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## Executive Summary

The EuroSea Communication Plan outlines the main communication objectives, messages, audiences, and tools of the EuroSea project. To achieve the EuroSea vision to advance research and innovation towards a user-focused, truly interdisciplinary, and responsive European ocean observing and forecasting system, cooperation between different types of stakeholders is essential. As the ultimate objective is to deliver the essential information that is needed for human wellbeing and safety, sustainable development, and blue economy in a changing world, communication with and dissemination to all stakeholders both within and outside the project ensures fit-for-purpose results.

To support the project consortium with clear messaging and communication outputs delivered by Work Package 8, the Communication Plan briefly summarises the EuroSea vision and innovation action objectives (Section 1) and the main approaches of Work Package 8 in support of project-related internal communication (Section 2).

With respect to the external communication, different target audiences need to be approached with different messages, and often also using different communication tools. Messages, target audiences, and tools are described in detail (Section 3), and are linked to each other (Diagram 3). In this way, the EuroSea communication approaches are outlined to target policy and decision-makers, industry and business sectors, the scientific community, and the general public.

To monitor the effectiveness and long-term impacts of the EuroSea activities, including communication, a subset of the EuroSea steering committee has established a protocol, explained in Section 4 of this plan.

Finally, a Gantt chart summarises the timing of communication for which a planning could already be made (Section 5).

## 1. Introduction

EuroSea is a European Union Innovation Action titled ‘Improving and Integrating European Ocean Observing and Forecasting Systems for Sustainable use of the Oceans’. The EuroSea project is funded through the European Commission research funding programme Horizon 2020 under a call supporting the G7 Future of Seas and Oceans Flagship Initiative. EuroSea brings together key European actors of ocean observing and forecasting with users of oceanographic products and services. The EuroSea innovation demonstrators are focused on operational services, ocean health, and climate.

EuroSea’s high-level ambitions are to:

- Contribute to fit-for-purpose sustained observing and forecasting in Europe; and
- Support the implementation of the Future of the Oceans Initiative of the G7 Science Ministers (the Tsukuba Communiqué).

The EuroSea consortium works on the premise that ocean observing and forecasting are critical to underpin any ocean-related activity, from science to blue economy, from management to ocean-human interactions. Despite the ocean’s paramount importance to society, there are fundamental gaps in today’s ocean observing and forecasting systems, limiting our capacity to sustainably manage our activities in the ocean. These gaps cannot be filled by individual nations. EuroSea will support the European integration for coordinated observations and predictions of the ocean state and variability that can be sustained in the long term.

### **EuroSea Vision:**

Advancing Research and Innovation towards a user-focused, truly interdisciplinary, and responsive European ocean observing and forecasting system, that delivers the essential information needed for human wellbeing and safety, sustainable development, and blue economy in a changing world.

### **EuroSea Innovation Action Objectives:**

1. Strengthen the European ocean observing and forecasting as an integrated entity within a global context.
2. Improve the design for an integrated European ocean observing and forecasting system for the European seas and the Atlantic, including the deep sea.
3. Improve and enhance the readiness and integration of ocean observing networks.
4. Enable FAIR data, supporting integration of ocean data into Copernicus Marine Service, EMODnet and SeaDataNet portfolios.
5. Deliver improved forecasts and new information synthesis products by better use of data in models.
6. Develop novel services, demonstrating the value of the ocean observing system to users.
7. Support an integrated, sustainable and fit-for-purpose ocean observing system by engaging with a range of end-users and other stakeholders.

## 2. Main attributes of the EuroSea communication

The effect and impact of the EuroSea activities will rely greatly on effective communication. EuroSea is operating at the interface between scientists and policymakers, public and private stakeholders, national and intergovernmental funders and programmes.

EuroSea has a 55-partner-strong consortium from EU and third countries who will all be communicating about the project and their work in it. The EuroSea Work Package 8 ‘Communication: Engagement, Dissemination, Exploitation, and Legacy’ is leading the project’s communication and impact assessment efforts.

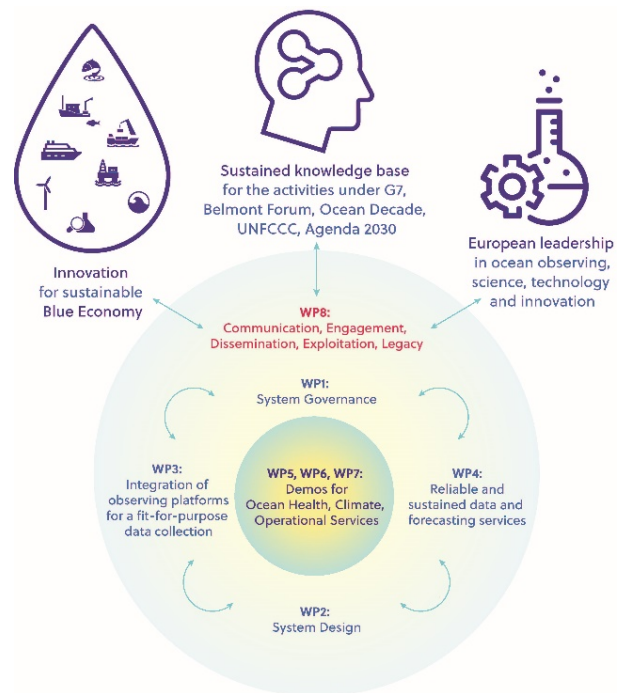
Achieving the success of EuroSea will require that the project consortium can rely on clear messaging and communication outputs delivered by Work Package 8, to trigger effective interactions with stakeholders at the many project’s interfaces.

This communication plan supports the EuroSea consortium in their project-related communication and outlines the Work Package 8 activities. It is based on the main approaches of the EuroSea communication, namely:

- Communication is critical both within the consortium and with the project’s stakeholders;
- Key communication messages should be shared and used by all project partners;
- Communication targets should be well defined and analysed;
- Communication tools should be designed for specific needs, accessible and usable by the partners.

All EuroSea work packages are strongly interlinked. This will allow the project’s collective intelligence to be fully exploited to achieve the ambitions and objectives of EuroSea.

The EuroSea internal communication is ensured by Work Package 9 ‘Coordination’ working in close collaboration with Work Package 8. A set of the EuroSea internal communication instruments is mentioned below. The rest of this plan focuses on the project’s external communication, i.e. communication towards the EuroSea stakeholders.



**Diagram 1: EuroSea structure underpinning the project’s objectives**



**Diagram 2: EuroSea governance composed of internal and external bodies**

## Internal communication tools:

- **Cloud** containing all project details and requirements as well as allowing co-working space and document sharing;
- **Mailing lists** allowing easy contact with task team leaders, work package leaders, steering committee, and other governance bodies of the project (see diagram 2);
- **Virtual meeting platform** (GoToMeeting);
- **Coordinator's messages** sent frequently to the consortium to highlight important developments;
- **Newsletter** which is targeted at the consortium but also those interested in the project's activities;
- **Work package interlinks** diagram will be developed to show the complementarities, relations, benefits, as well as knowledge and best practice transfer throughout the project.

## 3. EuroSea external communication

The value of effective project communication is in delivering clear messages to the project stakeholders through a set of targeted communication tools. EuroSea communication aims at supporting the project's activities and stakeholder engagement. But above all EuroSea communication aims at making a strong and impactful contribution to the project's high-level objectives of promoting ocean observing importance, sustainability, and integration. These are referred to as the EuroSea big messages and will be transmitted through all our communication and engagement activities.

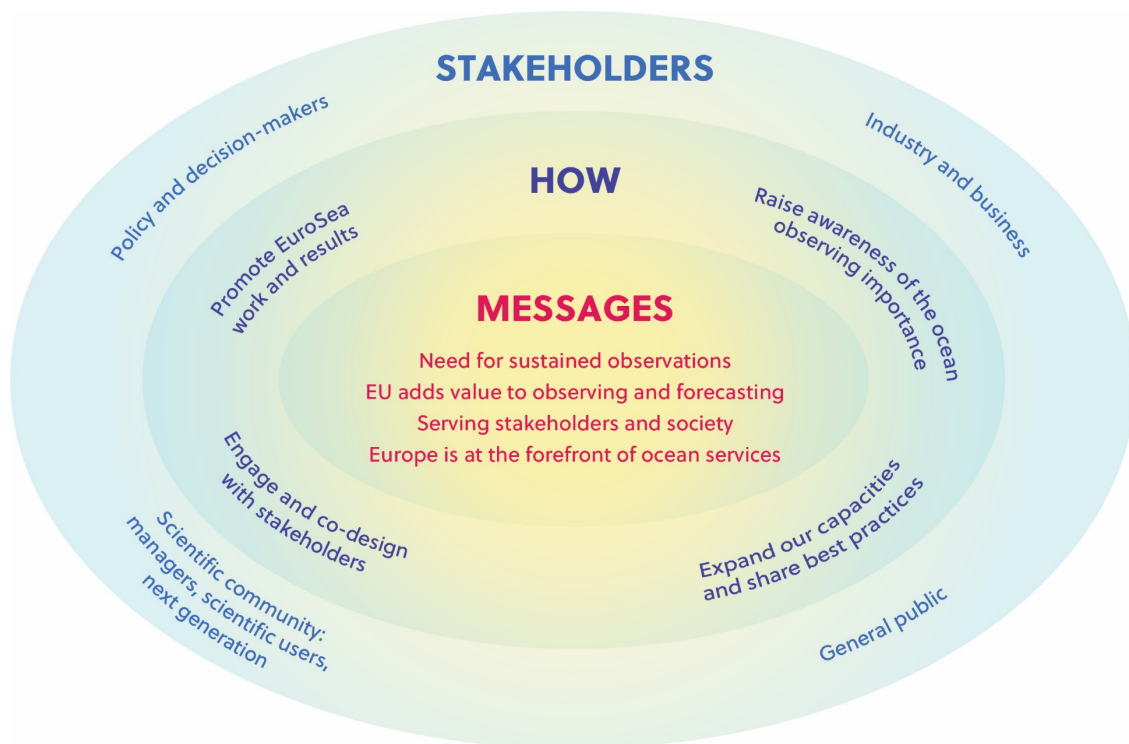


Diagram 3: EuroSea big messages, communication tool categories, and key stakeholder groups

### 3.1. Messages

EuroSea communication underpins four main messages. These messages should be clearly reflected in any communication initiative emanating from the EuroSea consortium. This will allow consistency and ensure effectiveness of our communication efforts.

#### Message 1: Sustained information comes from sustained observations

To obtain comprehensive science-based ocean knowledge and services, we need fit-for-purpose, robust, responsive, integrated, and sustained ocean observing and forecasting systems across Europe and beyond.

The EU invests in integrating and aggregating ocean data across the European countries, but the underlying observations are still predominantly maintained and delivered by individual states, each following their own priorities and working within their possibilities. EuroSea will demonstrate to decision and policymakers (European, intergovernmental, national, and local) that quality data, information, and reliable decision support come from *robust and sustained ocean observing*.

We want to make decision and policymakers value the importance of national ocean observing and forecasting efforts while realising that it is critical to *jointly commit* to ocean observing sustainability.

#### Message 2: EU adds value to ocean observing and forecasting

EuroSea addresses the whole value chain of ocean observing, from data collection to aggregation, modelling, forecasting and services. It is possible to approach this European system of systems throughout the full value chain only in a cooperative pan-European project like EuroSea.

The EU-added value helps to deliver optimised and integrated ocean observing and forecasting throughout the value chain, transferring the data into services for multiple stakeholders, and delivering innovation for the blue economy.

We want to illustrate that EuroSea builds on years of cooperation across the European oceanographic communities spanning disciplines and technologies. EuroSea integrates these achievements to further optimize the existing systems and foster innovation and best practices. This highlights the importance and contribution of the *national efforts* as well as the *critical added value of the European coordination*.

### Message 3: We are serving stakeholders and society

The long-term efficiency and sustainability of the European ocean observing and forecasting system rely on engagement across a variety of societal actors through multi-stakeholder dialogue, co-design, and shared ethics and values, leading to improved and fit-for-purpose services for different users.

We want to show how EuroSea serves society and stakeholders by adopting the principles of Responsible Research and Innovation, diversity, inclusion, and ethics throughout the ocean observation and forecasting value chain.

We will illustrate how EuroSea results bring benefits to society and our outreach will contribute to international Ocean Literacy.

### Message 4: Europe is a global leader in ocean observing and forecasting

EuroSea is a significant part of the European contribution towards the Global Ocean Observing System. The EuroSea work and results will support the implementation of the UN Decade of Ocean Science for Sustainable Development 2021-2030 and related international and European strategies.

Europe has many achievements in integrating, aggregating, and optimizing the national efforts of the EU and associated member states for a shared European benefit. We are now at the forefront of the international know how in ocean observing, forecasting, and services. In EuroSea, we want to strengthen Europe's capabilities and expand its global role.

EuroSea communications will demonstrate the value of the EuroSea partnerships for the global ocean science, observing and forecasting, and how this ultimately benefits every single country involved in the project, and beyond.

## 3.2. Target audiences

The EuroSea communication target audiences have been defined across the Quadruple Helix Model recognizing four major actors in the innovation system: *science*, *policy*, *industry*, and *society*.

Accommodating different stakeholders in the EuroSea target categories helps structure and channel the EuroSea communication. The reality will always be more complex, and some stakeholders belong to several categories. Identifying stakeholders is not enough to define targeted communication outputs. Identification is only the start of the process which will entail analysis and prioritization as key elements of the stakeholder study.

Interactions and engagement with these stakeholders will have to be defined in a specific way, considering not only the knowledge of stakeholders achieved through the stakeholder study, but also the form and time of the targeted interactions. Work Package 8 is supporting the consortium in this work.



This document highlights the main EuroSea stakeholder categories. All four Quadruple Helix categories are equally important for the EuroSea's long-term success.

- **Science**

EuroSea science stakeholders include a diverse network of actors managing, coordinating, or conducting scientific research and oceanographic services. This group includes the research community, science managers and coordinating bodies (some of whom can act as decision-makers, see below) as well as students/the next generation of scientists. The science category includes actors at local, national, intergovernmental, and European levels.

- National oceanographic, hydrographic and met agencies and institutes, and universities;
- Observing network operators;
- National research managers and funders;
- Ocean observing programmes and panels (GOOS, EuroGOOS, IOOS, CIOOS, IMOS, GOOS panels, etc);
- EU and international ocean data aggregation initiatives (EMODnet, Copernicus, SeaDataNet, Pangaea, etc);
- Related EU projects (e.g. the EuroSea sister project Blue Cloud but also many others) as well as Belem and Galway programmes;
- EU and international weather forecasting centres (ECMWF, WMO);
- International Earth Observation initiatives (GEO and GEO Blue Planet);
- Global environmental assessments (WOA, GOSR, UNFCCC);
- Research Infrastructures (ESFRI, etc) and related data management initiatives;
- Joint Programming Initiatives;
- ICES;
- Future UN Ocean Decade initiatives;
- Oceanographic research associations (national, EU, global - POGO, etc).

- **Industry**

In the EuroSea context, this category includes producers of ocean observing sensors and equipment, co-developers of oceanographic products and services, and users of data, products, and services delivered through EuroSea and broader ocean observing and forecasting activities. The companies that intend to commercialise the products and services developed in the demo work packages will require robust exploitation plans, risk and benefit assessments, and methodologies. They will also benefit from the networking opportunities in the project.

- Private companies that supply ocean observing sensors and other equipment (e.g. Teledyne, NKE Instrumentation, Kongsberg Maritime).
- Co-developers of products and services from the EuroSea demo work packages (e.g. Xylem Analytics, Mowi, CTAQUA, Port of Barcelona, Nologin). The co-development process involves both the suppliers of ocean observing technologies and the users. This process requires two-way communication in terms of demonstrating the capabilities of ocean observations to the users and determining their needs.

- Users of these products and services, as well as data providers and intermediate users (e.g. aquaculture companies, port operators, shipping companies). The effectiveness of the products and services developed in the demo work packages will be communicated to companies in these sectors.

- **Policy and decision-makers**

Policy and decision-makers are actors within governmental settings who formulate, adopt, implement, or evaluate policies at European, intergovernmental, national, and local levels. Policy and decision-makers require short and concise recommendations and visual documentation setting out the EuroSea findings in a broader policy landscape relevant to the stakeholders' portfolios.

- European Commission DG R&I – funder of the project;
- Other European Commission programming and strategy mechanisms (Horizon Europe, Ocean Governance, Marine Knowledge, Copernicus, Cloud, Mission Earth) and related Directorates-General (R&I, MARE, EEAS, GROW, CNET);
- EU Directives (MSFD, WFD, MSP, CPF, DCF, Plastics) serviced by DG Environnement, DG MARE, JRC;
- European Environment Agency;
- Satellite agencies (ESA, EUMETSAT, others);
- European Parliament (intergroups, committees, MEPs);
- Regional Sea Conventions;
- Ocean governance initiatives (e.g. in BBNJ, MSP, EU International Ocean Governance Forum);
- UN agencies (IOC, WMO), programmes (e.g. UNEP) and conventions;
- OECD Ocean Economy working group.

- **Society/general public**

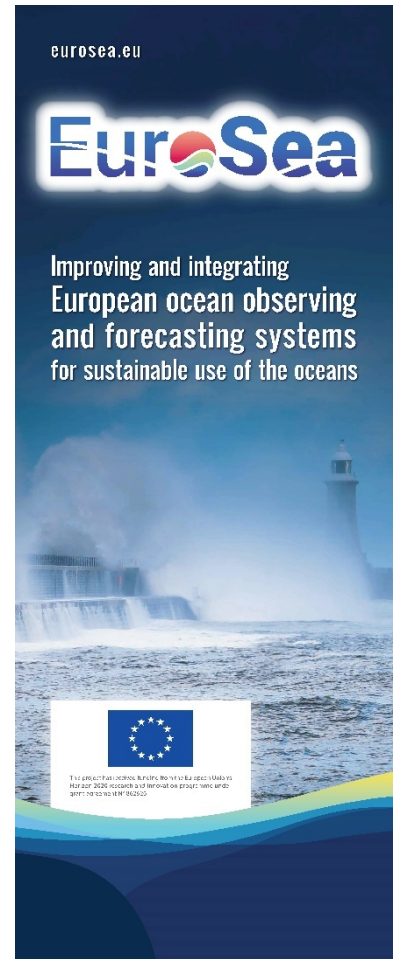
This category includes all members of society who have no specific knowledge of ocean observing and forecasting and are not involved in the groups and organizations listed above. The general public will receive awareness-raising materials to trigger their interest, improve their ocean literacy and increase their citizen responsibility for sustainable use of the ocean resources. This category will include society at different scales, disciplines, and ages. The citizen science activities are of particular relevance to EuroSea, as they are bridging the gap between ocean literacy and scientific co-design and engagement with the general public.

### **3.3. Communication tools**

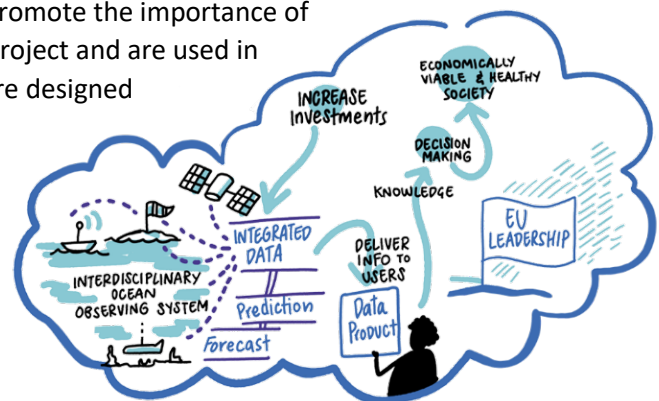
In EuroSea, we will work to deliver our communication messages to various audiences through a set of communication tools. Capacity development activities will help us to gain additional knowledge. Different communication activities of the project will satisfy different needs, from promoting the project itself, to shedding light on the importance of the ocean observing sustainability, to improving the consortium's capacities and stakeholder engagement. Gantt chart in chapter 4 shows the delivery time of the key communication outputs.

- **Visibility of the EuroSea project and results**

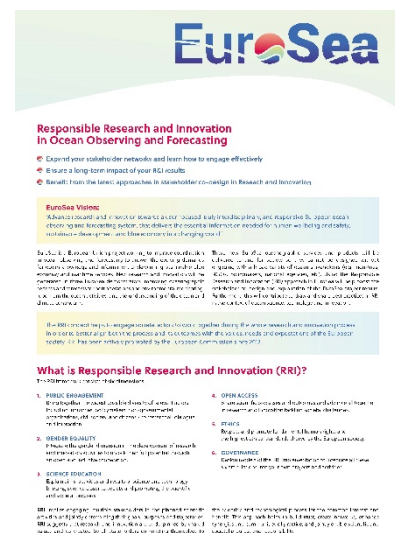
- **EuroSea logo** on all project outputs and communication activities ensures brand visibility and recognition. An accompanying **brand book** is available.
- **Website** (<https://www.eurosea.eu/>) includes the project's details and will grow to include information for broad stakeholders. It will feature videos of oceanographic activities, the EuroSea public awareness video, infographics, the project's achievements, as well as relevant news and events.
- **Twitter** account (@Euro\_Sea; #EuroSea) helps to attract broader audiences. Some EuroSea targets are particularly active users of twitter, e.g. policy and decision-makers as well as EU projects and initiatives. Twitter also helps reaching out to the general public with awareness raising videos and infographics. EuroSea will aim at reaching at least 1,000 followers by the end of its lifetime.
- **Project business cards and flyers** attract attention and direct interested stakeholders to the EuroSea website.
- **Roll-up banner** (featured on the right) highlights the EuroSea at meetings and events.
- **Presentation deck** (short and long versions) and a presentation template allow consortium members to promote the project and its results in a harmonised way, adding to the recognizability of the project and a strong EuroSea brand.



- **Infographics** (featured on the right) promote the importance of ocean observation and the EuroSea project and are used in various outputs. The infographics were designed based on the visual records of the EuroSea kick-off meeting and reflect the partners' narratives.
- **Newsletters** containing information on the project's achievements and initiatives will be circulated at least twice a year to the consortium and external subscribers.
- **Press releases** on specific EuroSea announcements will be drafted by Work Packages 8 and 9 for and transmitted to the project partners' press services who can adapt them.
- **Exhibition stands** will be developed for the use at relevant events. The stands will be interactive and designed to inform different target audiences across the quadruple helix of science, policy, industry, and society. The stands will combine various EuroSea outputs, e.g. roll-up, flyers, videos, etc.



- **EuroSea legacy report** will highlight the project’s achievements, advice on Responsible Research and Innovation, best practice in knowledge and technology transfer, and ensure that the project’s outcomes inform relevant science policy agendas. All best practices will be sustained beyond the project’s lifetime in an open-access online repository coordinated by UNESCO IODE and GOOS, the Ocean Best Practices portal.
- **Ocean observing importance and sustainability**
  - **Video** will be produced to help raise public awareness of the ocean observing relevance to our daily lives. It will explain the importance of the EU initiatives and bring about the big EuroSea messages outlined above.
  - **YouTube channel** will feature the EuroSea main video but also relevant other videos demonstrating different ocean observing and forecasting practices (e.g. biological sampling, deployment of oceanographic devices, modelling activities, etc). Not all videos necessarily need to follow extensive scripts and sophisticated editing to feed a YouTube channel. Short ‘lo-fi’ videos can be very effective for communication through the social media. For example, leaders of the demo work packages can explain their work in a one-minute interview.
  - **Participation in national and international public events** will be part of the EuroSea communication effort. Local policy and decision-makers and general public will be invited to attend. At these events EuroSea will display its exhibition stand, infographics, videos and may co-create other activities with the EuroSea consortium partners.
- **EuroSea capacity building and best practices**
  - **Factsheets** will highlight concepts and methodologies useful for the consortium (e.g. the fact sheet on Responsible Research and Innovation featured on the right).
  - **Training workshops** will strengthen the consortium’s capacities. Among the themes there will be stakeholder engagement, effective communication, business development, and intellectual property rights. Trainings will require physical presence or take place as webinars.
  - **Seminars** will help engage with university students as the next generation of professionals in the ocean observing value chain. This will allow EuroSea to both contribute to training of young scientists and collect ideas from the future oceanographers who will help implement and benefit from the project’s integration, optimization, and sustainability efforts.
  - **Ocean Best Practices portal** coordinated by UNESCO IODE and GOOS will receive all relevant best practices developed in the project.



- **Stakeholder engagement**

- **Presentations and networking** at relevant conferences, workshops, and exhibitions will help highlight EuroSea and enable interaction with stakeholders.
- **Stakeholder workshops** will be organized for a focused engagement with specific users and targets.
- **Policy briefings** will be investigated, potentially co-designed with related European projects.
- **Stakeholder trainings** will promote the use of the EuroSea oceanographic products (e.g. for sea level measurement in ports or for extreme marine events monitoring) and build skill capacities for the organizations from countries with economies in transition (e.g. coastal management tools for the African continent).
- **Webinars** on the project results will help generate momentum around EuroSea, collect stakeholder feedback, and foster cooperation for the results' legacy.

## 4. Impact monitoring

The EuroSea consortium has set out to optimize, advance, and innovate many aspects of the ocean observing value chain, from technologies to products and services, from governance to capacities and best practices. Communications will be an important enabler in this work. A subset of the EuroSea Steering Committee established a protocol to evaluate the effectiveness and long-term impacts of the EuroSea activities. This process was pioneered by Work Package 8 leader working closely with the consortium.



The EuroSea impact monitoring protocol reflects the ambitions and objectives of the project laid out in the impact section of the Description of Action (DoA), the requirements laid out in the call, and the needs outlined in the Tsukuba Communique. This will be the first known protocol for measuring impact in an EU ocean observing and forecasting project.

This Communication Plan was updated in 2021 when the development of the impact monitoring protocol was completed. The following steps were taken to complete the protocol and define the list of EuroSea impacts:

- Analysis of the EuroSea impact section once the project started its work;
- Impact thought-mapping session at the EuroSea kick-off meeting, November 2019;
- Development of the impact monitoring protocol by leaders of Work Packages 8 and 1 and in liaison with the EuroSea Exploitation Manager, January 2020 - January 2021;
- Discussions with the EuroSea Steering Committee and each individual work package, November 2020-January 2021;
- Adoption of the impact monitoring protocol at the EuroSea General Assembly, January 2021;
- Contribution/adaptation and confirmation of the expected impacts by WP (co-)leaders, February - September 2021;

- Finalization of the table of the expected impacts by WP8 leader and Exploitation Manager, October 2021;
- Delivery of an impacts page of the EuroSea website and an online impact tracking tool for the partners, by WP8 leader and Exploitation Manager – ongoing, completion foreseen in January 2022.

Impact assessment is paramount for an innovation action such as EuroSea. In addition to the list of expected impacts in the EuroSea grant agreement, the project undertook a more profound assessment of potential impacts. It is important to note that impact assessment is not performance evaluation. These terms overlap but are distinct. Performance relates to the efficient use of resources, while impact relates to the transformative effect on users. Impacts can be intended or unintended (spill-off effects). As per the DoA, the EuroSea impacts are considered both during and post project.

The protocol considers the following major overarching impacts of EuroSea:

- Support the implementation of the Future of the Oceans Initiative of the G7 Science Ministers (the Tsukuba Communiqué);
- Improve fit for purpose sustained observing and forecasting system in Europe;
- Demonstrate utility of European ocean observing system through development of services in ocean health, operational services and climate;
- Demonstrate important benefits to society.

In addition, eight specific impact areas have been identified, as follows:

1. Improve integration and coordination of various components of the European observing system and strengthen the Global Ocean Observing System (GOOS);
2. Increase data sharing and integration;
3. Deliver improved climate change predictions;
4. Build capacity, internally in EuroSea and externally with EuroSea users, in a range of EuroSea areas;
5. Develop innovation, including exploitation of novel ideas or concept, shorten the time span between research and innovation and foster economic value in the blue economy;
6. Facilitate methodologies, best practices, and knowledge transfer in ocean observing and forecasting;
7. Contribute to policy making in research, innovation, and technology;
8. Raise awareness of the need for a fit for purpose, sustained, observing and forecasting system in Europe.

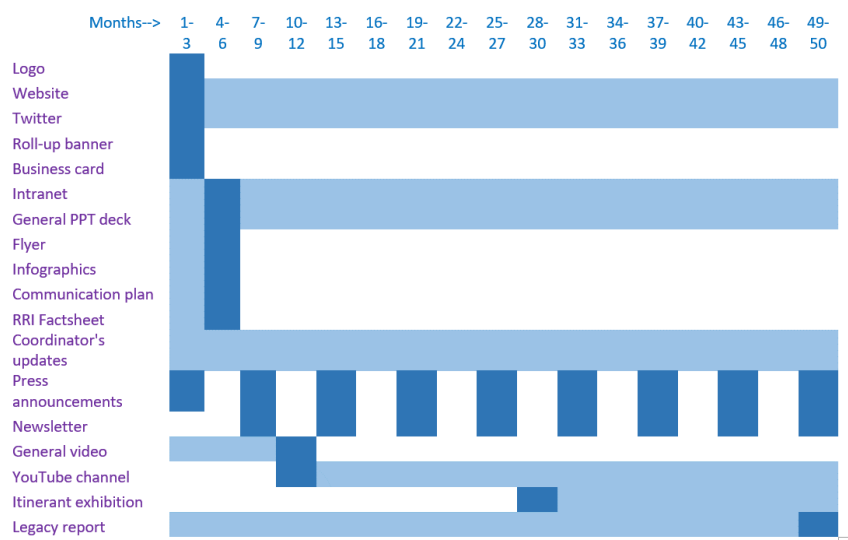
The impacts tracking has been designed to include:

- Connection with stakeholders and SMEs;
- Innovation aspects;
- Contribution to raising awareness of the value of ocean observing and forecasting;
- Contribution to the Ocean Best Practices System.

The impact tracking is harvesting quantitative and qualitative data and information allowing to estimate the impact. These include the reflection of the raising Technology Readiness Levels, number of new observing networks established, number of specific stakeholder interactions that have achieved needed results, number of joint strategies, referenced documents, best practices submitted to the international Ocean Best Practices System, or direct stakeholder feedback, like satisfaction surveys to users, or testimonials from public authorities or policy-makers. A dedicated webpage is being developed to reflect the EuroSea impacts as well as their progress.

## 5. Timeline

Some of the key communication outputs are featured in this Gantt chart. The list includes only the activities for which the timeline has been already defined as of April 2020. The time of delivery is marked in dark blue; the time of preparation, use, or updates – in light blue.



## 6. Conclusion

This deliverable is intended as a strong basis of work not only for the EuroSea Work Package 8 in charge of communication, but for the whole project consortium, bringing together 55 organizations across Europe. It is key for a large consortium to develop a feeling of community and a clarity in common objectives and communication messages. This Communication Plan is therefore providing not only guidance on the outreach activities of the project, but also the formulations of the strategic narratives that can support the project partners in their stakeholder engagements.

The impact monitoring, pioneered by Work Package 8 at the EuroSea kick-off and featured in this plan, is a first known attempt to develop a protocol to pinpoint the impacts across a range of the EuroSea activity areas and perform a robust assessment.

Communication is intrinsically an adaptable and open tool. The EuroSea communication plans are reviewed regularly and the adaptations of these plans in view of the COVID-19 pandemic restrictions have been reflected in Deliverable 8.2 Updated Dissemination and Exploitation Plan.