User-driven applications and tools for Climate-Informed Maritime Spatial Planning and integrated seascape management, towards a resilient & inclusive Blue Economy

D2.1 – Stakeholders engagement plan and existing applications/services report

WP2 – Stakeholders identification & engagement

Project funded from the EU HE research and innovation programme under GA No. 101112919

Lead Contributors	CDP, EARSC
Other Contributors	GSH, FMI, ICCS, USE, WTOC, IN2, METIS, RG, CRETE, MMAIP, VSML, MLG, BRET, DPRM, AIRC, ISL
Reviewers	ISL, PHEL, MMAIP

Due Date	31.05.2024
Delivery Date	30.05.2024
Type	R — Document, report
Dissemination Level	PU - Public

Keywords	Stakeholder Engagement Plan, End-Users needs, EO services, Gap Identification

Document History

Version	Date	Description	Reason for Change	Distribution
0.1	22.04.2024	Initial Draft (v1)		CDP (internal)
0.2	29.04.2024	2nd Draft (v2)	Review and edits by partners	CDP, EARSC, GSH, AIRC, IN2, METIS, WTOC, NEREUS
0.3	03.05.2024	3rd Draft (v3)	Review and edits by partners	CDP, EARSC, GSH, AIRC, IN2, METIS, WTOC
0.4	06.05.2024	4th Draft (v4)	Review and edits by partners	CDP, EARSC, GSH, AIRC, IN2, METIS, WTOC
0.5	07.05.2024	5th Draft (v5)	Review and edits by partners	All T2.1 partners
0.6	21.05.2024	6th Draft (v6)	Review and edits by partners	CDP, EARSC, GSH, WTOC, ISL, end-users
1	30.05.2024	Final Document (Final)	Review by internal reviewers	GSH

Legal Disclaimer

Table of Contents

1 Executive Summary

The present document is deliverable D2.1 entitled “Stakeholders engagement plan and existing applications/services report”. This report comprises **a joint deliverable** connected to Task T2.1 “OCEANIDS stakeholders Community: Exchange of best practices, capacity building and networking between groups” (led by CDP) and Task 2.2 “Assessment of current gaps between stakeholders' needs (regions and communities) and existing applications and services available” (led by EARSC) of Work Package (WP) 2 “Stakeholders identification & engagement”, led by WTOC. This report includes plans for engaging and consulting stakeholders, identifying challenges in the regions and prioritising gaps.

The primary objective of Task 2.1 within WP2 is to grow the size, reach and expand the activities of the ecosystem to increase its scientific and socio-economic impact. To this end, the OCEANIDS consortium aims to engage with potential end-users and group stakeholders, which includes local authorities and public agencies at the sub-national, national, European, and international levels.

This task will be performed in step with Task 2.4, which focuses on citizen engagement, to ensure cohesion and exploit synergies in stakeholder engagement activities. To achieve this, OCEANIDS will facilitate a set of liaison activities by capitalizing on the links its participants have with relevant authorities, agencies, and stakeholders, their participation in events and fora in the field of biodiversity, the CC mitigation plan, and more. Additionally, OCEANIDS plans to connect with the local stakeholders in and near the area of the validation activities, as well as in areas with potential where the OCEANIDS approach will be implemented in the future.

Task 2.2 is complementary to Task T2.1, building on the created community and identifying additional relevant stakeholders. The main objective of the task is to collect stakeholders’ needs (regions and communities), understand the Earth observation (EO) potential services which could support the targeted users, and identify the gaps between the offer and users’ requirements.

This task will be aligned with T2.1, with technical Work Packages, which will contribute to and benefit from the consultations conducted in the task, and with WP6 dedicated to Dissemination and Communication activities. Based on the outcomes of the task, new promotional materials will be produced, and communication channels will be key to gathering user requirements and EO offers.

In this document the work performed during the first six (6) months of the project will be presented, leading to 1) the creation and submission of the **Stakeholder Engagement Plan** which will serve as the basis and as a guiding document for the engagement activities that the OCEANIDS consortium plans to undertake throughout the entire duration of the project; 2) preliminary gap analysis outlining the initial path for the development of OCEANIDS platforms.

List of Tables

List of Figures

Table 1. List of Acronyms/Abbreviations

Organization Acronym / Abbreviation	Explanation
AIRC	ASSOCIACAO PARA O DESENVOLVIMENTO DO ATLANTIC INTERNATIONAL RESEARCH CENTRE
BRET	REGION BRETAGNE
CDP	CDP WORLDWIDE (EUROPE) GEMEINNUTZIGE GMBH
CREO	CREOTECH INSTRUMENTS SPOLKA AKCYJNA
CRETE	KRITI
DRPM	SECRETARIA REGIONAL DO MAR E DAS PESCAS
EARSC	EUROPEAN ASSOCIATION OF REMOTE SENSING COMPANIES
FMI	ILMATIETEEN LAITOS
HCMR	HELLENIC CENTRE FOR MARINE RESEARCH
HPA	HERAKLION PORT AUTHORITY AE
ICCS	EREVNITIKO PANEPISTIMIAKO INSTITOUTO SYSTIMATON EPIKOINONION KAI YPOLOGISTON
IN2	IN2 DIGITAL INNOVATIONS GMBH
ISL	INSTITUTE OF SHIPPING ECONOMICS AND LOGISTICS
GSH	GEOSYSTEMS HELLAS IT KAI EFARMOGESGEOPLIROFORIAKON SYSTIMATON ANONIMIETAIREIA
METIS	UAB METIS BALTIC
MLG	AYUNTAMIENTO DE MALAGA
MMAIP	MINISTRY OF MARITIME AFFAIRS AND INSULAR POLICY
NEREUS	RESEAU DES REGIONS EUROPEENNES UTILISATRICES DES TECHNOLOGIES SPATIALES
OHB	OHB DIGITAL SERVICES GMBH
PHEL	HELSINGIN SATAMA OY
PRAA	RAAHEN SATAMA OY
PRAU	RAUMAN SATAMA OY
RG	RESILIENCE GUARD GMBH
USE	UNIVERSIDAD DE SEVILLA
V-SML	VARSINAIS-SUOMEN LIITTO
WTOC	WEB2CLIMATE IKE
AI	Artificial Intelligence
API	Application Programming Interface
CAP	Climate Adaptation Planning
CC	Climate Change
GA	Grant Agreement
EC	European Commission
EO	Earth Observation
GIS	Geographic Information System
M	Month
MECE	Mutually Exclusive and Collectively Exhaustive
PCM	Project Cycle Management
RS	Remote Sensing
SMEs	Small-Medium Enterprises
O-DSP	OCEANIDS Decision Support Platform
TWG	Thematic Working Groups
WP	Work Package

2 Introduction

Coastal regions are often characterised by strategic socio-economic assets (i.e., linked to tourism, fisheries, harbours, and shipyards). This makes coasts particularly sensitive to Climate Change (CC) impacts, which primarily expose infrastructure and local population. Human activities are also responsible for additional pressures on coastal ecosystems, often generating more immediate impacts than those expected from CC by aggravating existing vulnerabilities. The need for CC adaptation in coastal areas is evident and is predicted to become progressively more significant over time due to the grim long-term forecasts of climate variables. Coastal area adaptation strategies should be iterative and dynamic, due to the evolving dynamics of coastal territorial systems. Furthermore, CC adaptation measures should consider local ecology, economy, society, politics, and technology. Therefore, the definition of Climate Adaptation Planning (CAP) must consider specific local socio-economic contexts. The OCEANIDS project aims to develop the tools and applications that enable a more resilient and inclusive society in coastal regions via better-informed and integrated seascape management. The central concept is to collect, harmonize, and curate existing climate data services, making data accessible, reusable, and interoperable for developing local adaptation strategies.

The role of WP2 “Stakeholders identification & engagement” is to establish new communities of stakeholders and enhance existing ones, to understand the potential EO services for Climate adaptation in coastal areas to be used by municipalities, regions or communities of interest-business sectors, organize and promote EO service requirements for the regions and develop a community approach, to quantify societal impacts and responses to weather risks and enhance citizen’s engagement and co-creation of awareness via ephemeral social networks. WP2 consists of the following tasks:

- **Task 2.1: “OCEANIDS stakeholders Community: Exchange of best practices, capacity building and networking between groups” [M1-M32]**
- **Task 2.2: “Assessment of current gaps between stakeholders' needs (regions and communities) and existing applications and services available” [M1-M32]**
- Task 2.3: “Quantifying societal impacts and responses to weather risks” [M1-M32]
- Task 2.4: “Social innovation: inclusion of citizens and engagement in co-creation via ephemeral social networks [M10-M31]

This document is the report presenting the Stakeholders Engagement Plan and the collected requirements from the End-Users of the OCEANIDS project. More specifically, it is a joint deliverable containing the output of Task 2.1 “OCEANIDS stakeholders Community: Exchange of best practices, capacity building and networking between groups” and also the output from Task 2.2 “Assessment of current gaps between stakeholders' needs (regions and communities) and existing applications and services available”. The following sub-sections present the scope and objectives, as well as the structure of the document.

2.1 Scope and Objective of the deliverable

The main scope of this deliverable is to present the creation and submission of the **Stakeholder Engagement Plan**, which will serve as the basis and as a guiding document for the engagement activities that the OCEANIDS consortium plans to undertake throughout the entire duration of the project. Moreover, one of the main objectives is to collect stakeholders' needs (regions and communities), understand the EO potential services which could support the targeted users, and **identify the gaps** between the offer and users' requirements.

2.2 Structure of the Deliverable

This document consists of the following chapters:

- **Chapter 1** is the executive summary of the deliverable
- **Chapter 2** includes the Introduction, main scope and structure of the deliverable
- **Chapter 3** is devoted to the Stakeholder Engagement Plan
- **Chapter 4** outlines the assessment of current gaps between stakeholders' needs (regions and communities) and existing applications and services available
- **Chapter 5** summarises the conclusions of this deliverable

2.3 Relation to other projects and tasks

In **Figure 1**, the OCEANIDS overall WPs structure workflow and the interconnection among the WPs are depicted. WP2 is directly connected to WP3, supplying it with valuable and insightful information. WP3, in turn, gathers feedback from end users, identifying their needs and requirements, and translates this feedback into relevant data sources that will be further used by WP4. Additionally, WP2 provides essential information to WP4, which is responsible for creating the technical tools. Collectively, these work packages contribute to WP5, where the validation activities take place.

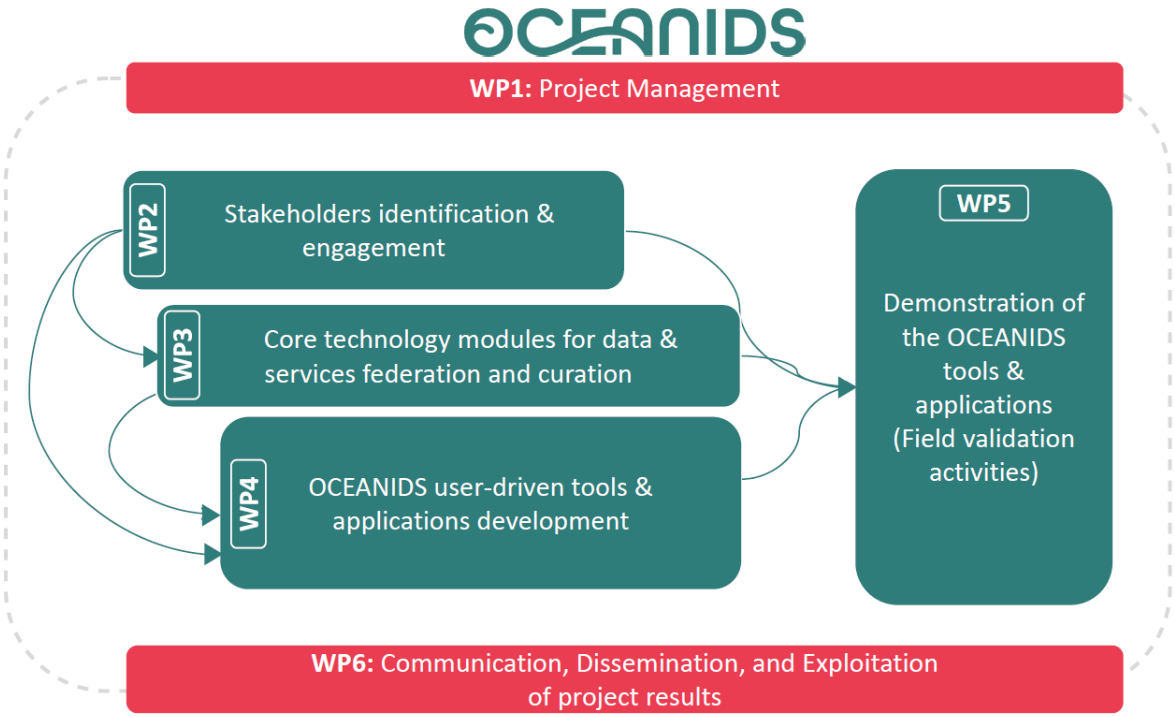

Figure 1. OCEANIDS WPs structure workflow

3 Stakeholders Engagement Plan

3.1 Background and Plan Drafting Modalities

The **Stakeholders Engagement Plan** is the result of the initial phase of Task 2.1 "OCEANIDS stakeholders Community: Exchange of best practices, capacity building and networking between groups".

The **initial phase** comprised initiation and planning activities for a total duration of 6 months. Two Sub-Tasks were conducted during this first phase:

- 3.1.1 Stakeholder Mapping: Workshop for the identification of stakeholders
- 3.1.2 Elaboration of the Stakeholders Engagement Plan

The **implementation phase** of Task 2.1 will start with the approval of the present Stakeholders Engagement Plan and run from M7 to M32 (until the end of the project). The implementation phase will be comprised of the following Sub-Tasks:

- 2.1.3 Execution of the Stakeholders Engagement Plan
- 2.1.4 Closure and Report of the Stakeholders Engagement Plan

Task 2.1 started with the organization of a **Stakeholder Mapping Workshop** on February 5th, 2024. The agenda of this Workshop is presented in **Table 2**. The Workshop was run online by CDP and facilitated by Étienne Métais, Associate Director Cities, States & Regions at CDP, and attended by the following participants/partners: CDP (facilitator), MMAIP, METIS, FMI, HPA, EARSC, HCMR, ICCS IN2, AIRC, GSH, RG, MLG, NEREUS, OHB and WTOC.

Table 2. Information of the Workshop organised by CDP

ID card	
Workshop for the identification of stakeholders (WP2)	
Date	05/02/2024
Time	11:00 – 13:00
Agenda of the workshop Step 1: List stakeholders – Build clusters Step 2: Identify interest Step 3: Identify influence Step 4: Create stakeholders' tiers/categories Step 5 (if time allows): Start creating a list of engagement activities per activity.	
The output of this workshop served as the main input for the creation of the Stakeholder Engagement Plan	

In its preliminary remarks of the Workshop, Étienne Métais highlighted the purpose of performing a Stakeholder analysis. Performing a stakeholder analysis aims to:

- Identify those who should be encouraged and assisted to participate
- Identify stakeholders, including winners and losers, those with rights, interests, resources, skills and abilities to participate in or influence the course of a project
- Improve the project sensitivity to the perceived needs of those affected
- Reduce negative impacts on vulnerable and disadvantaged groups
- Enable useful alliances which can be built upon
- Identify and reduce risks; for example, identify areas of possible conflicts of interest and expectations between stakeholders, so that real conflict is avoided before it happens

The 2-hour workshop went through **8 Steps**:

- **Problem Statement**
- **Stakeholders Identification (Generic)**
- **Stakeholders Clustering**
- **Stakeholders Identification (Nominal)**
- **Cluster Breakdown**
- **Interest-Power Grid**
- **Activities Menu**
- **Activities Attribution**

The Workshop was conducted in a participative manner on a Miro board[1] (Workshop Link), as depicted in **Figure 2**, which has rich, ready-to-use native capabilities for teams of every size to build out their vision with a creative, collaborative edge, including supporting workflows.

Moreover, internationally known non-proprietary conceptual methodologies and tools were used, such as the Logical Framework Approach[2] [Project Cycle Management (PCM) Guidelines], Cluster Diagram[3], Interest-Power Grid[4], also known as Interest-Influence Matrix or Influence-Impact Grid, MoSCoW method[5], and the MECE (Mutually Exclusive and Collectively Exhaustive) method[6].

[1] https://miro.com/product-overview/
[2] https://en.wikipedia.org/wiki/Logical_Framework_Approach
[3] https://en.wikipedia.org/wiki/Cluster_diagram
[4] https://www.projectmanagement.com/wikis/368897/stakeholder-analysis--using-the-power-interest-grid
[5] https://en.wikipedia.org/wiki/MoSCoW_method
[6] https://en.wikipedia.org/wiki/MECE_principle

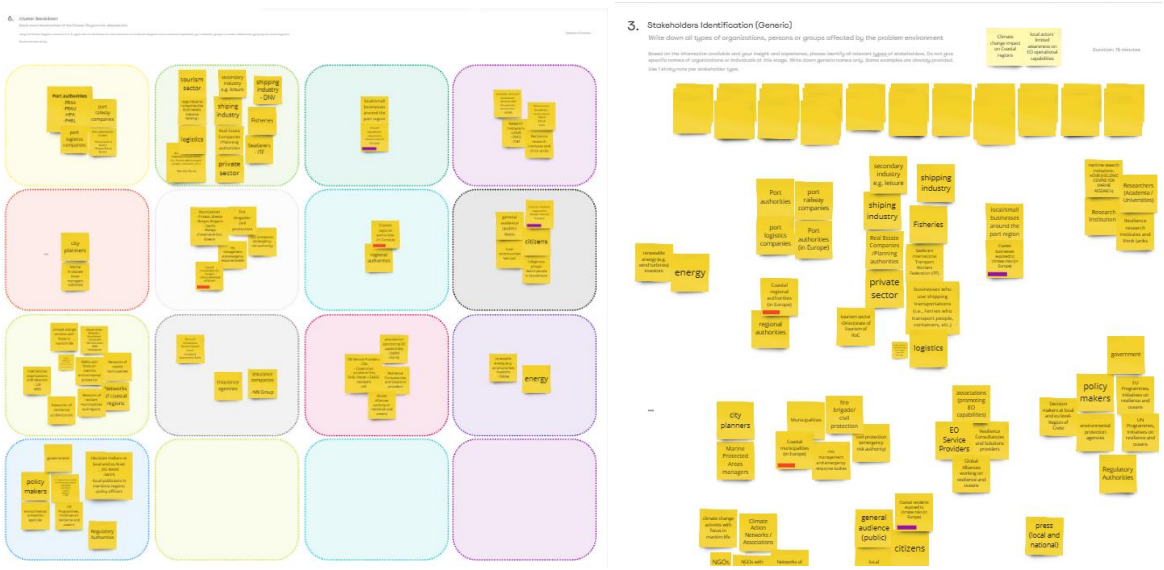

Figure 2. Stakeholders and Activities Clustering (snap from Miro board).

The first output of the Workshop was **a list of relevant Stakeholders, clustered by Groups**, as depicted in **Figure 3**, and an assessment of their respective importance and influence in achieving the OCEANIDS objectives. This output is presented in section 3.2 of this document hereafter.

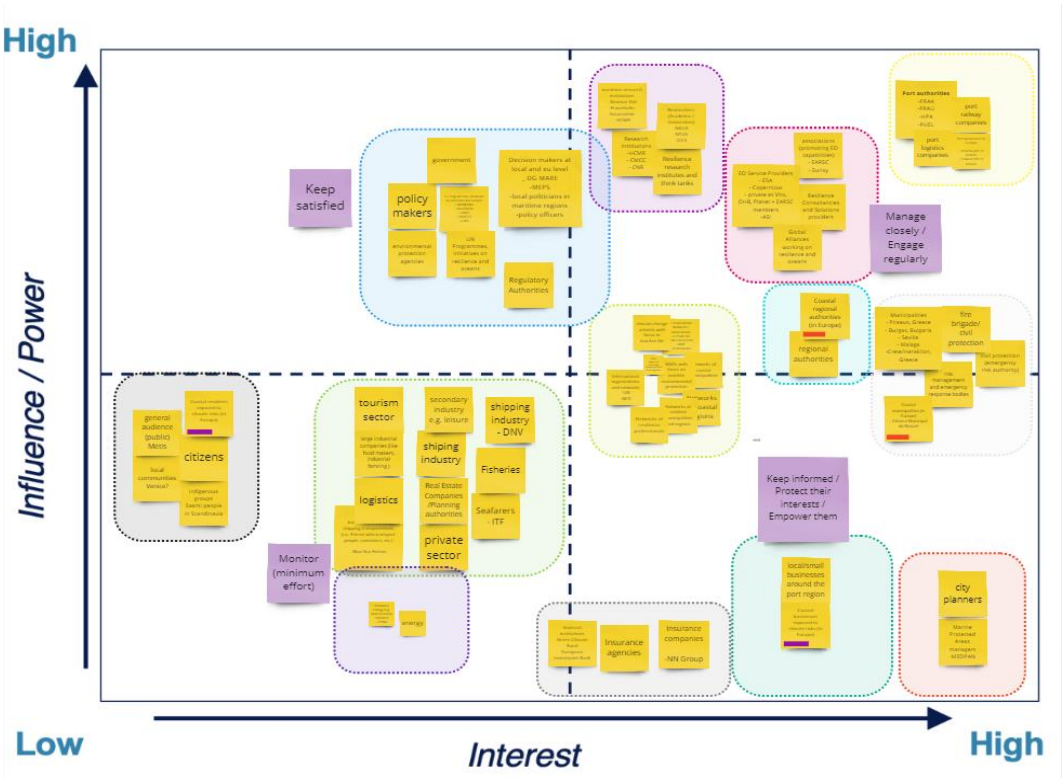

Figure 3. Stakeholder Grouping (screenshot from Miro board)

The second output of the Workshop was a **list of possible Stakeholder engagement activities**, as presented in **Figure 4**, clustered into the seven types of Activities defined in the Grant Agreement (GA), under Task 2.1.

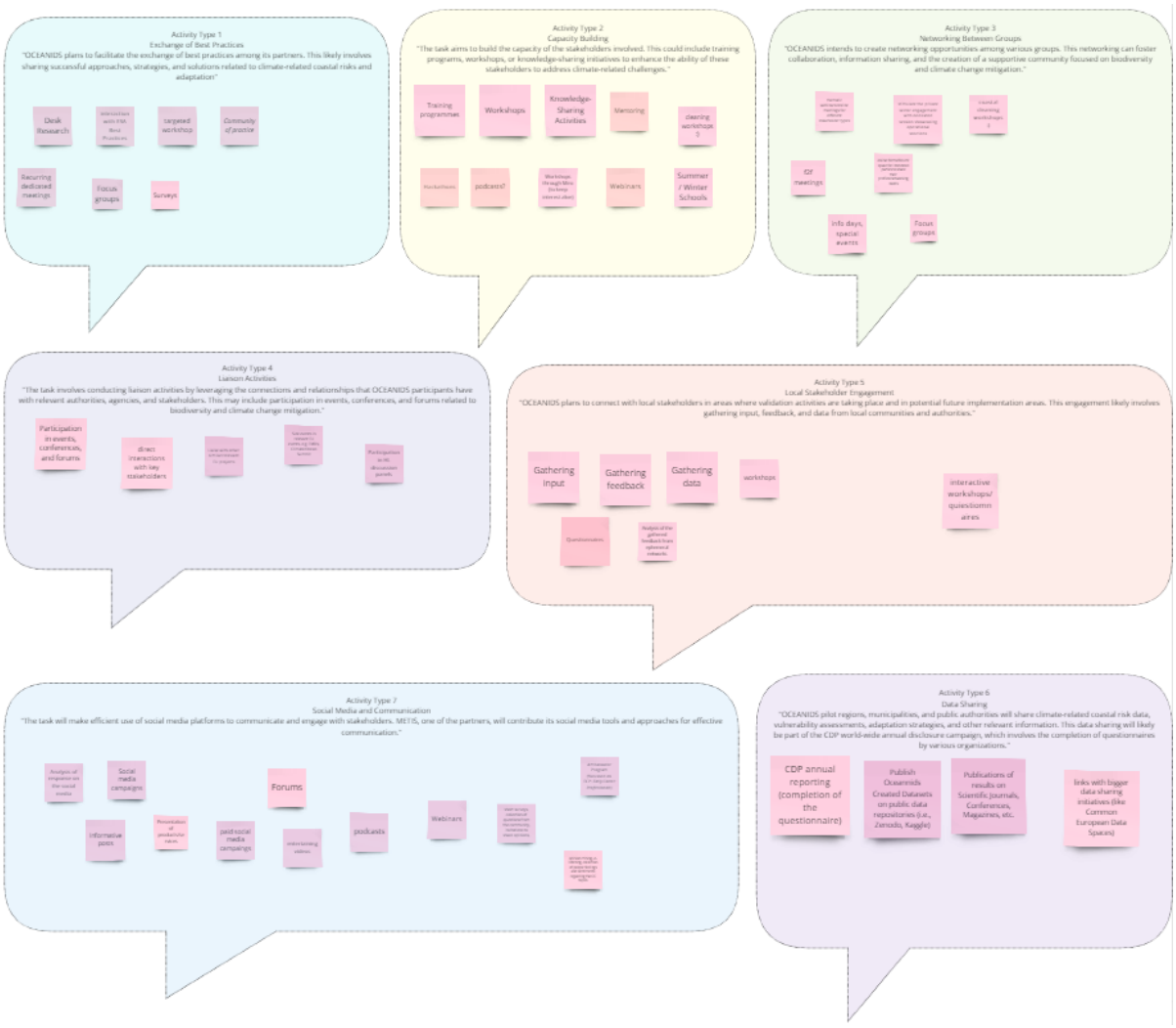

Figure 4. Stakeholder Engagement Activities (screenshot from Miro board)

The result of combining these two outputs was **a two-dimensional matrix** (**Figure 5**) which displayed **Stakeholders Groups (horizontally)** and **Activity Types (vertically)**, thus allowing the creation of various suggestions for engaging different stakeholders through different modalities, for example, "coastal municipalities in workshops". Each cell of the table could therefore host **"mini-plans"**, the collection of which would form the overall OCEANIDS Stakeholders Engagement Plan presented hereafter in sections 3.3 to 3.7.

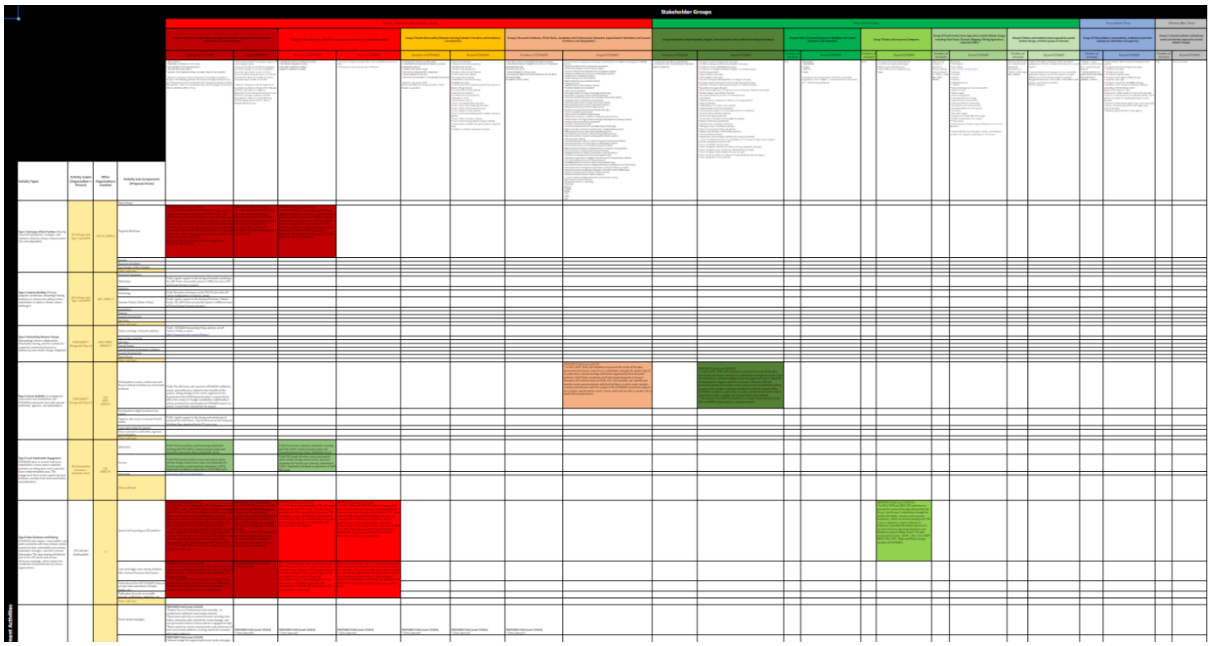

Figure 5. The two-dimensional matrix which displayed Stakeholders Groups (horizontally) and Activity Types (vertically), including the Mini-plans

All the Task 2.1 organizations were given 2 months (March to April 2024) to review and complete the matrix, once again in a participative manner, and the following partners did contribute CDP, METIS, IN2, FMI, HCMR, NEREUS, RG, AIRC and GSH.

**Upon request by the reader, links to the above documents in the figures can be provided.*

3.2 Identified Stakeholders Groups and Stakeholders

In total, **11 OCEANIDS-relevant Stakeholder Groups** (or clusters) could be identified and qualified during the Workshop:

- **Group 1**: Coastal Municipalities and Regions (and their subsequent departments, authorities and professionals)
- **Group 2**: Port Authorities (and their subsequent departments and professionals)
- **Group 3**: EO/ RS (Remote Sensing) Solution Providers and Resilience Consultancies
- **Group 4**: Research Institutes, Think Tanks, Academia and professional networks (specialised in Maritime and Coastal Resilience and Adaptation)
- **Group 5**: Networks of Municipalities, Regions, Ports (and other Non-profit Interest Representatives)
- **Group 6**: Other EU-funded projects in Maritime and Coastal Resilience and Adaptation
- **Group 7**: Banks and Insurance Companies
- **Group 8**: Private Sector [most exposed to coastal climate change, including Real Estate, Tourism, Shipping, Fishing/Agriculture, especially Small-Medium Enterprises (SMEs)]

- **Group 9**: Citizens and residents (most exposed to coastal climate change, and their groups of interest)
- **Group 10**: Policymakers, Governments, Institutions (and their subsequent authorities and agencies)
- **Group 11**: General audience and private sector (not directly exposed to coastal climate change)

Based on the Interest-Power Grid, the following groups have been assessed as having:

- For Groups **1, 2, 3** and **4**: Mid-to-High Importance AND Mid-to-High Influence for the achievement of the objectives of OCEANIDS. These groups must be ***closely managed and regularly engaged***
- For Groups **5, 6, 7, 8** and **9**: Mid-to-High Importance AND Low-to-Mid Influence for the achievement of the objectives of OCEANIDS. These groups must be ***kept informed, and ideally empowered, and their interest must be protected***
- For Group **10**: Low-to-Mid Importance AND Mid-to-High Influence for the achievement of the objectives of OCEANIDS. These groups must be ***kept satisfied, and ideally empowered, and their interest must be protected***
- For Group **11**: Low-to-Mid Importance AND Low-to-Mid Influence for the achievement of the objectives of OCEANIDS. These groups should ***not be prioritised (minimum effort)***

For each Stakeholder Group, **individual Stakeholders** have been nominally identified, or their number has been estimated. The results are displayed in **Table 3**. These lists will serve as the basis for the outreach during the implementation phase of the Stakeholder Engagement Plans. The lists are not exhaustive, especially for Stakeholders beyond the formal OCEANIDS partners, but will be completed throughout the implementation.

Table 3. Identified Stakeholder Groups

Group 1: Coastal Municipalities and Regions (and their subsequent departments, authorities and professionals)	
Members of OCEANIDS	Beyond OCEANIDS
* KRITI (CRETE) * VARSINAIS-SUOMEN LIITTO (V-SML) * AYUNTAMIENTO DE MALAGA (MLG) * REGION BRETAGNE (BRET) * AZORES SECRETARIA REGIONAL DO MAR E DAS PESCAS (DRPM) * Relevant subgroups: Elected regional and municipal councillors in charge of the	* 439 of the 1294 NUTS 3 European regions are coastal regions (34%) * Between 31,000 and 36,000 municipalities. No official number of coastal municipalities was found, but since the EU counts a total of around 90,000 local governments, an estimate would be that about 34 to 40% are coastal, namely between 31,000 and 36,000

following portfolios; Municipal and Regional Departments (and their professionals) for Civil Protection, Emergency Response & Risk Management, Urban and Spatial Planning, Geographic Information System (GIS)/Cartography, Environment, Climate, Maritime Affairs (if any).	* Relevant subgroups: Elected regional and municipal councillors in charge of the following portfolios; Municipal and Regional Departments (and their professionals) for Civil Protection, Emergency Response & Risk Management, Urban and Spatial Planning, GIS/Cartography, Environment, Climate, Maritime Affairs (if any).
Group 2 Port Authorities (and their subsequent departments and professionals)	
Members of OCEANIDS	Beyond OCEANIDS
* HERAKLION PORT AUTHORITY AE (HPA) * HELSINGIN SATAMA OY (PHEL) * RAUMAN SATAMA OY (PRAU) * RAAHEN SATAMA OY (PRAA)	* 319 trans-European networks (TEN-T) ports identified by the (European Commission) EC in 2007 * In Europe in total, there are over 1,200 ports
Group 3 Earth Observation/Remote-Sensing Solution Providers and Resilience Consultancies	
Members of OCEANIDS	Beyond OCEANIDS
* OHB DIGITAL SERVICES GMBH (OHB) * EUROPEAN ASSOCIATION OF REMOTE SENSING COMPANIES (EARSC) * ILMATIETEEN LAITOS (FMI) * IN2 DIGITAL INNOVATIONS GMBH (IN2) * WEB2CLIMATE IKE (WTOC) * CREOTECH INSTRUMENTS SPOLKA AKCYJNA (CREO) * Relevant subgroups: EO/RS specialists; Urban Resilience specialists	* Climate City (World) * Prepared International (World) * RESALLIENCE (World) * Resilience Rising (World) * Resilient Cities Catalyst (World) * Green Urban Data (Spain) * Futureproofed (Europe) * RdA Climate Solutions (Europe) * CLIMACT (Europe) * Climate Data Factory (World) powered by Copernicus Climate Change Service * Creative Climate Cities (World) * Climate Focus (World) * VITO Remote Sensing (World) * ASI (Europe - Agenzia Spaziale Italiana/Italian Space Agency) (Italy) * Group on Earth Observations-GEO (World) * EuroGEO (Europe) * European Space Agency-ESA (Europe) * NASA (World) * Planet[7] (Europe) * Event: Sustainable Places (Europe)

[7] https://rb.gy/cgqz44

	* Event: Urban Tech Challengers (Europe) * Event: Urban Tech Forward (Europe) * Event: Bridge for Cities (World) * Event: International Making Cities Livable Conference (World) * Event: Urban Transitions (World) * Event: Smart City Expo World Congress (World) * 140 members of EARSC (European private companies only) * Database of 700 EO companies in Europe
Group 4 Research Institutes, Think Tanks, Academia and professional networks (specialised in Maritime and Coastal Resilience and Adaptation)	
Members of OCEANIDS	Beyond OCEANIDS
* HELLENIC CENTRE FOR MARINE RESEARCH (HCMR) * EREVNITIKO PANEPISTIMIAKO INSTITOUTO SYSTIMATON EPIKOINONION KAI YPOLOGISTON (ICCS) * UNIVERSIDAD DE SEVILLA (USE) * ASSOCIACAO PARA O DESENVOLVIMENTO DO ATLANTIC INTERNATIONAL RESEARCH CENTRE (AIRC)	* Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement CEREMA (France) * Adaptation Without Borders (Sweden/Europe/World) * Nordic Urban Resilience Institute (Nordic region) * Center for Urban Disaster Risk Reduction and Resilience (World) * UN Decade Collaborative Centre for Coastal Resilience (World) * Global Center on Adaptation (World) * Global Challenges Foundation (World) * Munich Climate Insurance Initiative (World) * PlanAdapt (World) * UNESCO Chair on Urban Resilience (World) * Stockholm Resilience Centre (World) * Urban Ocean Lab (World) * Eurisy-Association of European Space Agencies (Europe) * Association of European Schools of Planning (Europe) * International Urban Planning and the Environment Association (World) * Global Association of Risk Professionals (World) * International Association for Impact Assessment (World) * International Network for Storm Surge Barriers (World) * Buildings Performance Institute Europe (Europe)

	* Institute for European Environmental Policy (Europe) * Europa Biodiversity Observation Network (Europe) * Think Sustainable Europe (Europe) * Basque Centre for Climate Change (Europe) * Laboratoire des Sciences du Climat et de l'Environnement (France) * Leibniz Institute of Ecological Urban and Regional Development (Germany/ Europe) * Ecologic Institute (Germany/Europe/World) * The Green Tank (Greece/Europe) * Center for Environmental and Sustainability Research (Portugal) * Agence des villes et territoires méditerranéens durables (Mediterranean) * Mediterranean Protected Areas Network (Mediterranean) * Euro-Mediterranean Center on Climate Change (Mediterranean) * Amsterdam Institute for Advanced Metropolitan Solutions (World) * Climate Analytics (World) * Grantham Research Institute on Climate Change & the Environment (World) * International Institute for Environment and Development (World) * International Institute for Sustainable Development (World) * Mercator Research Institute on Global Commons and Climate Change (World) * Potsdam Institute for Climate Impact Research (World) * Wuppertal Institute for Climate, Environment and Energy (World) * Fundacion Tecnalia Research & Innovation (Spain/Europe) * Netherlands Organisation for Applied Scientific Research TNO (Netherlands/World) * VTT Technical Research Centre of Finland (Finland) * GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel (Europe) * Fraunhofer Information Center for Regional Planning and Building Construction (Europe) * Fraunhofer Institute for High Frequency Physics and Radar Techniques (Europe) * Fraunhofer Institute for High-Speed Dynamics,

	Ernst-Mach-Institut, EMI (Europe) * National Observatory of Athens-NOA (Greece) * National Technical University of Athens-NTUA (Greece) * National and Kapodistrian University of Athens-NKUA (Greece) * University of Aegean-UoA (Greece) * + at least 1 Institute of Marine Research in each European country * Aalto University School of Business (Finland) * Austrian Institute of Technology- AIT (Austria) * CNR (Italy) * Deltares (The Netherlands) * ECMWF (World) * CREAF * Technical University of Denmark-DTU (Denmark) * EPOS * Joint Research Center-JRC (Europe) * EUMETSAT (Europe) * Hellassat (Greece) * Euro-Mediterranean Center on Climate Change-CMCC (Italy) * European Research Executive Agency-REA (Europe) * INGV (Italy) * Meise Botanic Garden (Europe) * MINES Paris (Europe) * Armines * Politecnico di Milano-POLIMI (Italy) * Open Geospatial Forum (World) * SINTEF Ocean, Climate & Environment * SURF (The Netherlands) * University of Utrecht-UU (The Netherlands) * Wageningen University-WUR (The Netherlands) * University of Twente (The Netherlands) * GERICS (Germany)
Group 5 Networks of Municipalities, Regions, Ports (and other Non-profit Interest Representatives)	
Members of OCEANIDS	Beyond OCEANIDS

* RESEAU DES REGIONS EUROPEENNES UTILISATRICES DES TECHNOLOGIES SPATIALES (NEREUS) * Institute of Shipping Economics and Logistics (ISL) *Region of Bretagne (BRET)	* European Sea Ports Organisation (Europe) * EU Mission Adaptation/Pathways2Resilience (Europe) * EU Mission Oceans/PREP4BLUE (Europe) * Conference of Peripheral Maritime Regions of Europe (Europe) * ICLEI (Europe/World) * Regions4Climate (Europe) * Climate Alliance (Europe) * Council of European Municipalities and Regions (Europe) * European Regions Research and Innovation Network (Europe) * European Environment Agency-EEA (Europe * Network of European Metropolitan Regions and Areas (Europe) * Assembly of European Regions * Rede de municípios para a adaptação local às alterações climáticas (Portugal) * Resilient Regions Association (Sweden) * Association Nationale des Élus du Littoral (France) * C40 (World) * Global Covenant of Mayors for Climate and Energy (World) * Regions4 (World) * Global Alliance for Urban Crises (World) * Global Resilience Partnership (World) * Ocean & Climate Platform (World) * Ocean Cities Network (World) * Ocean Risk and Resilience Action Alliance (World) * Resilient Cities Network (World) * UN Cities Race to Resilience (World) * UN Regions Race to Resilience (World) * Climate Strong Islands Network (World) * Making Cities Resilient 2030 Initiative (World) * Sea'ties Initiative (World) * Global Island Partnership/Local2030 Islands Network (World) + at least 1 national network of municipalities and 1 network of regions per European country (altogether more than 40) * Event: EurOCEAN Conferences (Europe) * Event: European Conference on Climate Change Adaptation (Europe) * Event: European Forum for Disaster Risk Reduction (Europe) * Event: European Urban Resilience Forum (Europe) * Event: Nordic Conference on Climate Change

	Adaptation (Nordic region) * Event: Adaptation Futures (World)
Group 6 Other EU-funded projects in Maritime and Coastal Resilience and Adaptation	
Members of OCEANIDS	Beyond OCEANIDS
N.A.	*VALORADA *HARMONIA *USAGE *PROTECT *ILIAD * Subgroups: EU-funded projects under the same Work Programme of the CINEA.C – Green research and innovation (C.1 – Horizon Europe Climate)
Group 7 Banks and Insurance Companies	
Members of OCEANIDS	Beyond OCEANIDS
None	* European Investment Bank (World) * Council of Europe Bank (Europe) * NN Group N.V. (Netherlands) * Green Climate Fund (Global South) * AXA (World)

In the following sections **3.3 to 3.7**, the detailed Stakeholder Engagement Plan structured by type of activities, is documented.

- ✓ Each Activity Type will be managed by an **OCEANIDS Lead Organization** supported by OCEANIDS Contributing Organizations
- ✓ Each Activity will target one or more **Stakeholder Groups** as clustered above

The description of the activities will describe if any distinction is made for the relevant Stakeholder Groups between formal OCEANIDS members and non-OCEANIDS members.

3.3 Activity Type 1: Exchange of Best Practices & Capacity Building

The Lead Organization for this type is **GSH**.

The Contact Person at the Lead Organization is Eirini Marinou.

The Contributing Organizations for this type are **CDP, ISL, NEREUS, AIRC, EARSC, METIS, IN2, WTOC and USE.**

The Main Stakeholder Groups who will benefit from the activities are **Group 1 Coastal Municipalities and Regions**, **Group 2 Port Authorities**, and marginally also **Group 10 Policymakers, Governments, and Institutions**.

The activities of this type will run from Month 7 (June 2024) to Month 32 (end of the project).

Summary of the Activity Type: Sharing successful approaches, strategies, and solutions related to climate-related coastal risks and adaptation. Possibilities for training programs, workshops, and knowledge-sharing initiatives to enhance the ability of these stakeholders to address climate-related challenges, will be explored.

Detailed Stakeholders Engagement Plan under this Activity Type:

- Establishment of **a permanent Focus Group**, composed of relevant professionals of the OCEANIDS Coastal Municipalities, Regions and Institutes, such as CRETE, ISL, V-SML, MLG, BRET, DRPM, MMAIP and Port Authorities such as HPA, PHEL, PRAU, PRAA. The composition ensures diverse expertise and perspectives to effectively tackle coastal-related challenges. This shall be achieved by meetings organized by the Coordination Team (see Deliverable 1.2) either monthly, quarterly, or semi-annually, depending on the agenda and requirements. During these meetings, members will engage in collaborative problem-solving sessions, sharing insights, experiences, and expertise to address issues affecting coastal areas. The first meeting of the Focus Group took place on the 13th of May 2024 and the next one is scheduled on the 8th of July.
- Organization of **thematic and targeted Workshops and Webinars**, to the benefit of the Focus Group members, as well as non-OCEANIDS invited Coastal Municipalities and Regions, and Port Authorities.
    - **CDP** volunteers to steer up to 4 online targeted Workshops composed for CRETE, V-SML, MLG, BRET, and DRPM, providing insights from the CDP Cities and CDP States and Regions Questionnaires, Guidance, Tools, and Data related to climate-related coastal risks and adaptation. The Workshop would take place twice per year, for example once at the preparation of the Data Disclosure in Spring, and once at the release of the datasets and score in Winter. CDP could open the participation to these workshops beyond the 5 OCEANIDS municipalities and regions, especially for those also engaged in the disclosure process with CDP elsewhere, but with similar geographic characteristics.
    - **NEREUS** in collaboration with CDP will organize a workshop in Belgium, preferably at the port of Antwerp to present the first tools developed in the project. NEREUS currently leads efforts to engage other port/regional

authorities, academia, and industry. This workshop is primarily addressed to policymakers (Group 10); therefore, the discussion will entail a policy dimension. The Network could engage its member regions to share best practices.

- **AIRC** will organize within this activity type one webinar in the framework of the AIR Centre's Networking Friday series. The webinar will be open to the general public, with an emphasis on the scientific and academic community. This webinar will take place in the final part of the project (M24-M32) and will be focused on the dissemination of results of the project highlighting examples of best practices, as well as the OCEANIDS tools and its application in the pilot sites.
- **WTOC** will organize an online workshop to demonstrate the use of the AI (Artificial Intelligence) tool that is being developed in the framework of OCEANIDS. The API (Application Programming Interface) will ask for areas and kinds of events and will search the internet to gather information and organize them in an easy-to-use database. The showcase of this tool to stakeholders will provide opportunities to map the impacts of different natural phenomena on coastal areas.

- **AIRC** Mentoring: **Reception of trainees** at the ESA EO Lab, AIR Centre headquarters in Terceira Island, Azores, in the context of the following disciplines: EO from deep ocean to near space, Ocean observation and modelling, Healthy and clean oceans, Marine resources and biodiversity, Digital twin of the ocean, Marine robotics and applications and Mitigation of and adaptation to climate change. The expenses of the trainees should be covered by the trainees.
- **AIRC** support from AIR Centre's experts in different areas of EO and Ocean Sciences research in the design of OCEANIDS **capacity-building activities** organized by other OCEANIDS partners: development of course contents, identification of speakers, access to contacts within the AIR Centre's Network.
- **IN2** will use a mix of **easy-to-set-up polls** and open-ended, targeted questions to measure acceptance, induce change, and quantify the impact individual actions have on the climate. The provided ephemeral networks will include listening capabilities on mainstream social media networks that will, for example, allow the harvesting and analysis of specific pilot-related hashtags or posts from a specified pilot location.
- **USE** will identify the different ways in which stakeholders articulate their participation/contribution/expertise on climate-related coastal risks and their vulnerabilities. To reach this, USE will carry out a qualitative approach to the different discourses on the management and degree of participation to build best practices. A **qualitative methodological strategy** has been designed adapting the steps of Braun and Clarke (2006)[8]. The strategy includes i) focus groups, ii) main discursive categories analysis, iii) questionnaires using Google Forms, and iv) a joint

[8] https://scholar.google.com/citations?user=otoYzF8AAAAJ&hl=en

hybrid seminar organization. USE will visualise and share the storytelling generated in the research to increase best practices impacts.

- **GSH** will prepare and implement **training validation techniques** and best practices where teams will cycle through a process of planning, executing, and evaluating. Continuous collaboration is vital, both among team members and project stakeholders. Validation processes will be performed by developers and end-users so that the platform (product) satisfies stakeholder needs. Validation will eliminate ambiguities and ensure the proper use of the technology that is developed.

✓ Connection to other WP or Task in OCEANIDS: **WP5 "Demonstration of the OCEANIDS tools & applications (Field validation activities)"**

3.4 Activity Type 2: Networking Between Groups & Liaison Activities

The Lead Organizations for this type are **EARSC and AIRC (co-leadership)**.

The Contact Persons at the Lead Organization are Weronika Borejko (EARSC) and Natalia Ospina-Alvarez (AIRC).

The Contributing Organizations for this type are **CDP, NEREUS, GSH, METIS, FMI, ICCS, HCMR, RG, USE and WTOC.**

The Main Stakeholder Groups who will benefit from the activities are **Group 1 Coastal Municipalities and Regions**, Group 3 EO/RS Solution Providers and Resilience Consultancies **Group 4 Research Institutes, Think Tanks, Academia and Professionals Networks, Group 5 Networks of Municipalities, Regions, Ports**, Group 6 Other EU-funded projects in Maritime and Coastal Resilience and Adaptation, Group 8 Private Sector.

The activities of this type will run from Month 7 (June 2024) to Month 32 (end of project).

Summary of the Activity Type: Networking to foster collaboration, information sharing, and the creation of a supportive community focused on biodiversity and climate change mitigation; Leveraging the connections and relationships that OCEANIDS participants have with relevant authorities, agencies, and stakeholders.

Detailed Stakeholders Engagement Plan under this Activity Type:

- **Participation in events, conferences and forums**:
    - **EARSC** will facilitate collaborations with other EU projects and initiatives broadening the involved network of coastal municipalities and regions and the related private sector representatives of interested domains and the EO providers. This activity will be implemented in close collaboration with WP6, developing relevant communication materials raising awareness about EO-enabled solutions supporting coastal areas in building their resilience and climate change adaptation. This will involve consultations with the EO sector and related projects to organize together opportunities for firstly, collecting needs and requirements from the community, and secondly, promoting the solutions.

- **CDP** volunteers to present the results of the data disclosed by Group 1 and Group 2 stakeholders (see Activity Type 4) to conferences, annual meetings and forums organized by Networks of Municipalities, Regions and Ports in (Group 5) as well as Research Institutes, Think Tanks, Academia and Professionals Networks (Group 4). Therefore CDP, with the help of METIS, GSH, EARSC, HCMR, ICCS, USE and AIRC, will identify and monitor event announcements published by them, co-write event speakers' concepts and abstracts with the support of the OCEANIDS consortium, apply to be a speaker and attend the events, subject to budget availability and staff capacity. Events which will not offer a speaker slot or booth will be deprioritized. CDP proposes that NEREUS should be a co-speaker, or that CDP and NEREUS divide work in a relevant manner.
- **AIRC** will represent OCEANIDS in different events and conferences related to the theme of the project, taking advantage of the events organised in the framework of the Marine Biodiversity Observation Network (MBON) which the AIR Centre hosts (participation is subject to budget availability). Additionally, it will promote the participation of OCEANIDS experts in panels/round tables relevant to the project.
- **AIRC** will support the design and submission of proposals for Side Events/ Special Sessions in relevant events such as the European Maritime Days organized by the EC every year.
- **GSH** will represent OCEANIDS in different events and conferences either as a participant in a round table or as a scientific partner [will develop the OCEANIDS Decision Support Platform (O-DSP)] submitting posters and publications in conference proceeding or peer-reviewed publications in several Journals. These publications can enhance awareness and visibility. Relevant conferences are (a) the European Association of Remote Sensing Laboratories (EARSEL); (b) the International Symposium on Geoscience and Remote Sensing (IGARRS); (c) EGU - Plinius18; (d) European Geosciences Union (EGU); (e) 9th Our Ocean Conference in Greece, etc. Relevant Journals are (a) Journal of Marine Science and Engineering; (b) Remote Sensing; and (c) Sustainable Cities and Society.
- **ICCS** will present the technical achievement regarding the OCEANIDS Data Cubes implementation and data harmonization, federation and management in conferences and journals. Relevant conferences are the following: (a) IEEE International Conference on Acoustics; (b) Speech and Signal Processing (ICASSP); (c) International Conference on Image Processing (ICIP) (d) International Conference on Pattern Recognition, International Geoscience and Remote Sensing Symposium; and (e) International Society for Photogrammetry and Remote Sensing (ISPRS). Relevant journals are the following: (a) IEEE Transactions on Geosciences and Remote Sensing; (b) IEEE Access; and (c) Annals of ISPRS.

- **HCMR** will represent the OCEANIDS project at various national and international conferences and workshops. By participating in these events, HCMR will actively present the key findings and achievements of the initiative and the WP in particular in conferences such as (a) the International Symposium on Geoscience and Remote Sensing (IGARRS); (b) the European Geosciences Union (EGU) meeting; (c) the American Geophysical Union (AGU) meeting; (c) COMECAP etc. Additionally, HCMR will contribute to the preparation of articles for submission to peer-reviewed scientific journals such as the following: (a) International Journal of Climatology; (b) Theoretical and Applied Climatology and (c) Atmosphere.
- **RG** will present the CC risk and hazard risk assessment platform, developed within the OCEANIDS framework, at various conferences such as the European Conference on Earthquake Engineering. Additionally, the relevant scientific research will be published in high-impact scientific journals including Earthquake Engineering & Structural Dynamics, Natural Hazards and the International Journal of Disaster Risk Reduction.
- **USE** will present an oral communication to the International Geographical Union meeting in August 2024 (Dublin, 2024). Other events will be the International Conference on Climate Change and Urban Resilience (London, United Kingdom) and/or the International Conference on Marine Protected Areas in Marine Spatial Planning (Bodo, Norway) in July 2025. As well as joint events organized together with Málaga Council Hall.
- **BRET** runs the "Breizh Hin" network, which brings together partners involved in adapting to climate change in Brittany. It is made up of members with technical functions, such as project managers, but there are no political representatives. Structures such as local authorities, associations and representatives of economic sectors participate in the network. The network aims to increase the skills of Brittany's population in the field of adaptation, to share feedback and to inform partners about existing tools, methods, funding and projects. The OCEANIDS project will be presented to members of the network, enabling partners to be identified to test the tools locally.
- **FMI** has participated in a EuroGEO session in the GeoDPA event in April 2024 related to, among others, OCEANIDS actions. Further events relevant to the project are the Destination Earth General assembly, the European Geophysical Union EGU24 and the ESA-ECMWF ML4ESOP events in 2024.
- **WTOC** will present the climate impact databases created in the framework of OCEANIDS in a conference related to catastrophe modelling or in a boarder conference with the related session, in late 2025/early 2026. Also, an article on the same issue is aimed to be published in a scientific journal in 2026.

– **AIRC** will organize within this activity type an **OCEANIDS Networking Friday webinar** on AIR Centre's Networking Fridays. The webinar will be open to the public, with an emphasis on the scientific and academic community. It will take place in the initial-

mid part of the project (M10-M14) to introduce OCEANIDS and identify synergies and possibilities of collaboration with similar projects and relevant stakeholders.

- **In-person Forums**:

  METIS will identify (but not host) suitable venues for in-person forums that accommodate the anticipated number of participants and facilitate interactive discussions; develop structured agendas for in-person forums outlining key discussion topics, session formats, and allotted timeframes; incorporate opportunities for networking, group activities, and interactive exercises to engage participants and encourage collaboration; appoint skilled facilitators or moderators to lead in-person forum sessions, guide discussions, and ensure respectful and inclusive participation.

- **Participation in the Mission Adaptation Community in TWG:**

  GSH participates in the EU Mission Adaptation Community in the collaborative Thematic Working Groups (TWG) as OCEANIDS is funded by the Mission Adaptation call. By participating in two TWGs, **Climate Services** and **Stakeholder Engagement**, OCEANIDS can benefit from participation in events, sharing practices, and opportunities to link research with policy and practice. The Community of Practice facilitates the exchange of knowledge and experiences, strengthening coordination and collaboration among its members. Its membership comprises regional and local authorities that are Charter Signatories, EU-funded projects working on climate change adaptation, regions or local authorities participating in their implementation, the EC and other relevant European institutions, national authorities (identified via national adaptation contact points), and Friends of the Mission. The Mission's Community of Practice offers a space for EU-funded projects to be part of and shape a vibrant space for different actors to connect and collaborate. Specifically, the Community provides the opportunity for projects like OCEANIDS to:

  - Connect with the European Commission and MIP4Adapt to gain first-hand information on opportunities
  - Network and collaborate with other projects working on climate change adaptation to jointly address research and implementation challenges, identify remaining needs and opportunities to be tackled through Mission activities, build alliances and partnerships between projects on specific areas of shared interest, etc
  - Connect with regional and local authorities to help replicate and upscale approaches, tools and/or solutions, and strengthen impact on practice and policy
  - Build project capacities and receive training in topics of interest, e.g., dissemination, communication, and exploitation
  - Develop a space that projects can use to further their activities, outreach and delivery of outputs and impacts, for instance by developing joint activities between projects and with MIP4Adapt

- Increase impact, gain recognition and visibility of projects' results as "*Mission Projects*"

✓ Connection to other WP or Task in OCEANIDS: **WP6 "Communication, Dissemination, and Exploitation of project results"**

3.5 Activity Type 3: Local Stakeholder Engagement

The Lead Organization for this type is **IN2**.

The Contact Persons at the Lead Organization are Konstantina Geramani and Alexandru Stan.

The Contributing Organizations for this type are **FMI, EARSC, ISL** and **USE**.

The Main Stakeholder Groups who will benefit from the activities are **Group 1 Coastal Municipalities and Regions, Group 2 Port Authorities**, and marginally **Group 8 Private Sector, and Group 9 Citizens and Residents**.

The activities of this type will run from Month 7 (June 2024) to Month 32 (end of project).

Summary of the Activity Type: As OCEANIDS adapts a community approach is of critical importance to engage with local stakeholders. This can ensure that the project is relevant to the needs and priorities of the community, builds local capacity and brings to the project new perspectives and ideas, leading to more innovative solutions to local problems. Stakeholders can provide critical insights that enhance the quality of the project results and offer resources, both human and informational, to extend the project's reach.

The OCEANIDS local stakeholder engagement methodology involves a strategic mix of tools and activities tailored to the needs and characteristics of stakeholders in areas where validation activities will take place and in potential future implementation areas. The approach followed emphasizes participatory techniques to effectively engage with stakeholders and includes the following tools:

- **Surveys**: to assess stakeholder knowledge about climate change impacts and their expectations from Maritime Spatial Planning
- **Workshops**: to facilitate group discussions, explore different stakeholder perspectives and gather qualitative insights
- **Interviews**: one-on-one interviews with key stakeholders to dive deeper into their specific needs and expectations
- Implementation and provision of **citizen engagement tools**, particularly through the use of ephemeral social networks that OCEANIDS will develop, to raise awareness, boost citizen participation, encourage joint creation of ideas, and gather data. Stakeholders' engagement will be analysed from the social media interactions, giving an understanding of the effectiveness of the dissemination efforts, as well as from the campaigns organised by the project

These tools can be organised on-site as well as online depending on what is appropriate for the stakeholders involved and relevant in the actual state of engagement.

Detailed Stakeholders Engagement Plan under this Activity Type:

- **Local Workshops and Surveys:**
  - **FMI** organized an online meeting with Finnish maritime spatial planning experts and FMI project staff on the 1st of March 2024. Another respective meeting was later arranged on the 5th of March 2024 together with those Finnish ports taking part in the OCEANIDS project (PHEL, PRAU and PRAA). On these occasions, the main outline and aims of the OCEANIDS project were presented together with planned FMI contributions in other WPs. The focus of these interactive discussions was to gather the views and needs of the stakeholder groups. The record was formed from stakeholder comments with the idea of combining this information with later online surveys concerning their CC-related needs, plans and adaptation. Surveys were launched at the end of the meetings and were left open to answer for two weeks. Activities were organized to obtain stakeholder-expressed comprehension of what aspects are important for each and to adjust emphasis in the development work later in the project. Initial results have been compiled from the above activities.
  - **USE** will identify the different ways in which stakeholders articulate their participation/contribution or expertise on climate-related coastal risks and their vulnerabilities by carrying out a qualitative approach including: i) identification of focus groups, ii) main discursive categories analysis, iii) questionnaires by Google form, iv) a joint seminar (hybrid) organization and v) a final storytelling report visualising the results.
- **Interviews:**

  ISL will carry out semi-structured interviews with stakeholders from the port of Bremerhaven, i.e. port authority and container terminal operator. Moreover, interviews with hinterland transport operators, like barge operators in Inland Waterway Transport will be carried out. Additionally, administration bodies such as the senatorial authority of Bremen (Department of Climate Change Adaptation) and the City Municipality of Bremerhaven (Manager of Climate Change Adaptation) will be interviewed.
- **Citizen engagement tools:**

  IN2 will be responsible for the development of ephemeral social networks which respond to a growing desire among users for more privacy, less pressure and more authentic social interactions. Data collected will be analysed and give valuable input to the project.

✓ Connection to another WP or Task in OCEANIDS: **WP6 "Communication, Dissemination, and Exploitation of project results"**

3.6 Activity Type 4: Data Disclosure and Sharing

The Lead Organization for this type is **CDP**.

The Contact Person at the Lead Organization is **Afroditi Mathioudaki**.

The Contributing Organizations for this type are **GSH, USE, EARSC, HCMR, FMI, ICCS, OHB, WTOC, IN2, CRETE, HPA, MMAIP, V-SML, PHEL, PRAU, PRAA, MLG, BRET, DPRM and ISL.**

The Main Stakeholder Groups who will benefit from the activities are **Group 1 Coastal Municipalities and Regions, Group 2 Port Authorities**, and marginally **Group 7 Banks and Insurance Companies**.

The activities of this type will run from Month 7 (June 2024) to Month 32 (end of project).

Summary of the Activity Type: OCEANIDS pilot regions, municipalities, and port authorities will share climate-related coastal risk data, vulnerability assessments, adaptation strategies, and other relevant information. This data sharing will likely be part of the CDP's worldwide annual disclosure campaign, which involves the completion of questionnaires by various organizations.

Detailed Stakeholders Engagement Plan under this Activity Type:

- **Annual Disclosure Cycles for Group 1 Coastal Municipalities and Regions**:

  CDP will engage in 2024 directly with CRETE, V-SML, MLG, BRET and DRPM, for them to complete the CDP Cities Questionnaire or the CDP States & Regions Questionnaire, with a focus on coastal risks data, vulnerability assessment, adaptation strategies and infrastructure and project needs. CDP will deliver a score and feedback (call or written) for the Regions and Cities that will have disclosed before the CDP Scoring deadline. The data will be published on the CDP Open Data Portal. CDP will engage with other European coastal municipalities and regions to encourage them to complete the same Questionnaires. CDP counts about 1,200 respondents worldwide yearly on average (about 200 in Europe). **CDP** will repeat the approach in 2025 and 2026, and new inputs coming from OCEANIDS will be incorporated into the response. The OCEANIDS consortium can also decide if some questions are mandatory (and therefore tagged in the Questionnaire). CDP will look into the possibility of putting CRETE, V-SML, MLG, BRET and DRPM in a common sample to facilitate statistical comparison. In 2025 and 2026, CDP will look into possibilities to gather respondents around the world in a sample of coastal cities and regions to allow statistical comparison.

- **Annual Disclosure Cycles for Group 2 Port Authorities:**

  CDP will engage in 2024, from June to December, directly with HPA, PHEL, PRAU and PRAA, for them to complete the CDP Corporate Questionnaires. CDP will deliver a score and feedback (call or written). CDP will try to engage with other European Port Authorities to encourage them to complete the same Corporate Questionnaire. CDP counts about 20,000 respondents worldwide every year on average on the Corporate Questionnaire, but Port Authorities are infrequent participants, and none in Europe so far. Therefore, the success will also rely on the help of HPA, PHEL, PRAU, PRAA and the European Sea Ports Organization, to grow the baseline of invited Port Authorities in Europe as a precondition. In 2025 and 2026, the approach will be repeated, and new inputs coming from OCEANIDS will be incorporated into the response.

- **Sharing of CDP data:**

- In 2024, 2025 and 2026, **CDP** volunteers to present the results of the data disclosed by the Group 1 and Group 2 stakeholders through Activity 6 to Banks, Investors and Insurance Companies, which are already working with CDP (e.g as a signatory, request authority or endorser), especially information disclosed in the Questionnaire regarding Adaptation and Resilience projects finance needs. The data sharing will prioritize CRETE, V-SML, MLG, BRET, DRPM, HPA, PHEL, PRAU and PRAA as being members of OCEANIDS.
- In December 2024 and December 2025, the **CDP** team will look into the possibilities of transferring their Cities and States & Regions datasets to other European public databases that accept such inputs. At the same time, CDP will also share the datasets with organizations in Group 4 (Research Institutes, Think Tanks, Academia and professional networks specialized in Maritime and Coastal Resilience and Adaptation).
- **CDP**-collected corporate data cannot be shared on open data repositories as it requires licensing for commercial use. However, CDP Corporate data can be made available to some specific organizations including public research institutes for non-commercial use. Data sharing of the 4 Port Authorities in OCEANDIS can therefore be considered if it fulfils the CDP Worldwide Public Purpose Data License Policy.

✓ Connection to another WP or Task in OCEANIDS: **WP4 "OCEANIDS user-driven tools & applications development"**

3.7 Activity Type 5: Social Media and Communication

The Lead Organization for this type is **METIS**.

The Contact Person at the Lead Organization are Simona Sirutė and Gabrielė Keraitė

The Contributing Organizations for this type are **EARSC and NEREUS**.

The Main Stakeholder Groups who will benefit from the activities are: **All 11 Groups.**

The activities of this type will run from Month 7 (June 2024) to Month 32 (end of project).

Summary of the Activity Type: The task will efficiently use social media platforms to communicate and engage with stakeholders. METIS, one of the OCEANIDS partners, will contribute its social media tools and approaches for effective communication.

Detailed Stakeholders Engagement Plan under this Activity Type:

- **Social media campaigns**:

  METIS will experiment with diverse content formats including short videos, interactive polls, behind-the-scenes footage, and user-generated content to keep audience engagement high; will tailor content to suit the characteristics and preferences of each social media platform, ensuring maximum resonance with target audiences.

- **Paid Social media campaigns**:

METIS will allocate a budget for targeted paid social media campaigns to reach specific stakeholder segments and amplify project messaging; utilize paid advertising features on social media platforms to promote key project updates, events and reports to a wider audience; evaluate the effectiveness of each campaign in achieving its objectives and reaching target stakeholder segments; launch interactive social media campaigns such as quizzes and giveaways to encourage participation and foster a sense of community among followers; amplify the reach through each partner's communication channels and contacts.

- **Informative posts**:

  METIS will utilize a variety of formats, including articles, videos, visuals, to cater to different preferences and learning styles; regularly update the project website with informative posts to keep stakeholders informed about project progress and milestones; share video clips and photos from partner gatherings, conferences, meetings, and workshops; share project updates, key findings, and relevant insights through concise and impactful posts on social media platforms; engage with followers by encouraging comments, shares, and discussions around posted content to foster interaction and community engagement; ensure timely dissemination of project updates and outcomes through informative posts on all communication channels; coordinate with project partners and stakeholders to gather relevant information and insights for inclusion in posts; monitor engagement metrics such as website traffic, social media analytics, and post interactions to evaluate the effectiveness of informative posts.

- **Entertaining videos**:

  METIS will develop a series of entertaining Event Overview Videos that showcase the excitement and innovation of OCEANIDS project activities. These dynamic presentations will encapsulate the spirit and ambience of project events, effectively promoting the initiative and fostering a meaningful connection with the audience by conveying its infectious enthusiasm. Additionally, Explainer Videos will serve as informative tools, simplifying the intricate objectives and methodologies of the project to make them accessible to both experts and the general public alike. Furthermore, Demonstrator Videos will be vital for spotlighting the tangible applications and outcomes of the project's research, showcasing its accomplishments and potential impact within its respective domain. These videos will highlight diverse aspects of the project, including research breakthroughs, community involvement, and environmental impact, ensuring consistency in video quality, production values, and messaging across all releases. Leveraging social media platforms will be essential to promote the videos and encourage sharing among stakeholders and their networks, maximizing outreach and engagement.

- **Polls/short opinion surveys**:

  METIS will develop concise and targeted polls and short opinion surveys to gather insights on specific project-related topics and initiatives; ensure questions are clear, relevant, and tailored to the interests and expertise of stakeholders and

sub-groups; utilize various communication channels to distribute polls and surveys, including email newsletters, project websites, and social media platforms; establish a feedback loop to communicate survey results and follow-up actions with stakeholders and sub-groups promptly.

- **Opinion mining, e-listening, and analysis of responses on social media:**

  METIS plans to implement multilayer market sentiment study methods and targeted web analytics campaigns throughout the project; identify key indicators for stakeholder engagement, such as top trends, influencers, and media reach; utilize sentiment analysis, machine learning, and natural language processing techniques to collect, analyze, and report on targeted audience perceptions and priorities; implement personalized communication strategies based on insights gained from sentiment analysis to tailor messages to the specific needs and preferences of each stakeholder group.

✓ Connection to another WP or Task in OCEANIDS: **WP6 "Communication, Dissemination, and Exploitation of project results"**

4 Assessment of current gaps between stakeholders' needs (regions and communities) and existing applications and services available

4.1 Methodology

WP2 with its focus on stakeholder engagement and gap identification, is a pillar for the other WPs and the overall success of the project. Specifically, within task T2.2 "Assessment of current gaps between stakeholders needs (regions and communities) and existing applications and services available", the consortium not only evaluates the status of the available offer on the market, but also explores the user needs, and therefore outlines the way forward for the OCEANIDS platform and sets the requirements it should meet. To maximize the impact of the task it will be running throughout the project to perform continuous consultations with end users, which will be crucial for accurate design and implementation of the OCEANIDS platform.

The implementation of the task can be divided into **3 sub-tasks**:

1. Identification of **challenges** in the regions and prioritisation of gaps
2. Understanding the **potential EO services** for climate adaptation in coastal areas
3. **Gap analysis**

All sub-tasks will be running throughout the project and will be strongly intertwined.

1. **Identification of challenges in the regions and prioritisation of needs**

With the user-centred focus of the project, the identification of user needs, challenges and requirements plays a key role in the initial stage of OCEANIDS. The following approach was defined to gather relevant information:

- Firstly, to benefit from the structure of the consortium, as the first step, local and regional stakeholders involved directly in the project contributed to **internal consultations** identifying preliminary needs and challenges
- Secondly, further consultations will be conducted with a broader network of stakeholders beyond the project consortium. This will be facilitated by leaders of Activity 3: Local Stakeholder Engagement and supported by involved local and regional authorities
- Thirdly, more detailed consultations focusing on the technical parameters of the platform will be launched, involving potential end users, from within and beyond the consortium

2. **Understanding the potential EO services for climate adaptation in coastal areas**

Understanding of the EO potential will strongly rely on the involvement of the private EO sector and therefore, the members of the European Association of Remote Sensing Companies-EARSC (the leader of the task). To initially understand the current offer, an **online**

form was launched among the EARSC members asking them to share the services they offer which might be relevant in coastal areas and the climate change adaptation domain. The form will remain open throughout the project and will be opened to the broader community of all interested service providers at a later stage of the project.

Based on the gathered information and conducted desk research a booklet of services will be created presenting the EO capabilities and EO potential. The tool will be developed with the help of WP6 dedicated to communication and dissemination to guarantee delivery of comprehensive and understandable content which might be used to raise awareness about the EO among end users (both within and beyond the consortium).

3. **Gap analysis**

Based on the feedback gathered from the end users, the consortium will be able to create a list of relevant areas which OCEANIDS services should address. This will be compared with offers gathered from the EO private sector and identified through desk research. Therefore, that will allow for the initial identification of gaps, pinpointing the areas which are not addressed by the market. The gathered offer will be presented to the interested end users to receive their further feedback and explore if the available services meet their requirements or if and how they should be improved.

For the purpose of the task, EARSC taxonomy has been used to facilitate the categorization of the services and areas of interest.

4.2 Identification of challenges in the regions and prioritisation of needs

As explained in the previous section 4.1, which described the methodology of the task**, identification of challenges in the regions** was the first sub-task undertaken by the consortium.

The first action was to explore with end users involved in the project their challenges, needs, main areas of interest and priorities. There are twelve (12) organizations in the consortium representing end users either directly or indirectly, such as ports, regions, cities, relevant ministries, and organisations which bridge the knowledge and information produced by the OCEANIDS project to related networks among their community.

Firstly, all of the entities met for dedicated intro calls to understand the scope of the task and the required inputs. During the calls, an **Excel file** was presented which served as a template to collect their initial needs and interests. The file included **six (6) thematic areas** (Land, Built Environment & Human Factors, Ocean/Marine, Atmosphere & Climate Change, Disasters/Geohazards, and Security), divided into specific areas which were presented with corresponding EO-based services (see **Figure 6**). Through the form organizations responded to the following questions (see **Figure 7**):

- Is the area/service relevant to your organization and its goals?
- Do you already use any service in this area?
- If the area/service is irrelevant to your organization, is it relevant for your region but managed by other organizations?

Partners filled in the form identifying the most relevant areas and therefore indicating the priorities for OCEANIDS. Despite the diversity of received responses, a few domains seem to be **the most relevant**:

- **Atmosphere & Climate Change** (top priority for 65% of respondents)
- **Security** (a top priority for 63% of respondents)
- **Ocean/Maritime** (a top priority for 52% of respondents)

Followed by the remaining areas:

- **Disasters/geohazards** (49%)
- Built Environment & Human Factors (41%)
- Land (only 30%)

Thematic area	Specific area	Service
Land	Agriculture	Assess environmental impact of farming Assessing crop damage due to storms Monitor crop disease and stress Assess crop acreage and yield. Harvest Monitor specific crops Forecast crop yields Detect illegal or undesired crops Monitor water use on crops and horticulture
	Forests	Assess forest types Monitor forest resources Detect illegal forest activities
	Inland Water	Monitor pollution in rivers and lakes Assess and monitor water quality Assess ground water and run-off
	Snow & Ice	Detect changes in glaciers Monitor Snow Cover
	Land Ecosystems	Detect and monitor arid areas Assess environmental impact of human activities Monitor of land pollution
	Land use / cover & change	Detect illegal mining activities Assess land value, ownership, type, use etc Assess changes in land use and quality Measure land use statistics Monitor humanitarian movement and camps Assess pressures on populations, migration

Figure 6. Example of the thematic area "Land" and its associated specific areas and the related EO-based services

Is it relevant for your organization and its goals?	Do you already use any service in this area?	If the area is not relevant for your organization but is relevant for your region/area, indicate it here	Comment
Choose your answer from drop-down list	*Choose your answer from drop-down list*	*Choose from drop-down list*	*Anything else you would like to share or make note of*
Difficult to say	No	Yes, it is relevant for our region/area, but it is not managed by our organization	
No, it's not relevant for us	No	Yes, it is relevant for our region/area, but it is not managed by our organization	
No, it's not relevant for us	No	Yes, it is relevant for our region/area, but it is not managed by our organization	
Yes, but it's not our top priority		Yes, it is relevant for our region/area, but it is not managed by our organization	
Yes, it is among our priorities and goals	No	Yes, it is relevant for our region/area, but it is not managed by our organization	
Yes, but it's not our top priority	No		
Difficult to say	No	Yes, it is relevant for our region/area, but it is not managed by our organization	
No, it's not relevant for us	No		
	No		
	No		
No, it's not relevant for us	No		
Yes, but it's not our top priority	No		
No, it's not relevant for us	No		

Figure 7. Example of the questions posed to the interviewers within the Excel document

In each of the most relevant areas, partners identified services which could be potentially "relevant for the organization" and those that are "relevant for their region but managed by other organizations."

- ✓ The most frequently selected service was the **assessment of climate change risks** (in the area of Atmosphere & Climate Change) which is aligned with the scope and objectives of the OCEANIDS project
- ✓ Second most frequently selected were **monitoring of ship movements** and **monitoring of marine ecosystem** quality/productivity (both in the areas of Ocean/Maritime). **Table 4** shows specific areas and the services with the highest scores (most frequently identified as relevant for the organization or region)

Table 4. Specific areas and the services with the highest scores

Thematic area	Specific area	Service	Indicated as relevant by partners [%]
Atmosphere & Climate Change	Climate	Assess climate change risk	**80%**
Ocean/Marine	Marine ecosystem pollution	Monitor quality/productivity	**70%**
Ocean/Marine	Ships	Monitor ship movements	**70%**
Land	Inland Water	Monitor pollution in rivers and lakes	**60%**
Ocean/Marine	Marine ecosystem pollution	Monitor pollution at sea	**60%**
Ocean/Marine	Marine ecosystem pollution	Detect and monitor oil slicks	**60%**
Ocean/Marine	Coastal	Map water depth	**60%**
Ocean/Marine	Coastal	Monitor ocean level and surface	**60%**
Ocean/Marine	Metocean	Forecast and monitor ocean winds and waves	**60%**
Disasters/Geohazards	Floods	Map and assess flooding	**60%**
Security	Detect sensitive security risks		**60%**
Security	Monitor high-risk areas		**60%**

What is relevant to mention is that most of the involved partners do not currently use any specific services to monitor the areas relevant to them. Most of their work is based on in-situ measurements, analysis of documentation and use of external contractors/consultants. OCEANIDS will bridge the gap between the end users and the potential services which could facilitate their everyday work. The use of suitable data and retrieved information is key in the decision-making process and Maritime Spatial Planning.

After the collection of the Excel forms, partners participated in **one-on-one calls** with the task leader, to explore in more detail the following:

1) The profile of the organization – the scope of their work, the workflow and decision process, responsibilities and dependencies in the closest network
2) The main challenges faced by the organization and the region
3) The prioritization of needs and challenges and the outline of the ecosystem impacting the prioritization.

These follow-up calls were crucial for further work in the project, identifying the specificities of each entity. Depending on their geographical scope and the profile of their activities, partners will be direct users of the OCEANIDS platform or the connector with specific end users from their region and/or area. This action is strongly intertwined with task T2.1 which maps and engages with relevant stakeholders. Based on the calls, the consortium identified potential additional organizations which should be involved in the project and contribute to consultations and identification of requirements for the platform.

Among some key challenges mentioned stakeholders identified:

- **Tourism** and its impact on water usage and water shortage (especially in the Azores, Greece, including Crete)
- **Extreme weather conditions**
    - Winds (all involved ports, both from Finland and Greece)
    - Droughts (especially Spain, Malaga, and some areas of Brittany)
    - Storms and floods (especially Spain, Malaga, and some areas of Brittany)
- **Maritime Spatial Planning** – tools are needed to support the planning process
- **Air quality** – many areas need to implement the regional Climate Adaptation Plans and comply with carbon neutral indicators, more efficient tools are needed, currently mostly based on in situ measurements
- **Data collection** on remote areas – especially relevant to all involved islands, distance between managed areas makes it more challenging and costly to collect coherent data
- **Climate change impact assessment** and **forecast** allowing for informed decision-making

The collected materials are being shared within the consortium to shape the work of other WPs and other tasks in WP2. The content will be updated throughout the project with more specific and current needs, and in the later stage of the project, the focus will be more detailed on the technical parameters of the platforms and tools created in OCEANIDS.

There are two key actions planned within this sub-task:

1. **Engaging external entities** – additional entities connected through the consortium partners and beyond (e.g., coming from other relevant projects like VALORADA, HARMONIA, etc.) will be invited to contribute to the discussion and share their needs and challenges

2. **Technical consultations** – aligned with technical WPs of the project, more detailed consultations regarding the platform specifications will be conducted, identifying technical parameters and requirements of the end-users

Based on the collected feedback, WP3 and WP4 will be able to define in more detail the scope of the developed services and the OCEANIDS platforms. The results summarized in this report are only coming from the first six (6) months of the project and should be treated as preliminary.

4.3 Understanding the potential EO services for climate adaptation in coastal areas

The EARSC taxonomy used in the exercise with the end user's basis on actual EO capabilities. Thanks to that, end users can already start to understand what is possible to be achieved and facilitated with the help of RS. To broaden the catalogue and to complement it with actual use cases and success stories simultaneously to the internal consultations, an online form was disseminated among one hundred-forty (140) companies in the EARSC network, inviting them to share relevant services which might be addressing Climate Change and/or coastal areas. Based on the collected responses **a booklet of services** will be created to be disseminated among potential and interested end users, including a comprehensive presentation of the project. Apart from questions concerning the service provider (name of the company, point of contact, etc.) the form requires some additional information about the service including its description, benefits for the user and used data (**Figure 8**).

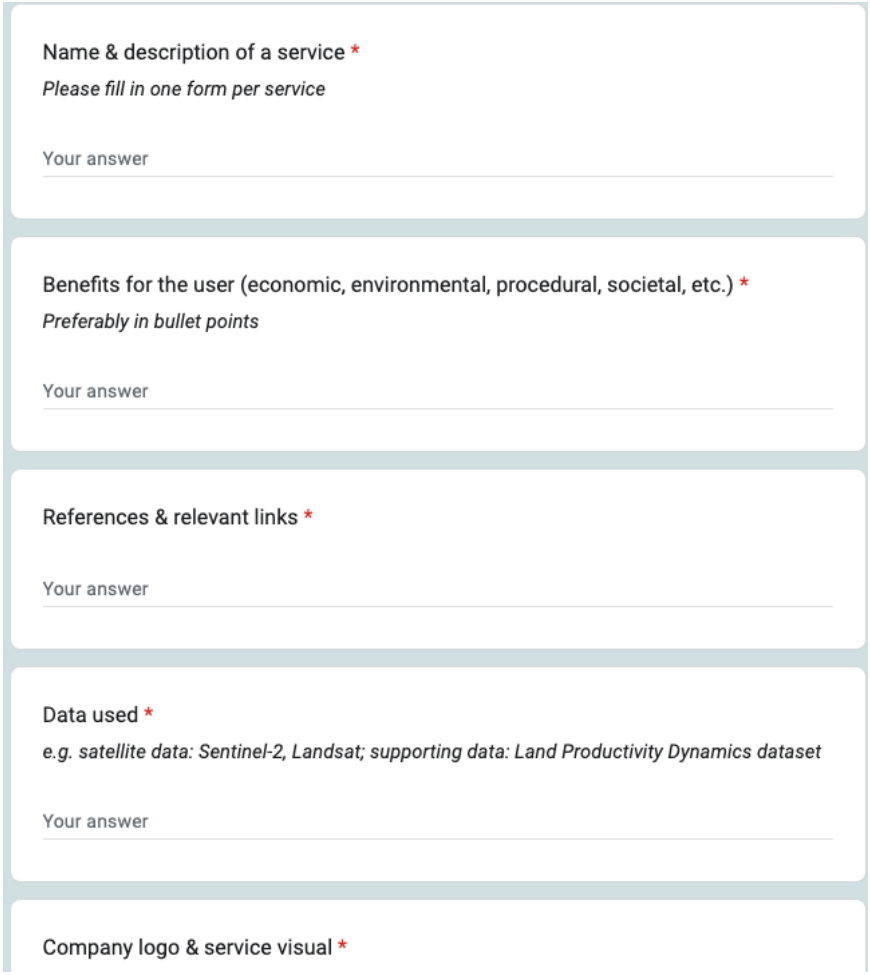

Figure 8. The disseminated online form

The understanding of potential EO services will not be limited to the online form, it will be complemented by thorough desk research which was launched before the submission of this document. The research will be based on the relevant sources of the EO use cases coming from eoWIKI, eoMALL, eoPAGES, Copernicus Marine Service, European Maritime Safety Agency, Copernicus Land use monitoring, Eurisy, and most importantly from the interested service providers.

Information gathered through this sub-task will serve two purposes:

- It will provide end users with needed information to understand the EO capabilities
- It will allow the OCEANIDS consortium to understand the current offer on the market and therefore, identify the most suitable and relevant services which could be delivered through the project

4.4 Initial gap analysis & next steps

Based on the initial feedback gathered from the consortium partners several areas and services can be highlighted as key for the OCEANIDS project.

- **Assessment of climate change risk**

The main elements of the future OCEANIDS platform are the OCEANIDS Decision Support Platform (O-DSP) and Decision Support Platform for Climate-Informed Maritime Spatial Planning (CI-MSP) in Coastal Regions. As designed it should consider current and future climate risks and opportunities during design, planning, and implementation. It will respond to identified challenges of lack of historical data, or enough data to run modeling and forecasting for involved regions. It should also consider the capacity of end users to manage and run such tools, allowing an end user without technical knowledge to use the tool.

- **Monitor quality/productivity**

Among key areas addressed by OCEANIDS shipping and transportation were defined. As these two sectors need to comply with regulations limiting their environmental impact, the measurement of their impact and their productivity will be relevant for ports, their cities, and regions. That will be also related to monitoring the harbours' infrastructure like canals and docks, which are directly impacted by climate change through sea-level rise.

- **Monitor ship movement**

Monitoring of ship movement is tackling several aspects of the functioning of coastal areas. Firstly, it might impact the optimization of routes to manage the traffic, as well as minimize the use of fuel. Secondly, as mentioned by OCEANIDS partners, due to difficult conditions in the port caused by weather or the formation of the seabed, ports need additional information to coordinate the ship movement. This could be also supported by other services indicated as relevant – mapping of the water depth and forecasting and monitoring ocean winds and waves. Thirdly, monitoring of ship movement could support the proper identification of ships and therefore, allow for recognition of illegal activities and intruders.

Another trend among relevant services that can be identified is the topic of **pollution in rivers, lakes, and the sea**. This is also strongly aligned with the objective of the project and addressing the climate change-induced challenges. Even though each partner has their specific needs and challenges, this exercise allowed for the identification of some major trends and common requirements.

Based on the conducted preliminary research, the consortium will outline suitable next steps which will include further exchange with involved local and regional authorities and reaching out to other relevant stakeholders. This will be done in close collaboration with WP3 and WP4 to make sure the consultations provide all the information required for the design and development of OCEANIDS tools.

5 Conclusions

The preliminary steps of WP2, through the collaborative actions of T2.1 and T2.2, were presented in this document. It is important to mention that the OCEANIDS project is ongoing and still on M6, thus a lot of input will be collected and processed accordingly. More specifically in this report, two major topics were presented: **1)** The outcomes of the Workshop and the end users resulting in the creation of the Stakeholder Engagement Plan, and **2)** The interviews conducted, with the direct or indirect end-users, aiming to develop a concise gap analysis and gather requirements.

To this end, following the above-mentioned workshop, the internal meetings and exchanges and the drafting of the stakeholder engagement plan, the key areas and activities on which the OCEANIDS consortium should focus on were identified. In addition, room for improvement in our collaboration and communication strategies was revealed. The plan now outlines specific actions to foster stronger relationships with stakeholders through regular updates and feedback loops. Additionally, the need to set clear metrics to measure the effectiveness of our engagement efforts was established. Overall, the workshop provided valuable insights that will enhance stakeholder interactions and ensure alignment with OCEANIDS organizational goals.

Additionally, the initial feedback from the interviews was presented. However, further interactions with the involved users will be launched. As identified by some partners, additional end users need to be included in the consultation process, which will be invited for online meetings to gather their needs and more specific requirements. During the plenary meeting, the Task contributors and the relevant consortium partners will outline the next steps for the task, focusing on setting the deadlines and requirements for the technical consultations (coming from WP3 and WP4). The gap analysis and user needs will be updated on a continuous basis, but some checkpoints will be defined by the consortium to align with the platform development and guarantee the availability of required information.

The results of this exercise, the lessons learned, the next steps, as well as the initial feedback from the interviews will be presented and further discussed during the OCEANIDS 1st Plenary Meeting, scheduled to take place in Helsinki on the 30th and 31st of May, 2024.

END OF DOCUMENT