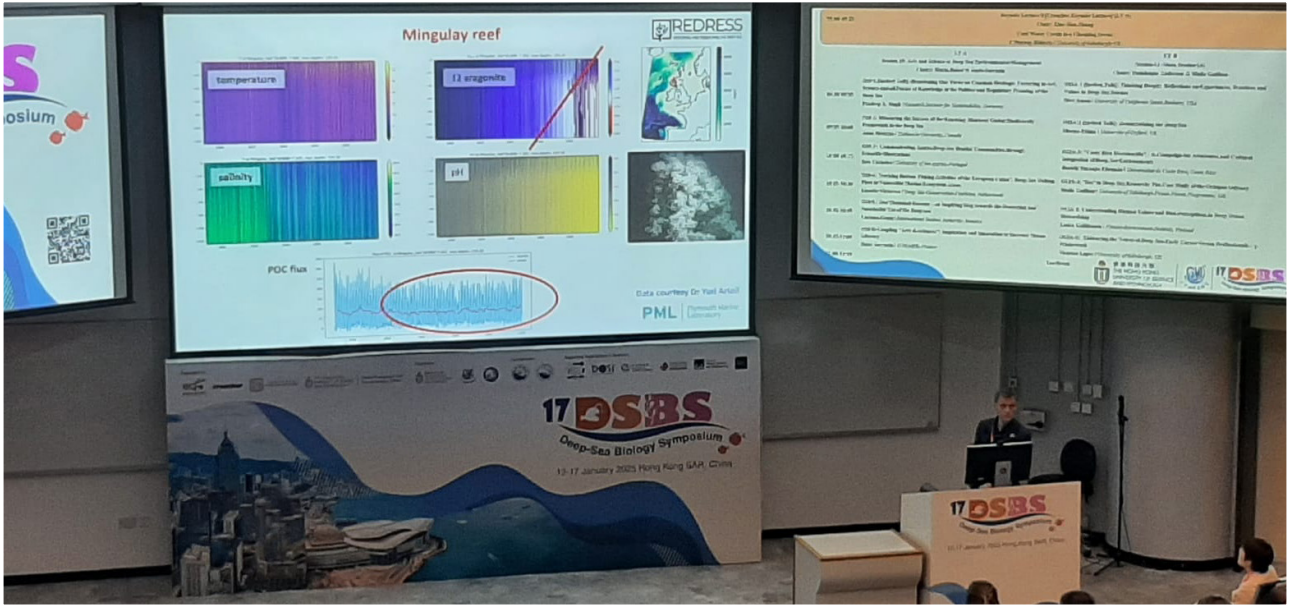




REDRESS at International Conferences Deep-Sea Biology Symposium - Hong Kong (China)

The 17 Deep-Sea Biology Symposium took place at Hong Kong University of Science and Technology, Hong Kong SAR, China. From 12 to 17 January 2025 experts, experts on deep-sea ecology and biology meet to discuss the new discoveries in these remote ecosystems. Among the large international audience and speakers (more than 400 attendances), several members of the REDRESS Consortium (UNIVPM, SZN, UEDIN, UAveiro, UAz & Okeanos, REVOCEAN, NOC and DSBS) were present. The last day of the meeting hosted two keynote speakers from the REDRESS consortium: Murray Roberts (UEDIN) opened the morning session with a talk on “Cold-Water Coral’ Habitats: Emblem in Deep-Sea Biology and Driver of Marine Policy” and Roberto Danovaro (UNIVPM), coordinator of the REDRESS project, opened the last afternoon session of the symposium. Among the “New frontiers in deep-sea biological research”, Danovaro listed ecosystem restoration. The overview of the REDRESS project showed the feasibility of restoring deep-sea ecosystems using new and cost-effective technologies to support successful results.







European Researchers' Night 2024

Cristina Gambi (UNIVPM) & Marina Carreiro Silva (IMAR-UAz)

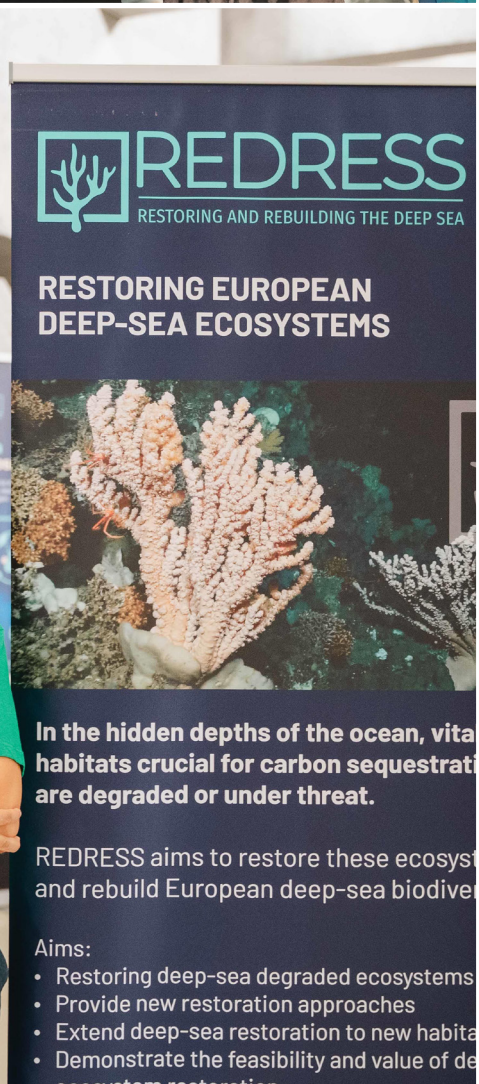
The European Researchers' Night is the largest science outreach event in Europe, and it has been celebrated last Friday, 27 September 2024 in all Europe. The REDRESS project has responded to the EU Call for this exhibition. UNIVPM and ECOREACH in the Ancona downtown and IMAR-UAz in Ponta Delgada, São

Miguel Island (Azores), have promoted the different tasks and activities of the REDRESS project with special focus on the biodiversity of deep-sea habitats and the new challenges for their ecological restoration and innovative solutions for the monitoring of the interventions. Rollups and posters supported the presentation of the REDRESS tasks to the audience. Special attention was also dedicated to children with games and activities showing beauty and the importance of life underwater. The event allowed also direct interaction with researchers and stakeholders on the importance of deep-sea habitats and the effects of deep-sea restoration to society and economy. The Azores Deep-Sea Research Group, Okeanos-University of the Azores, together with Observatório do Mar dos Açores, a scientific and cultural non-profit association, have organized a series of interactive demonstrations about the biology, ecology of cold-water corals, including a taxonomic key that guided both children and grow-ups on the differences between the coral taxa, including stony corals, black corals,



gorgonians and soft corals. The Research Night was also the occasion to show the potential of research on marine ecosystems with the networking with other EU ongoing initiatives CLIMAREST (<https://climarest.eu/>), DIG4ECO (<https://digi4eco.eu/the-project/>), DIVERSEA (<https://www.ntnu.edu/diversea>), LifeDREAM (<https://www.life-dream.eu/>), FORESCUE and BioProtect (<https://bioprotect-project.eu/>).

eu/), DIG4ECO (<https://digi4eco.eu/the-project/>), DIVERSEA (<https://www.ntnu.edu/diversea>), LifeDREAM (<https://www.life-dream.eu/>), FORESCUE and BioProtect (<https://bioprotect-project.eu/>).



A WINDOW ON YOUNG REDRESS RESEARCHERS



Pierfrancesco Cardinale

PhD student at Department of Life and Environmental Sciences, Polytechnic University of Marche (UNIVPM) - Italy

Experience

Master's degree in marine biology with a thesis on "Microbiomes associated to the tropical stony coral *Acropora*: a biogeographic comparison". Participation to three oceanographic cruises in the Mediterranean Sea

REDRESS task

The focal point of my PhD is to provide insights and innovative approaches for the restoration of deep-sea vulnerable habitats, as outlined in WP2, Task 2.1 (Restoration of deep cold-water coral reefs impacted by bottom trawling). My main objectives are threefold: firstly, to investigate the colonisation of artificial structures for deep-sea species recruitment; secondly, to assess the recruitment, survival, growth and changes in biodiversity in the Dohrn Canyon restoration areas; and thirdly, to test innovative approaches for ex-situ propagation of cold-water coral species. I attended the REDRESS-DIG4ECO summerschool on marine restoration and digital twin, 10-17th June 2024, at the Kristineberg Center for Marine Research and Innovation (Fiskebäckskil, Sweden).



Ginevra Fanelli

PhD student, National PhD Program in Biodiversity, Department of Earth and Sea Sciences, University of Palermo, & Department of Life and Environmental Sciences, Polytechnic University of Marche (UNIVPM) - Italy

Experience

Master's degree in marine biology at Polytechnic University of Marche (XXXIX cycle)

REDRESS task

My PhD is focused on the study of the interactions between micro- and macroorganisms at chemosynthetic ecosystems (WP2, Task 4), with particular interest in the census of microbial habitats (distribution and typologies), the drivers for their formation at hot vents and cold seeps, and the ecological roles that they play for the associated chemosynthetic communities. Moreover, the study of biology and microbiome of chemosymbiotic fauna, will help in exploring the secrets of their adaptations, and in some cases also long lifespans, in such extreme environments. I attended the Summerschool on marine restoration and digital twin, 10-17th June 2024, at the Kristineberg Center for Marine Research and Innovation (Fiskebäckskil, Sweden). I was on board the R/V Gaia Blu for the ECOREST_II cruise (16-22nd July 2024) to carry out restoration interventions in the Dohrn Canyon (Central Mediterranean).

A WINDOW ON YOUNG REDRESS RESEARCHERS



Johanna Sophie Buerkert

Wageningen University, Environmental Policy Group

Experience

PhD in international law from the University of Copenhagen where I researched the way international law can contribute to socio-ecological systems' resilience in Arctic coastal communities. Located at the intersection of law, social science and ecology, my research has been quite interdisciplinary, and I am happy to continue in this line of work here in REDRESS

REDRESS task

As part of WP5 I am looking into the governance arrangements (actors, rules, resources and discourses) surrounding deep-sea restoration. We use qualitative methods (e.g. document analysis, interviews) to characterize governance arrangements across different case studies of the REDRESS project. I am particularly curious to find out how different actors perceive restoration and how that does (or does not) impact the way restoration is being done– stay tuned for our findings



Millot Jade

Ifremer, France

Experience

Double bachelor's in biology and mathematics; master's degree in marine science; PhD on Spatial planning for conserving Vulnerable Marine Ecosystems in the Mediterranean.

REDRESS task

My PhD research focuses on identifying priority areas of conservation for Vulnerable Marine Ecosystems (VMEs) in the Mediterranean, impacted by bottom trawling and climate change. A large part of my work focuses on producing new spatial information on the distribution and composition of Mediterranean megabenthic communities. More specifically, I have: (1) developed a bioregionalization of megabenthic communities on Mediterranean soft bottoms, (2) quantified the sensitivity of megabenthic taxa to bottom trawling using functional traits and mapped the current distribution of the most sensitive taxa, (3) used Species Distribution Modelling (SDM) to predict and map climate refugia for indicator species of VMEs for the mid-century under various climate scenarios. The study on the crinoid *Leptometra phalangium* has been published: Millot, J., et al. (2024). Habitat shifts of the vulnerable crinoid *Leptometra phalangium* under climate change scenarios. *Progress in Oceanography*, 229, <https://doi.org/10.1016/j.pocan.2024.103355>. These new spatial inputs, combined with existing spatial layers (e.g., bottom trawling estimates and the current network of MPAs), will be integrated into a Systematic Conservation exercise to identify a priority network of conservation for VMEs in the Mediterranean. My work contributes to task 1.2 of the REDRESS project, focusing on Species Distribution Modelling for VMEs, and task 1.3, involving the final exercise of Systematic Conservation Planning.

A WINDOW ON YOUNG REDRESS RESEARCHERS



Georgeo Vincent

CNR-IRBIM, Mazara del Vallo, Italy / University of Bologna - IFREMER

Experience

Master's degree in marine science, Research engineer at Ifremer Deep-sea-Biology Laboratory, France, Research fellow at CNR-IRBIM Mazara del Vallo, Italy, PhD studenten Finding Multipurpose Fishing restricted area network in the Mediterranean Sea.

REDRESS task

My PhD research focuses on identifying priority areas of conservation for Vulnerable Marine Ecosystems (VMEs) in the Mediterranean, impacted by bottom trawling and climate change, using species distribution modelling, as well as identifying Essential Fish Habitats (EFH) of Elasmobranch species, such as nurseries, spawning and reproduction area. The objective is to find areas of conservation priority using these outputs, synthetised with other already published data on commercially valuable species EFH, such as the Hake, deep-sea shrimps, etc... My work on VME has already been published for the bamboo coral *Isidella elongata*, (Georges et al., 2024) which highlighted significant shifts in habitat for the pessimistic "Business as usual" RCP 8.5 scenario in 2100. The ongoing work regards three sea pens fields indicator species: *Pennatula Rubra*, *Pennatula Phosphorea* and *Pteroeides spinosum*, at pan-European scale (Mediterranean and North-East Atlantic Ocean). a publication is expected for 2025. My work contributes to WP1 task 1.2 of the REDRESS project, focusing on Species Distribution Modelling for VMEs.

FORTHCOMING EVENTS

> **European Marine Board**

20 February 2025 13.00-14.00 - online webinar

Prof Roberto Danovaro will present REDRESS project

<https://www.marineboard.eu/events/restoration-deep-sea-habitats-rebuild-european-seas>



This webinar is linked to EMB's upcoming Future Science Brief No. 12 on "Deep Sea Research and Management Needs"

Link:

https://us06web.zoom.us/webinar/register/WN_05LO38GvReq2cFnZQmE3ng

FORTHCOMING EVENTS

- > **REDRESS Annual Meeting**
3-4 March 2025, Heraklion - Crete (Greece)
- > **Kick-Off Event Project**
Cluster Restore & Protect Marine Biodiversity & Project Cluster Reducing Bycatch
13-14 March 2025, Brussels
European Research Executive Agency (REA)
- > **One Ocean Science Congress 2025**
4-6 June 2025 - Nice (France)
“On a Mission to restore the Ocean and Waters – Towards the deployment at scale of innovative solutions for Ocean restoration and resilience of coastal communities”.
Prof Roberto Danovaro is an invited speaker.
- > **MARE conference 2025**
24-27 June 2025 - Amsterdam (The Netherlands)
REDRESS consortium has proposed a session on “The governance of deep-sea restoration activities”
<https://marecentre.nl>
- > **58th European Marine Biology Symposium**
6-9 July 2025 - Bodo (Norway)
<https://www.embs-symposium.com>
- > **European Research Night**
26 September 2025 - EU cities
- > **SER2025: 11th world Conference on Ecological Restoration**
30 September - 4 October 2025 - Denver, Colorado (USA)
REDRESS consortium has proposed a symposium on “New frontiers in marine ecosystem restoration” that has been accepted
<https://ser2025.org>

REDRESS Consortium

REDRESS brings scientists and top experts from different disciplines together with SMEs in a large multi-disciplinary Consortium of 26 partners (including 1 affiliated entity and 4 associated partners) from 15 countries with skills in marine restoration ecology, marine biology, marine spatial planning, modelling, computer and data science, marine technologies, economy, governance, socioeconomics, and human sciences with special attention on knowledge transfer, dissemination and communication.

1. Università Politecnica Delle Marche (UNIVPM) - Italy
<https://www.univpm.it/>
2. Agencia Estatal Consejo Superior De Investigaciones Cientificas (CSIC) - Spain
<https://www.csic.es/>
3. Institut Français De Recherche Pour L'exploitation De La Mer (IFREMER) - France
<https://www.ifremer.fr/>
4. Helmholtz-Zentrum Fur Ozeanforschung Kiel (GEOMAR) - Germany
<https://www.geomar.de/>
5. Stichting Nederlandse Wetenschappelijk Onderzoek Instituten (NWO-I) - Netherlands
<https://www.nioz.nl/>
6. Hellenic Centre For Marine Research (HCMR) - Greece
<https://www.hcmr.gr/>
7. University Of Galway (NUI GALWAY) - Ireland
<https://www.universityofgalway.ie/>
8. Universidade De Aveiro (Uaveiro) - Portugal
<https://www.ua.pt/>
9. Goeteborgs Universitet (UGOT) - Sweden
<https://www.gu.se/>
10. University Of Haifa (UH) - Israel
<https://www.haifa.ac.il/>
11. Hafrannsóknastofnun, Rannsókn- Og Radgjafarstofnun Hafs Og Vatna (MFRI) - Island
<https://www.hafogvatn.is/>
12. Consiglio Nazionale Delle Ricerche (CNR) - Italy
<https://www.cnr.it/>
13. Sorbonne Université (SU) - France
<https://www.sorbonne-universite.fr/>
14. Stazione Zoologica Anthon Dohrn (SZN) - Italy
<https://www.szn.it/>
15. Engitec Systems International Limited (ESI) - Cyprus
<https://esi-ltd.eu/>
16. DEESS (DEESS) - France
<https://www.deess.eu/>
17. ECOREACH SRL (ECOREACH) - Italy
<https://www.ecoreach.it/>
18. European Chapter Of The Society For Ecological Restoration Ser International (SERE) - Belgium
<https://chapter.sere.org/>
19. Israel Oceanographic And Limnological Research Limited (IOLR) - Israel
<https://www.ocean.org.il/>
20. Wageningen University (WU) - Netherlands
<https://www.wur.nl/>
21. Universidade Dos Acores (Uac) - Portugal
<https://www.uac.pt/>
- 21.1. IMAR- Insitudo Do Mar (IMAR) - Portugal
<https://imar.org.pt/en/about-us/>
22. National Oceanography Centre (NOC) - United Kingdom
<https://noc.ac.uk/>
23. The University of Edinburgh (UEDIN) - United Kingdom
<https://www.ed.ac.uk/>
24. Plymouth Marine Laboratory Limited (PML) - United Kingdom
<https://www.pml.ac.uk/>
25. Deep-Sea Biology Society (DSBS) - United Kingdom
<https://dsbsoc.org/>
26. REVOcean (REVOCEAN) - Norway
<https://www.revocean.org/>



REDRESS Management Office



Roberto Danovaro [UNIVPM]
REDRESS coordinator



Cristina Gambi [UNIVPM]
Scientific Project Manager



Silvia Gallegati [UNIVPM]
Project Manager Assistant

REDRESS Advisory Board



Dr Chiara Piroddi
[Joint Research Center]



Prof Miquel Canals
[University of Barcelona]



Prof Andrew Sweetman
[Scottish Association for Marine Science]



Dr Dominic Pattinson
[OSPAR]



Prof Paul Snelgrove
[Memorial University of Newfoundland]



REDRESS Steering Committee

 COORDINATOR	 Roberto Anovaro [UNIVPM]		
WP1 CO-LEADERS	 Ana Hilário [UAveiro]	 Federica Foglini [CNR]	
WP2 CO-LEADERS	 Marina Carreiro Silva [UAc]	 Murray Roberts [UEDIN]	
WP3 CO-LEADERS	 Jacopo Aguzzi [CSIC]	 Sascha Flögel [GEOMAR]	 Furu Mienis [NIOZ]
WP4 CO-LEADERS	 Stephen Hynes [NUI GALWAY]	 Nadia Papadopoulou [HCMR]	
WP5 CO-LEADERS	 Nadia Papadopoulou [HCMR]	 Jan van Tatenhove [WU]	
WP6 CO-LEADERS	 Cristina Gambi [UNIVPM]	 Laurenz Thomsen [UGOT]	



HORIZON-CL6-2023-BIODIV-01-6
REDRESS project: N. 101135492
01.02.2024 - 31.01.2028


www.redress-project.eu





Co-funded by
the European Union





The REDRESS project (N. 101135492) is co-funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or UK Research and Innovation. Neither the European Union nor the granting authority can be held responsible for them.

 [redress.project.eu](https://www.facebook.com/redress.project.eu)

 [RedressP](https://twitter.com/RedressP)

 [redressproject2024](https://www.instagram.com/redressproject2024)

 [redress-project-26b752305](https://www.linkedin.com/company/redress-project-26b752305)

 [redressprojectcommunity](https://www.zoom.us/j/redressprojectcommunity)