

# Life Sedremed

## ENHANCED BIOREMEDIATION OF CONTAMINATED MARINE SEDIMENTS

LIFE20 ENV/IT/000572

START DATE OF THE PROJECT: 1 October 2021

DURATION OF THE PROJECT: 42 months

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### DELIVERABLE D1.3

Intermediate Communication, dissemination and  
exploitation plan

DUE DATE OF DELIVERABLE: **08-2023**

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BENEFICIARY LEADING THIS DELIVERABLE: **Nisida Environment Srl**

## Authors

Raffaele Vaccaro, CEO of Nisida Environment Srl

Rossella Liberti PhD, Partner of Nisida Environment Srl and LIFE SEDREMED Project Manager

Ernesto Rollando, Communication Expert

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## Executive Summary

This deliverable follows on deliverable D1.2 that presented the initial structure of the LIFE SEDREMED Communication, Dissemination and Exploitation Plan. It provides an updated overview of the communication, dissemination and exploitation strategy of the project and the results obtained until now.

As a reminder the general objectives of LIFE SEDREMED Communication, Dissemination and Exploitation Plan are:

- set up innovative tools for the communication and engagement of various stakeholders (academic institutions, private and public companies, professionals,

ministries and environmental agencies, environmental associations/NGOs, local residents etc.);

- disseminate efficiently project goals and results achieved;
- create synergies with other EU funded projects for collaborations and exchange of experiences;
- ensure the dissemination of project outcomes also after the end of the project.

The document provides an overview of the communication tools that have been created and used, the key messages of the project, the target audiences, the development of the graphic identity and the outcomes of the first dissemination event organised in Brussels, the other events in which the partners participated and the events foreseen for the coming months.

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## Introduction

LIFE SEDREMED aims to demonstrate the effectiveness of an innovative methodology for the in-situ remediation of contaminated coastal sediments. The developed methodology will be implemented in the contaminated shoreline of the former industrial site of Bagnoli, Naples (IT). Besides allowing a significant reduction of remediation costs, the project outcomes will ensure a lower environmental impact than conventional techniques such as selective dredging or capping, by minimizing the impact on existing flora and fauna and reducing the risk of resuspension of contaminants. The project will also develop and deliver to Invitalia (Bagnoli's site manager) a comprehensive environmental monitoring plan with the potential to cover the decontamination operations of the entire coastal area and the monitoring of bathing conditions in the coming decades.

Through the communication, dissemination and exploitation plan, and its associated activities, the project will aim at maximising the engagement of other academic institutions, private and public companies, environmental agencies and ministries, local environmental associations and Bagnoli citizens with the objective to boost scale-up, replicability and public acceptance of the remediation methodology.

In addition to the communication tools and the events organised by the project's partners, a key aspect of the plan is the frequent participation in external meetings and conferences with interested stakeholders to increase the awareness of local, regional, national and European authorities about the solutions developed and the objectives achieved, thus ensuring continuity of actions and results. The solution proposed has in fact a very large

potential impact on the marine decontamination market in Europe since the removal and/or the decontamination of marine sediments is considered as one of the most technically challenging and costly regeneration processes in addition to the relevant environmental risks. Constant information exchange with public administrations and with large private contractors will be essential in order to disseminate this approach in other sites in Italy and Europe. In view of the complexity and risks linked to decontamination of sediments, citizens' awareness and involvement will be very important to ensure public acceptance and avoid problematic lack of confidence and eventual protests and blockages of the decontamination works. The project will focus on the constant involvement of civil society in the events and through site visits. Finally, the "MEDREHUB" will serve as a platform to continue the dissemination and communication strategy of the project also after its end.

## Deliverable 1.2 – First CDEP (03/2022)

In the preceding deliverable readers will find information on the CDEP specific objectives, the target audiences, the key messages conveyed, an initial overview of the timing and coverage of the CDEP.

### Graphic identity

The graphic identity of the project is branded by a logo, aiming at ensuring a quick recognition of the project and the identification colours. The graphic identity of the project has been developed in collaboration with the sub-contracted expert.

In the image below the iteration process to obtain the project logo is shown: the partners were presented with 3 options at the first monitoring meeting (04/2022) and voted for option 3 that integrates the bacteria and ocean aspects in the circle while encompassing the electrokinetic approach in the last letter of the project name.

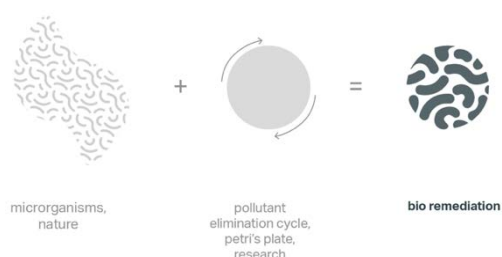
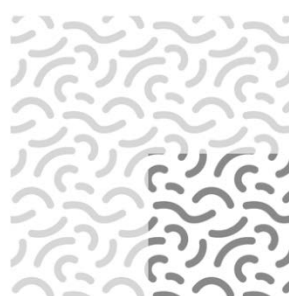


Figure 1: Logo iteration process.



Bacteria pattern

Figure 2: Logo iteration process bis

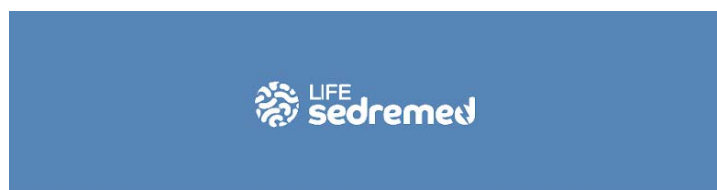






Figure 3: The 3 options proposed to project partners.

The logo defines the main themes, and the remedies employed of the project (sea life, bioremediation and electrokinesis themes) and highlights both the bioremediation (microorganisms) and electro kinetics employed in the process. Option 3 was then further worked on and we obtained the final logo of the project. In the picture below the final logo of the project in its main theme colours, as shown:



## Update on the Exploitation Strategy

NISIDA has designed a preliminary exploitation methodology. This methodology will guarantee the creation of robust exploitation plan at end of the project. The methodology

has been presented by Nisida and validated by all partners during the 1° Annual Meeting held in Belgium (02/2023). This first step has enabled to start working on the other key deliverable for future successful exploitation of results, the Replication and Transfer Plan (Del. B4.2), that can be summarized in the following steps:

- 1) Preliminary identification of the key exploitable results generated by technical actions of LIFE SEDREMED (B1-B3 and C1). This exercise requires the active involvement of academic and private partners of the consortium.
- 2) Assessment of the innovation and business potential of the exploitable results (including LCA and LCC outputs).
- 3) Identification of the main applicable standards in the decontamination sector.
- 4) Analysis of selected Member States marine decontamination needs.
- 5) Implementation the IPR strategy developed
- 6) Application of the prepared business plan.
- 7) Organization of targeted networking activities to reach stakeholders interested in LIFE SEDREMED result exploitation.
- 8) Identification of private and public funding schemes as pillars of a fundraising strategy that guarantee the future market deployment of the innovations developed during the project.

An important role in the exploitation strategy will be played by MEDREHUB since it will serve as physical space where conferences and meetings will be held at the end of the project and after the project ends to present project results to stakeholders potentially interested in exploiting LIFE SEDREMED innovations.

The exploitation strategy will evolve from a “inception phase” during the first half of the project to a “development phase” in year 3 and 4, ending with an “implementation phase” during the last 6 months of the project.

The Exploitation Strategy can be summarized in 8 steps as well:

1) First results on lab-scale and mesocosm-scale results are available internally, they are being reviewed by the scientific partners to then be published. These results focus mainly on PAHs degradation results and still need to be completed with indications on heavy metals fixation and other organic contaminants degradation (PCBs and PCDDs). The main outcomes of this setting-up phase will be used to describe the adaptation process of the technologies to the specific type of sediment and will be integrated in the exploitation strategy.

2) LCA and LCC analyses have started and are being carried out by UNIVPM and SZN. NISIDA is following the progress and will integrate the analyses' outcomes in the exploitation strategy.

3-4) NISIDA is working on an important deliverable that will set the base for the exploitation strategy (B4.1 – Stakeholder and Market analysis), the results of the study will be presented at the second divulgation event planned in Rome contextually to the second Annual Meeting (March 2024). This deliverable will contain information on key stakeholders and market potential in three key sea basins (Mediterranean, Baltic and North Sea), the standards and methodologies to approach sediment management and decontamination will also be included.

5-6) After the conclusion of the B4.1 and the start of the on-site implementation planned for December 2023. NISIDA will meet with technology providers (EKO and IDRA) to define the process to reach an IPR agreement and then include the key aspects in the exploitation strategy. The business plan will be based on the IPR strategy and on the market study included in B4.1.

7) Networking activities have already started since fall 2022 with an online event organised by the Italian Ministry of Environment (“Mettiamoci in Riga”) in which the objectives of the project were presented and a link with the other two LIFE projects (LIFE Sekret and LIFE Mar Piccolo) was created. The coordinator held a specific meeting with LIFE Remedia and the responsible of LIFE Green Site were contacted through a request for the LCC analysis. The first dissemination event in Brussels was the occasion to actively involve the projects LIFE SURE, LIFE NARMENA and LIFE BELINI, in addition to exchanging with representatives of EC,

CINEA, Permanent representations to the EU of Italy and Finland, the Italian Ministry of Environment, the Wallonia and Flemish environment agencies (BE), the Swedish Geotechnical institute, and other academic and industry representatives. Local institutional and industry stakeholders (Naples municipality and Campania Region) where met at the Green Med Symposium where the project was presented to the participants by the sub-commissary Pr. Filippo De Rossi. Networking and divulgation activities stepped up during summer and fall 2023, with the participation of 3 partners and 3 presentations at the bi-annual SedNet Conference in Lisbon, a stand at the Acquaconsol conference in Prague (CZ), a dedicated stand and short pitch at Pollutech (Lyon, FR) and a 20' minute presentation in a high-level workshop at Ecomondo (Rimini, IT).

This phase is still ongoing and will be further nurtured by the coming external events in which we will participate, and the other internal dissemination events foreseen.

Finally, we also made a specific social media post in collaboration with LIFE My Soil through which we reciprocally posted info about each other's project on our social media channels.

8) the proper development of the MEDREHUB strategy in which additional public and private funding schemes will be explored and monitored. Details about this phase will be included in both deliverable B5.1 (Medrehub funding strategy) and exploitation strategy integrated in the Replication and Transfer Plan (B4.2).

# Update on Communication Channels and Dissemination tools

## Overview

Communication channels are listed as the means to reach various target audiences. In LIFE SEDREMEd, we use several channels to disseminate our research to the different target groups. Some channels are specific for communication with certain target groups, e.g. technical/scientific publications or technical dissemination events, and others suitable for communication with all specified target groups, e.g. the LIFE SEDREMEd website or the X platform. Thereby, it is important to express project results in an accessible language, tailored to the different target groups.

Afterwards, more detailed information on each channel is presented in the following sub-chapters. The described use of the channels are suggestions and should be adjusted to any occurring changes during the project.

## Website

The LIFE SEDREMEd website is the central tool for communicating about the project progress and disseminating project results to stakeholders, the academic community, concerned citizens, and the wider non-expert audience. The languages of the website are both English and Italian. The partnership chose to translate the website in Italian in order to maximise the accessibility to information for local Bagnoli's residents and Italian Institutions.

The following information is presented on the website:

- General project information including the project's objectives, activities, timeframe, and demonstration site information.
- Presentation of project partners and description of their activities.
- Update of the project progress.
- All documents, such as deliverables, brochures, articles in press or fact sheets are provided online and can be downloaded as pdf.
- Links to press releases, social media channels and networking activities.
- Information on meetings and events
- Media section with access to project videos and photographs
- Dedicated contact page with section for newsletter subscription.

The website will be regularly updated by NISIDA's team until the end of the project and beyond (at least until 03/2027).

The website was put online on 07/2022 and the url is: <https://life-sedremed.eu/>

## Enhanced bioremediation of contaminated sediments in coastal areas of ex-industrial sites

[TALK TO US](#)

### How we intend to face the issue

LIFE SEDREMED is an EU-funded project for the development of an innovative solution to decontaminate polluted marine sites.

The project intends to demonstrate the efficiency of a methodology based on bioremediation and electro-kinetics for the decontamination of coastal marine sediments. The project partners will develop a prototype for the application of microorganisms within

Figure 4: Screenshot of LIFE Sedremed website homepage

The website analytics were activated in February 2023 and the results are as follows:

- 315 unique users
- 00:01:51 average engagement time
- 1.300 views
- 3.500 event count



Users▼ by Country ID▼

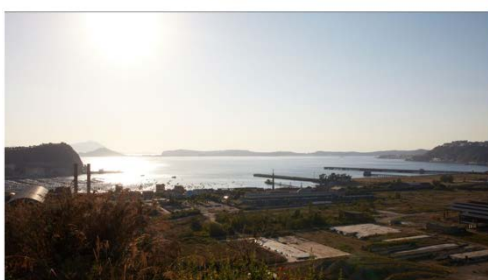


COUNTRY	USERS	
Italy	224	-
Belgium	20	-
Spain	13	-
France	10	-
Netherlands	7	-
United States	5	-
Luxembourg	4	-

Figure 5: Geographical distribution of life sedremed website users

## Newsletters

Up to now 2 newsletters have been sent, with the first one announcing the public launch of the project (10/2022) and the second one providing updates on the ex-situ mesocosms testing and the first divulgation event held in Brussels.

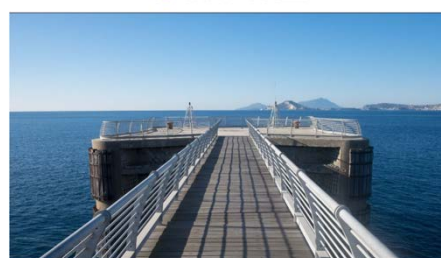


### NEWSLETTER LAUNCH

Dear all,  
further to our recent exchanges, we are sending you this e-mail from the [LIFE SEDREMED](#) project to follow up on the expert roundtable held last Thursday in Brussels.

**You have been added to our mailing list to remain updated about our project activities and progress.** If you wish to unsubscribe from our newsletter you can do so by clicking the link at the bottom of this e-mail.

For any additional information on our work do not hesitate to reach out to us through the following:  
Project email: [info@life-sedremed.eu](mailto:info@life-sedremed.eu)  
Communication expert: [e.rollando@hisidaenv.eu](mailto:e.rollando@hisidaenv.eu)

[View this email in your browser](#)


### NEWSLETTER #1 April 2023

In this issue

- Highlight: LIFE Sedremed Expert Roundtable
- LIFE Sedremed Annual Meeting
- Field activities start in Bagnoli Bay
- Launch of the new department at Stazione Zoologica Anton Dohrn
- Interview: IDRABEL, founder Christian Gennaux (Video)
- Flying over Bagnoli Bay, LIFE Sedremed implementation site (Video)

The launch newsletter was successfully delivered to 143 recipients, it counted 130 openings and 12 clicks on links.

Newsletter #1 was successfully delivered to 145 recipients, counted 105 total opens and 7 clicks.

A third newsletter is being prepared and will include the news on the start of the on-site installation of technologies, the description of 2023 divulgation activities in addition to the announcement of the second divulgation event to be held in Rome in early march.

## Printed Material

The CDEP also foresees the production of printed material to be used during dissemination events, international conferences, and networking activities.

The printed materials were produced at the end of 2022 and subsequently distributed to all partners. Italian partners received the brochure both in IT and EN while other EU partners received only the English version.

Brochures printed and distributed to partners:

- 600 IT brochures
- 500 EN brochures



Figure 7: Screenshot of the first two pages of the brochures

In the first months of 2024, we will proceed with a second print of the brochures having distributed all of them. In the fall of 2024 we will produce a second version of the brochure with the scientific results achieved and a description of the progress of the project.

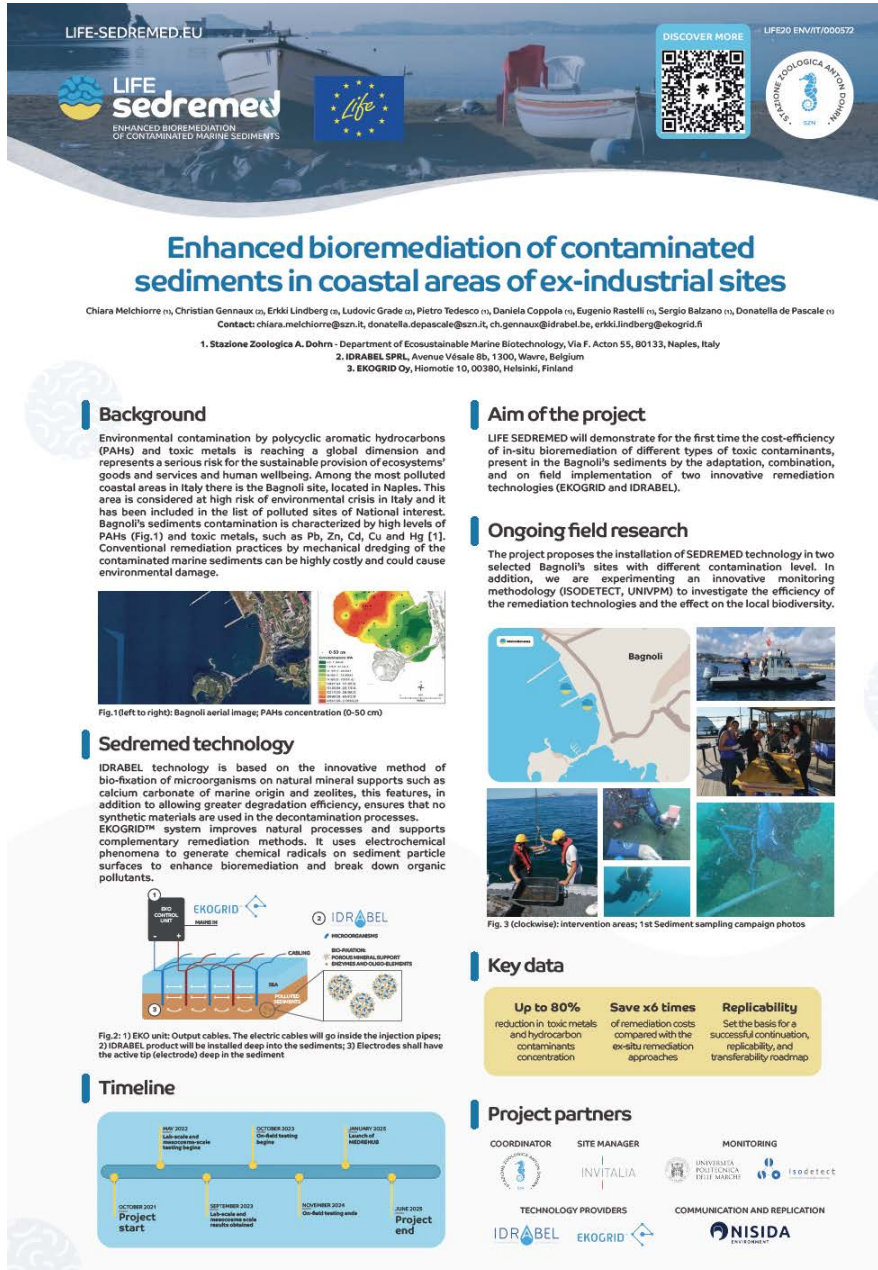
2 different roll-ups were produced and distributed to all partners:



Figure 8: Screenshot of the roll-ups produced

The descriptive roll-up was also produced in English for the non-IT project partners.

Finally a scientific poster was prepared for the SedNet conference in Lisbon:





## LIFE notice boards

LIFE notice boards are prepared during the project and two strategic moments:

1. At the beginning of the project (September 2022), a notice board will be created to transfer to the public a clear message and key information about the project's broad objectives. This notice board has been installed in front of Invitalia's offices in Bagnoli, on Via Diocleziano, one of the busiest roads of the neighbourhood (see picture below).



Figure 9: Notice board in front of Invitalia's offices

2. The second notice board will be designed and located close to the demonstration site (April 2024) with key scientific information about the project technical objectives and expected result (in Italian and English). This notice board still need to be produced and installed.

## Press releases/news articles

Press releases as well as announcements about events will be produced for the main findings, with a focus on the relevance of benefits of the project. These press releases will be in Italian and English and target especially public stakeholders, concerned citizens and the wider non-expert audience. Furthermore, press releases follow the completion of academic working papers and policy-reports and provide information on these.

Two press releases have been sent, including the first one announcing the start of the project (October 2022) and the second one focusing on the divulgation event held in Brussels (BE) in February 2023. Both press releases obtained a very good reach with several news articles in Italian media (both physical and digital).

In particular we would like to highlight this extensive description of the project published on La Repubblica (one the main Italian newspapers): [https://www.repubblica.it/green-and-blue/2023/06/08/news/inquinamento\\_mari\\_superbatteri\\_napoli-403560889/](https://www.repubblica.it/green-and-blue/2023/06/08/news/inquinamento_mari_superbatteri_napoli-403560889/)

## Social media activities

The communication strategy of LIFE SEDREMED relies heavily on social media. Mainly Nisida Environment, but also other project partners and the coordinator, have been communicating general project information, the project's progress, information and photos from activities,

such as the dissemination events or internal meetings, the project's results, and all project publications via Facebook, X and LinkedIn.

Social networks are being used to advertise events and to spread news about the project. They are contributing to increase the visibility of LIFE SEDREMED among young people, students, but also local and European environmental remediation companies. All partners are contributing to that increasing the impact and the numbers of followers.

A social media calendar has been developed to guide content production and is being implemented.

The intermediate results of the social media activities are:

- 431 followers on LinkedIn (43 posts)
- 134 followers on X(48 tweets)
- 75 followers on Facebook (31 posts)

Concerning Facebook, we made the choice to publish news in Italian in order to dedicate this communication channel to local citizens. However, since the communication with the local community is a matter of concern (Bagnoli has been waiting for decontamination for the past 30 years with several projects that failed and judiciary investigations involved), we are developing a strategy that also includes a risk management plan in order to moderate negative comments. We will start publishing the page on local citizens



Facebook groups in order to increase followers and engagement on the webpage and on X/Linkedin only after having the certainty of positive decontamination results.

## Scientific publications

The main and relevant technical results from the project will be published in high impact peer-reviewed journals and magazines to reach the scientific community and remediation industries. SZN and UNIVPM has a high track record of publications related with bioremediation, including recent papers about the Bagnoli bay contamination published in a special issue on Marine Environmental Research. Articles will be tailored to relevant different targets (scientific research and remediation market), the project foresees the production of at least 3 scientific publications and 4 articles on magazines by the end of the project. Publications will continue in the after-life period of the project and include before 2028 another 3 publications and 6 articles on magazines.

Some already selected journals are:

- Critical reviews in biotechnology
- Marine Pollution Bulletin
- Environmental pollution
- Marine Environmental Research
- Science of The Total Environment
- New Biotechnology

- Environmental Science and Pollution Research
- Journal of Soils and Sediments

The publications are being prepared and their reporting will be included in the final CDEP document.

## Dissemination events

The planning of dissemination activities is operated by NISIDA and executed in the locations where events are foreseen (BE, IT, FI). To maximise efficiency and avoid unnecessary travel all the listed dissemination events are planned in combination with the annual project meetings.

Below you will find an update of the original table, with the first event already organized in Brussels in February 2023.

EU MS	LEAD	DATE	THEMATIC
BEL	IDRA	02/2022	Technological and policy solutions for the management of contaminated sediments in the EU – Expert Roundtable
IT (Rome)	INV	03/2024	Innovative approaches for the management of contaminated sediments

			Technical and policy challenges to achieve efficient remediation projects – Bagnoli’s case study.
FI	EKO	07/2024	Electro Kinetic opportunities for sediment remediation AND intermediate results
IT (Naples)	SZN	12/2024	Innovative Monitoring Approach for coastal remediation plans
IT (Naples)	SZN	03/2025	Final Project Conference - Results and After-LIFE plan

The target of the events are, alternatively, the scientific community, the companies operating in the remediation market, the legislators and the general public. The leading partner for the event is always being supported by NISIDA for event planning and management.

The first divulgation event held in Brussels (02/2023) was particularly successful and gathered high-level experts, both on the technological and policy aspects. On February 9, 2023, the partners of LIFE Sedremed organised a key divulgation event on the sidelines of

their first annual meeting. The divulgation event focused on two thematic pillars of sediment management:

- Technological solutions and EU funding for sediment remediation and sustainable management.
- Policy barriers and best practices in Member States for management of contaminated sediments.

The event format included an expert roundtable, and the LIFE Sedremed partners engaged with Belgian and European experts. The event took place at the premises of Political Intelligence (PI) in Brussels. The event foresaw the interventions from the European Commission (DG ENV and CINEA), the Italian and Finnish Permanent Representation to the EU, LIFE SEDREMED Project Coordinator/Technology Providers, LIFE Sure Project Coordinator, members of LIFE NARMENA and LIFE BELINI, the Swedish geotechnical institute and the Italian ministry of Environment and Energy Security).

For more information on the event, you can visit our website and read the dedicated article:

<https://life-sedremed.eu/updates/>.

Furthermore, the partners have been attending internationally relevant events as speaker (or poster presenter). In 2023 we participated to SedNet (Lisbon, PT), Acquaconsoil (Prague, CZ), Pollutech (Lyon, FR) and Ecomondo (Rimini, IT), you will find a dedicated article on our website describing the interventions held and the networking activities realized.

## Layman report

A Layman's report will be published to present the project, objectives, actions, and results to non-specialist audiences, including political stakeholders. The versions of the report will be produced in English and Italian, the report will be provided both in printed and electronic versions, which will be freely accessible via the project webpage. This Layman's report will be useful for providing a summary of the project when it will have achieved its objectives.

The Layman Report will be included in the final version of the CDEP.

## Project videos

Short videos will be used to illustrate the project approach and results.

In April 2023 we published a 4 minute that was broadcasted on RAI1 the main Italian public television channel. Other videos include interviews at Canale Energia and the description of the preparation phase in the lab of Idrabel in Belgium. We are preparing the animated video for the divulgation and schematization of the technological approach and filming has already started for the production of the short documentary that will be published at the end of the project.

## Partnerships with local environmental associations

Involvement of local environmental associations and NGOs is key to disseminate widely and efficiently project's actions and results, in fact the members of these groupings and their respective networks will have a facilitated access to the project information.

Representatives of these associations will be invited to participate and to speak both in the events foreseen in Naples and during the planned site visits.

Already during the proposal preparation, the consortium contacted various associations, in particular the proposal was supported by letters from Associazione MADRE (focusing on marine environment protection and education) and LEGAMBIENTE (the major Italian environmental NGO).

## Site visits

Half-way through the project and at the end of action B2 (on-site implementation of the SEDREMED approach) guided visits for high-schools, universities students, local NGOs and citizens of the area will be organised. The north peer in the project area that is already usable by the public will serve as a perfect platform to show and explain the remediation actions. During the second visit also the future location of MEDREHUB will be visited and a half-day meeting with civil society representatives will be held in order to present the project remediation results.

The site visits will enable civil society and local residents to directly witness the ongoing remediation works, they will be able to discuss and ask questions to the project coordinator and key partners while observing the site.

The site visits will be organized in May and June 2024.

## MEDREHUB and After-life Plan

Towards the planned end of the project (12/2024) the Mediterranean Remediation and Innovation Hub (MEDREHUB) will be set-up. MEDREHUB, hosted in one of the ex-industrial regenerated buildings managed by the project coordinator will serve as the location for the final partners meeting (12/2024) and final conference (03/2025). The final conference will represent a key moment where project conclusions and environmental results will be presented to public authorities, private companies working on Bagnoli's site and local

citizens. Additionally, a specific MEDREHUB dissemination program will be set until 03/2027 and will include: 1 international conference per year, 2 technical workshops, 2 webinars and 1 civil society event. This will enable the continuation of concrete dissemination and communication activities after the project ends and play a crucial role in the continuous involvement of citizens, to integrate them actively as a crucial stakeholder in the ongoing remediation process of Bagnoli and by implicating them in future management and protection activities of remediated areas (both terrestrial and marine). During the first year, the events will focus on disseminating LIFE SEDREMED methodologies and final results. In contrast the second-year program will be focused on presenting new innovative approaches in the field of environmental remediation and ecosystem restoration. This is an important point because from 2025 onwards, assuming that regeneration interventions on land will have ended, and those on sea in full activity, the restoration of biodiversity and ecosystem services will be crucial for the full restoration of the natural capital in the Bagnoli area. Additionally, in the course of 2026 an After-LIFE dissemination event will be held by Università Politecnica delle Marche in its premises to divulgate and present SEDREMED's results to students, academic staff and local stakeholders. The dissemination and communication program of MEDREHUB will be included in the After-Life Plan