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

D1.5 – Data Management Plan

WP1 – Project Management

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

Lead Contributors	Eirini Marinou (GSH), Betty Charalampopoulou (GSH)
Other contributors/ Reviewers	Flora Chalakatevaki (DRAK), Alexandros Katsantonis (DRAK)

Due Date	31.05.2024
Delivery Date	31.05.2024 [M6]
Type	DMP
Dissemination Level	PU - Public

Keywords	Data Management Plan, Data, Zenodo, Open Access, INSPIRE

Document History

Version	Date	Description	Reason for Change	Distribution
0.1	01/04/2024	1st draft	-	**Eirini Marinou (GSH)**
0.2	22/04/2024	2nd draft	Additional Input and proof reading	Betty Charalampopoulou (GSH)
0.3	29/04/2024	3rd draft	**Review**	Flora Chalakatevaki (DRAK), Panagiotis Tampoureas (DRAK), Alexandros Katsantonis (DRAK)
0.4	29/04/2024	4th draft	**Review**	Jesus Gacía-Campos (USE)
0.5	30/05/2024	5th draft	**Integration of comments from reviews**	**Eirini Marinou (GSH)**
0.6	31/05/2024	**Final Submission**	**-**	**Eirini Marinou (GSH)**

Legal Disclaimer

Table of Contents

1 Executive Summary 5
2 Introduction 8
2.1 Scope and Objective of the deliverable 8
2.2 Structure of the Deliverable 9
2.3 Relation to other projects and tasks 9
3 General Principles of Data management 11
3.1 Open Science principles 11
3.1.1 Open Science: Open Access to Scientific Publications 11
3.1.2 Open Science: Research Data Management 12
3.1.3 Open Geospatial Consortium Standards (OGC) 12
4 Data summary 13
5 FAIR data 14
5.1 Making Data Findable 14
5.2 Making data accessible/Dedicated repository 14
5.3 Data sharing 16
6 DMP Questionnaires/Dataset Identification 24
7 Questionnaire/Use Of Personal Data 30
8 Ethics and Intellectual Property 38
8.1 Data Protection 38
8.2 Intellectual Property Rights 39
9 Conclusions 40
10 References 41

1 Executive Summary

This document is intended to give a detailed overview of the deliverable "D1.5 Data Management Plan" for the OCEANIDS project. This deliverable is connected to Task T1.2 "Data management plan" of Work Package (WP) 1 "Project Management", led by Geosystems Hellas (GSH). This report describes the way data is generated, collected, and handled during the implementation of the project. This is a living document evolving during the lifetime of the project. This is the first version of the Data Management Plan (DMP), while two more versions will follow, one intermediate DMP on M18 and the Final DMP on M32 covering the post-project period as well. The DMP will be updated and adjusted regularly if needed always in line with the progress of the project.

The main focus of this deliverable is to provide the strategies to be followed for all data collected and/or generated during the project. Data gathered throughout the project's lifetime will be analyzed and a DMP will be initiated and delivered under this deliverable (D1.5). This DMP will identify best practices and specific standards, taking into account fundamental rights and ethically related constraints, related to the access, storage, and curation of the data that will be collected in the project.

For the creation of this Data Management Plan, the template issued for the implementation of the EU projects funded under Horizon Europe was used as guidance.

List of Tables

Table 1. List of Acronyms/Abbreviations 7
Table 2. Existing Datasets in every WP per Task 18
Table 3. NEW Datasets in every WP per Task 22
Table 4. Dataset identification Template 24

List of Figures

Figure 1. OCEANIDS WPs structure workflow 10
Figure 2. CC BY license elements 12
Figure 3. The Zenodo repository interface 15
Figure 4. The OCEANIDS community within the Zenodo repository system 15
Figure 5. The Asana Platform 16
Figure 6. The files can be accessed through this trusted ASANA platform 16

Table 1. List of Acronyms/Abbreviations

Acronym Abbreviation	Explanation
CAP	Climate Adaptation Planning
CC	Climate Change
CERN	Conseil Européen pour la Recherche Nucléaire/ European Organization for Nuclear Research
CI-MSP	Climate-Informed Maritime Spatial Planning
D	Deliverable
DMP	Data Management Plan
DOI	Digital Object Identifier
EC	European Commission
FAIR	Findable, Accessible, Interoperable and Re-usable
GA	Grant Agreement
GDPR	General Data Protection Regulation
GML	Geography Markup Language
GSH	Geosystems Hellas
IPR	Intellectual Property Rights
M	Month
O-DSP	OCEANIDS Decision Support Platform
OGC	Open Geospatial Consortium
QA	Quality Assurance
QAP	Quality Assurance Plan
WFS	Web Feature Service
WMS	Web Map Service
WP	Work Package

2 Introduction

OCEANIDS aims at building user-driven applications and tools, which act as an enabling technological layer for regional authorities and stakeholders to achieve a more resilient and inclusive systemic pathway to a Blue Economy in coastal regions. Bringing spatial and non-spatial data & services under a single-access window platform for Climate-Informed Maritime Spatial Planning (CI-MSP), the project will allow a more integrated seascape management of coastal regions. The project delivers a Decision Support tool (OCEANIDS Decision Support Platform - O-DSP), with an overarching target to collect, harmonise and curate existing climate data services, making data accessible, reusable and interoperable for the development of local adaptation strategies. Furthermore, CC (Climate Change) 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. OCEANIDS facilitates access to knowledge, data & digital services critical for better understanding and managing climate risks, enhancing adaptive capacities and supporting transformative innovations. All the data collected and/or processed for the deployment of the OCEANIDS tools and the overall implementation of the project shall follow certain practices and specific standards established by the European Commission (EC). Taking into account fundamental rights and ethically related constraints, related to access, storage, and curation of these data, a concise DMP is presented to monitor this procedure. The DMP falls under the WP1 which consists of the following Tasks:

- Task 1.1: “Project management and coordination towards objectives” [M1-M32]
- **Task 1.2: “Data management plan (DMP)” [M1-M32]**
- Task 1.3: “GDPR and Ethics (social, gender and inclusivity) aspects” [M1-M32]

This document is the report presenting the overall Project Management, QAP and RMP of the OCEANIDS project. It is one of the outputs of **Task 1.2: “Data management plan (DMP)” [M1-M32]** and represents the second deliverable of the WP1. 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

Once a project is selected for funding it is mandatory to provide an extensive DMP within the first 6 months of the project. Thus, the current document entitled deliverable D1.5 “Data Management Plan”, serves as the initial DMP which has as a main objective to report and define the data collected throughout the OCEANIDS project, and make sure that they comply with the FAIR data principles[1] (Findable, Accessible, Interoperable, Reusable). Moreover, it

[1] https://www.go-fair.org/fair-principles/

will present how the data are stored in which repository and how they are preserved. This version of the DMP covers all the information provided during the proposal phase but in a more details and exhaustive manner.

2.2 Structure of the Deliverable

This document consists of the following chapters:

- **Chapter 2** includes the Introduction, main scope and structure of the deliverable
- **Chapter 3** provides information regarding the general background of the data management principles
- **Chapter 4** presents the summary of the data of the OCEANIDS project
- **Chapter 5** provides information about the FAIR data
- **Chapter 6** presents the Ethics and Intellectual Property issues
- **Chapter 7** summarises the conclusions of this deliverable

2.3 Relation to other projects and tasks

The WPs of the OCEANIDS project are interconnected as can be seen in **Figure 1**. The first WP, WP1, is directly connected to all WPs as it serves as the main WP of the overall project management, playing a pivotal role in managing all activities conducted under the other WPs. Within this context, WP1 is responsible for documenting all the principles and fundamental rights concerning the data collection and distribution among partners in the project. Task 1.2 and WP1 are interrelated with all other Tasks and WPs, defining the guidelines and process to achieve optimal handling of the data collected throughout the project, which should be followed and applied by all OCEANIDS partners.

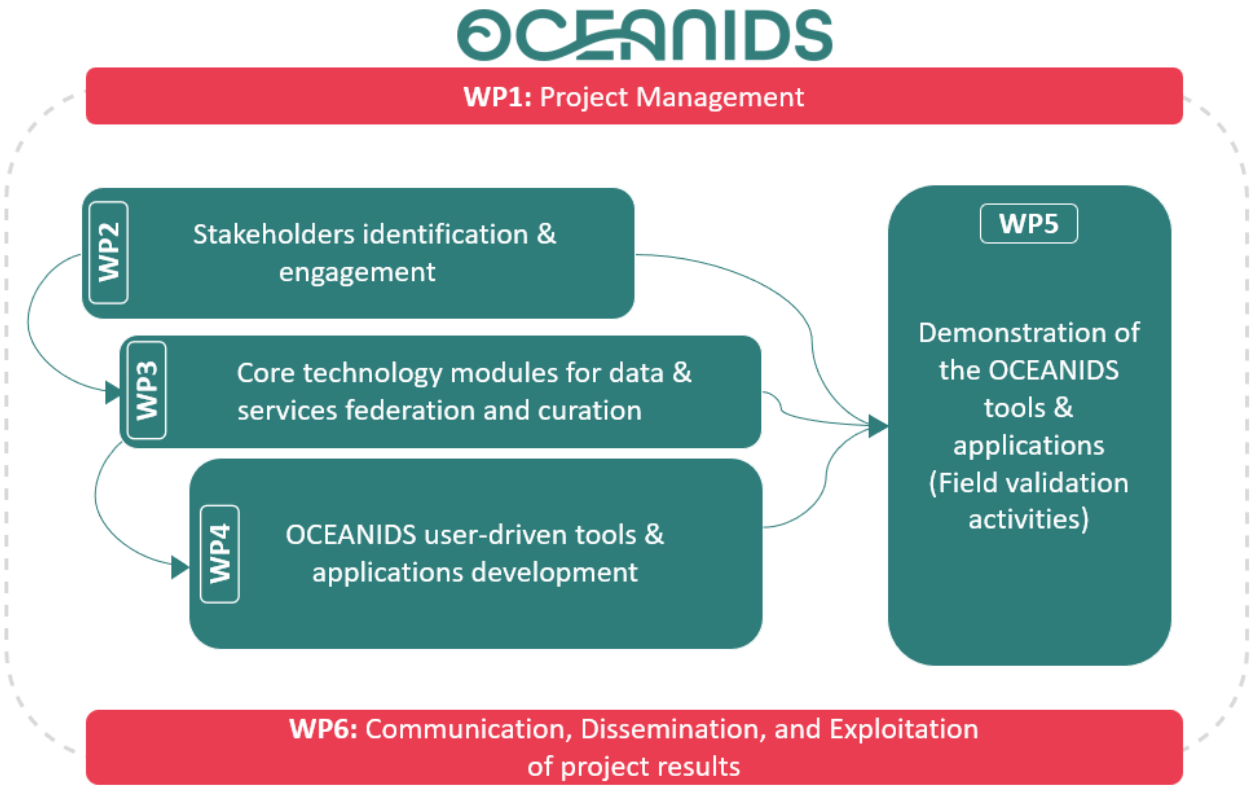

Figure 1. OCEANIDS WPs structure workflow

3 General Principles of Data management

A concise and detailed DMP is considered important as part of the Horizon Europe programme, outlining all how data is collected and/or processed throughout the project, making it a mandatory component. OCEANIDS shall follow all the policies and practices set by the EC's goals to achieve Open Science[2], research data management. The consortium of the OCEANIDS project embraces the principles of Open Science making the data **Findable, Accessible, Interoperable** and **Re-usable (FAIR)**[3].

3.1 Open Science principles

The majority of data from the OCEANIDS project will be made available as **Open Access research data**, which practically refers to the right to access and re-use digital research data under the terms and conditions set out in the Grant Agreement (GA). Openly available data can be accessed, exploited, reproduced and disseminated free of charge for external users, either experts or non-experts.

3.1.1 Open Science: Open Access to Scientific Publications

Under the Open Science principles, based on the GA of the OCEANIDS project, the beneficiaries must ensure open access **to peer-reviewed scientific publications** (refers to the evaluation of work by one or more people usually with similar competencies as the producers of the work) related to their results from the project. More specifically, the following practices shall be considered:

- For each publication a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication will be deposited in a trusted repository compatible with scientific publications, such as **Zenodo** (see section 5.2)
- For each publication immediate open access is provided to the deposited publication via this repository, under the latest available version of the **Creative Commons Attribution International Public License** (CC BY) [4] or a license of equivalent rights. The CC BY license enables re-users to distribute, remix, adapt and build upon the material in any medium or format, as long as attribution is given to the creator of the work. The license allows for commercial use, and it contains the following elements as depicted in **Figure 2**.

[2] https://rea.ec.europa.eu/open-science_en
[3] https://www.go-fair.org/fair-principles/
[4] https://creativecommons.org/share-your-work/cclicenses/

Figure 2. CC BY license elements

- Through this repository information will be given about any research output or any other tools and instruments needed to validate the conclusions of the scientific publication

All the beneficiaries/authors must retain sufficient **Intellectual Property Rights (IPR)** to comply with the open access requirements. The **metadata** of deposited publications must be open under the Creative Common Public Domain Dedication (CC0). The CC0 enables scientists, educators, artists and other creators and owners of copyright- or database-protected content to waive those interests in their works and thereby place them as completely as possible in the public domain, so that others may freely build upon, enhance and reuse the works for any purposes without restriction under copyright or database law.[5] The provided information must include at least the *author(s), title, date of publication, publication venue, Horizon Europe Funding, GA number, project's name, acronym, the authors involved in the action and their organisations.*

3.1.2 Open Science: Research Data Management

The **research data management** is in line with the FAIR principles, enriched with the following actions:

- Establishment of a DMP with **regular updates**. The consortium of the OCEANIDS project shall deliver and update on time the Initial DMP (D1.5), the intermediate DMP (D1.6), and the final DMP (D1.7) to ensure consistency among the data and metadata
- Upload and deposit the data set out in DMP, in a trusted repository, such as **Zenodo** (see section 5.2)

3.1.3 Open Geospatial Consortium Standards (OGC)

The OGC Standards are based on the FAIR principles (Findable, Accessible, Interoperable, and Reusable) geospatial information. OGC Standards are used to ensure interoperability and maximize the value of geospatial data. Developed through consensus, and backed by government and organizations across the globe, OGC Standards provide the stable platform upon which geospatial innovation is built. OGC's free and open geospatial Standards define interoperable approaches to Data Encoding, Data Access, Data Processing, Data Visualization, and Metadata and Catalogue Services. [6]

[5] https://creativecommons.org/public-domain/cc0/
[6] https://www.ogc.org/standards/

4 Data summary

In this section, the data that will be used in the OCEANIDS project will be described. Within the project, several **types** and **formats** can be identified and will be introduced, along with their **purpose**, **size** (if known) and their **origin/source**.

The OCEANIDS datasets are diverse in downloadable formats, and fully compliant with the OGC Standards.

The **formats** that are present in the OCEANIDS project are the following:

1. PNG, BMP, XML, GML, SAFE, GeoTIFF and GeoJPEG JPG 2000, GML file formats
2. WFS, WMS
3. 2D /3D shp and GeoJSON *for geospatial data*
4. ZIP / MrsID and other public domain compressed archives
5. PDF/GEOPDF formatted documents
6. WMV, MP4 or AVI formats *for possible videos*
7. CSV, GRIB2, NetCDF for climate and meteorological data

Links to some of the data, especially in terms of publications, posters, videos etc. will also be available on the project website.

The following **types of data** are expected **to be generated** by the project:

a) Data from the requirements collection activities **(WP2)**
b) Existing data on key taxa and biodiversity issues (datasets) **(WP2)**
c) Experimental data and specifications on the EO technologies developed (datasets, models & reports) **(WP3, WP4)**
d) Validation data from the pilots (datasets) **(WP5)**
e) Dissemination and exploitation plan/material (document and digital content) **(WP6)**

5 FAIR data

This section will present all the necessary measures to ensure that the data either collected or generated satisfy the acronym FAIR:

- **Findability**: This term includes any identifiers, keywords, metadata standards, and other principles/practices that will optimize the finding or re-use of these data by a third party(section 5.1)
- **Accessibility**: Information regarding the repository in which the data will be uploaded and stored, the access to the data itself (open access, access protocols and restrictions aspects), and accessibility and availability of the metadata (section 5.2)
- **Interoperability**: The vocabularies, standards, formats or methodologies that will be used to enable data exchange, re-use and interoperability
- **Reusability:** Provide information on the expected documentation, such as explaining methodology, codebooks (if any), variables etc.

5.1 Making Data Findable

Standard data models and vocabularies already in use in the context of EO and biodiversity data will be adopted to ensure the knowledge will be widely diffused to be processable and reused by external platforms and digital services. A complete Glossary will be created and distributed among the OCEANIDS partners to ensure the (Meta)data is findable.

5.2 Making data accessible/Dedicated repository

For the OCEANIDS project, a dedicated repository has been established to publish and host all shareable data, under **Zenodo.org**[7]. The Zenodo community is already acting as a one-stop-shop for data generated by EU projects and, thus, makes it easier for the data to be discovered by interested parties, as depicted in **Figure 3**.

Zenodo is a Centre-backed research data repository, developed under the European OpenAIRE program and operated by CERN (Conseil Européen pour la Recherche Nucléaire/ European Organization for Nuclear Research), for the long-tail of science, enabling researchers to preserve and share their research output from any science, regardless of the size and format. Moreover, is an innovative and easy-to-use web platform, which allows uploading, curating and sharing of the research data through an easy-to-use web interface and integration with other collaboration and data-sharing services. This repository ensures the discovery and citability of the research output by assigning a Digital Object Identifier (DOI)

[7] https://zenodo.org/communities/eu/

to every upload, as well as promotes software citation and preservation through one-click integration with GitHub (Nowak et al, 2016).

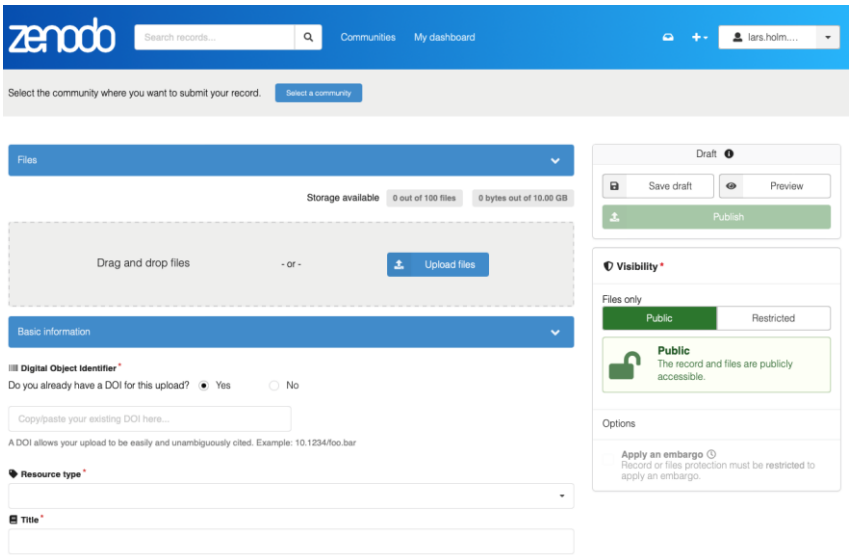

Figure 3. The Zenodo repository interface

The OCEANIDS community, as depicted in **Figure 4,** has been set up for openly sharing project data, including possible research outputs, to allow others to build on the produced work. The repository is named **"OCEANIDS project"** and its logo can be found on the top left. The community can be accessed by the following link:

https://zenodo.org/communities/oceanids-project

The consortium of the OCEANIDS will make sure that available data will be easily recoverable by any interested party. The data will be formatted according to its type and will be presented for access along with the necessary links to download the appropriate software tools, if necessary. This community is being curated by GSH (Task leader of T1.2) not only during, but also after the end of the project.

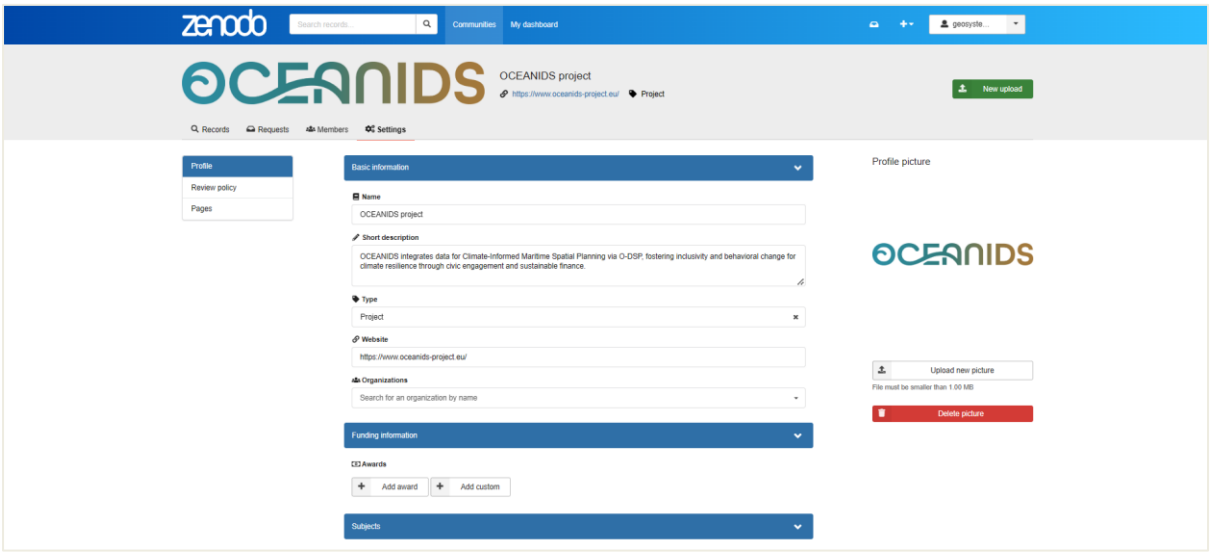

Figure 4. The OCEANIDS community within the Zenodo repository system

Moreover, to facilitate all project-internal communication, a content **Management Tool** was proposed during the Kick-off meeting (KO) and provided to all partners, with the **Asana Platform** (Figures 5 and 6). The Coordination Team has created a Workspace in this platform, dedicated to the OCEANIDS project, aiming to achieve the optimal implementation of the project, through direct communication. This platform serves also as the main repository of the project documents. More details regarding this platform and the workspace can be found in D1.2 "Risk Identification Management & Quality Assurance Plan".

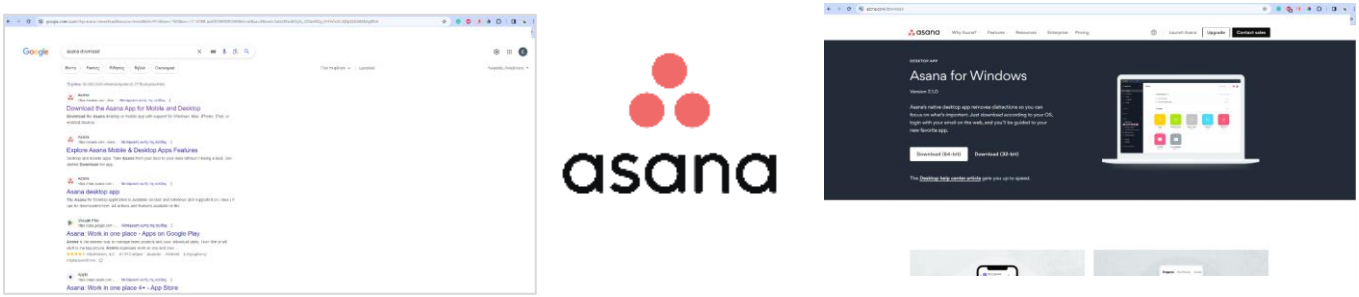

Figure 5. The Asana Platform

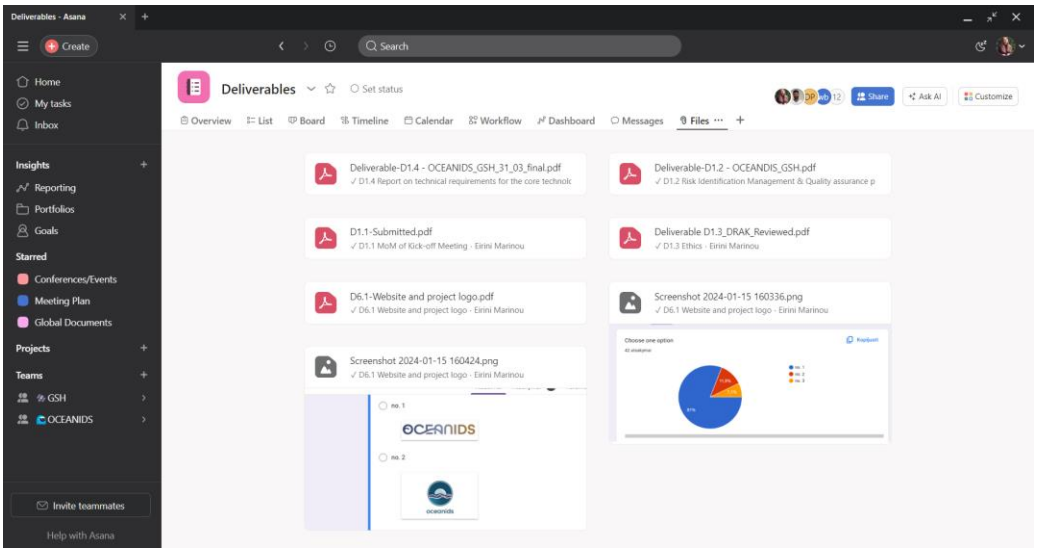

Figure 6. The files can be accessed through this trusted ASANA platform

5.3 Data sharing

The Data sharing in the OCEANIDS project can be separated into two datasets:

i. The **Existing Datasets**

ii. The **NEW Datasets**

In Table 2 and Table 3 are summarised all the data declared by the OCEANIDS partners that will be used or generated under each WP per Task are listed, after careful consideration among the OCEANIDS consortium. These tables have been created collaboratively among the WP leaders and Task leaders, documenting both kinds of datasets. The OCEANIDS partners answered several questions regarding the datasets that will be either collected (existing datasets) or generated throughout the project. It is important to take into account the fact

that the OCEANIDS is still in M6, therefore several updates will follow enhancing the list of available datasets.

The OCEANIDS partners answered the following questions:

i. Regarding the **Existing Datasets:**

- ✓ List the existing data acquired from public/open sources or elsewhere that will be used for the purposes of the OCEANIDS project
- ✓ Name the sources for these data
- ✓ How will data be made available in the project internally?
- ✓ Will these data be made available to external actors?
- ✓ Will any personal data be used for the purposes of the project?

ii. Regarding the **NEW Datasets:**

- ✓ List the data that will be generated in the context of the OCEANIDS project
- ✓ Will data or products/services generated in the project be made available?

These tables will be continuously updated and enhanced by the project partners whenever new data sources or results are available. These updates will be collected through the questionnaires presented in section 6 and will be documented in the intermediate version of DMP on M18.

Table 2. Existing Datasets in every WP per Task

EXISTING DATASETS						
QUESTION	**WP1** (GSH)	**WP2** (WTOC)	**WP3** (HCMR)	**WP4** (RG)	**WP5** (GSH)	**WP6** (METIS)
List the existing data acquired from public/open sources or elsewhere that will be used for the purposes of the OCEANIDS project	The data acquired and managed in WP1 (**T1.1, T1.2, T1.3**) are only internal data related to the consortium (personal data of the individual partners, and legal and financial data of the institutional partners).	**T2.1 CDP:** The data that will be acquired and managed in WP2 (**T2.1**) are internal data related to the consortium and submitted directly from the project partners **&** **NEREUS workshop:** workshop external data: registration of the participants (name/surname, email, etc) **T2.2 EARSC**: a database of European companies in the Earth Observation sector, a list of EARSC members and their points of contact **T2.3 WTOC:** Data will be acquired by publicly available resources online. Resources will include public databases, Wikipedia and media websites. Data will include information about meteorological and climatological events and the corresponding damages/losses/impacts, as reported at these sources.	**T3.1 ICCS:** The ODC implementation will use EO and non-EO data for their implementation. Such data can be Sentinel-{2,3,5P} and CERRA for EO data. As for non-EO data will be used geospatial Shapefiles geometries retrieved from local governance websites. **T3.2 OHB:** The developed EO services will use EO data products and spatial data from various missions and platforms based on the specific user needs and requirements derived within T2.2. Along others, this may encompass Level-2 products from Sentinel missions (1-3) or the Copernicus Services (Marine, Land, Atmosphere) **T3.3 HCMR:** The data will include climate change scenarios datasets such as Euro-CORDEX simulations and/or the Nordic Convection Permitting Climate Projections (NorCP) data over the Nordic domain and the latest CMPI6 data.	**T4.1 RG:** The risk assessment platform will use the data provided by WP3 (C3S Climate data store, EO Data services, climate, and meteorological models). **T4.2 OHB:** The Integrated EO and spatial data platform will use EO and spatial data services specified within T3.2. **T4.3 GSH:** The O-DSP (OCEANIDS Decision Support Platform) will use all the data provided e.g., from GEOSS and C3S Climate Data Store, by T4.1 (risk assessment), T4.2 (EO data) and T2.4 (social networks).	**T5.1, T5.2 GSH:** Training and Validation activities: Registration of the participants (Name, Surname, email, entity type, phone number) **T5.3 USE:** N/A	N//A

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

		T2.4 IN2: Data will be acquired and analysed through social media channels, responses to polls and surveys and will include metrics that measure the level of engagement and can provide information on the geographic location or the impact on the climate of actions taken.	**T3.4 FMI:** using the following climate data: ERA5/CERRA reanalysis of the current climate, dynamically downscaled CORDEX and NORCP climate model data and statistically downscaled NEXGDDP CMIP6 data. Seasonal forecasts from C3S will be bias-adjusted and downscaled with monthly updates. **T3.5 CREO:** The data which might be applicable for further use and which might be easily added to the repository may include Copernicus open datasets (Sentinel 2,3,5P)			
Name the sources for these data	N/A	**T2.1 CDP:** Oceanids Sub-national authorities and Port Authorities **& NEREUS workshop:** workshop external data: registration of the participants. Maybe use Microsoft Forms as a tool to collect responses. **T2.2 EARSC**: Google search, official companies' websites, and national portals listing companies active in the sector. **T2.3 WTOC**: Indicative sources are Wikipedia page (in different languages) BBC and Guardian's websites, CNN NOAA's list of disasters. **T2.4 IN2:** User interactions on social networks (posts, comments etc,.) related to specific hashtags, events or locations.	**T3.1 ICCS:** Indicative some sources are the Copernicus Dataspace (https://dataspace.copernicus.eu/) and CDS (https://cds.climate.copernicus.eu/#!/home). Other sources include the USGS Earth Explorer (http://earthexplorer.usgs.gov/) and MODIS (https://modis.gsfc.nasa.gov/) **T3.2 OHB:** Data from Sentinel missions (1-3) are available in the Copernicus Data Space Ecosystem https://dataspace.copernicus.eu/. The Copernicus services: https://marine.copernicus.eu/ https://land.copernicus.eu/en Additional sources will be defined based on T2.2	**T4.1 RG:** The sources are listed by WP3. **T4.2 OHB:** Refer to T3.2. **T4.3 GSH:** Indicative some of the sources, C3S Climate Data Storage https://cds.climate.copernicus.eu/#!/home and GEOSS portal https://www.geoportal.org/?m:activeLayerTileId=osm&f:dataSource=dab	End-users and stakeholders	N//A

			T3.3 HCMR: Indicative sources: https://cds.climate.copernicus.eu/#!/home https://www.nccs.nasa.gov/services/data-collections/land-based-products/nex-gddp-cmip6 and internal sources **T3.4 FMI:** Copernicus Dataspace: https://cds.climate.copernicus.eu/#!/home CORDEX database: https://esgf-data.dkrz.de/search/cordex-dkrz/ Nex-GDDP-CMIP6 database: https://www.nccs.nasa.gov/services/data-collections/land-based-products/nex-gddp-cmip6 **T3.5 CREO:** Copernicus Dataspace (**https://dataspace.copernicus.eu/**) and products acquired from Sentinels like https://cds.climate.copernicus.eu/#!/home			
How will data be made available in the project internally?	N/A	**CDP:** The data sharing will be part of CDP worldwide annual disclosure campaign, which involves the completion of questionnaires and shared with the consortium directly. **NEREUS workshop:** workshop registration list available to NEREUS and CDP. **WTOC**: A database of the collected data will be available in an internal repository and through an API for rapid access.	**CREO:** For both – datasets available through the Copernicus program and all other datasets provided by partners a dedicated repository shall be created, and hosted on a DIAS environment assuming quick access to requested datasets	**CREO:** For both – datasets available through the Copernicus program and all other datasets provided by partners a dedicated repository shall be created, and hosted on a DIAS environment assuming quick access to requested datasets	Lists that will be part of the deliverables D5.1 and D5.2 (will be GDPR compliant through a dedicated form)	N//A

		EARSC: the databases will be mostly used by EARSC (the owner of databases) and if required will be securely shared with involved consortium partners. **IN2:** The data will be collected, anonymized, aggregated and analysed internally. The results will be made available after analysis through selected tools. Regular updates and quality assurance will be performed. (OCEANIDS social networks service)				
Will these data be made available to external actors?	No. Data in WP1 are only for internal management and reporting to EC.	**CDP:** No, unless agreed otherwise with the OCEANIDS end-users **NEREUS workshop:** No. The data from participants of the workshop will be handled by NEREUS and CDP. **WTOC**: No **EARSC:** no, only information of parties giving their consent might be included in promotion materials. **IN2:** No	No	The OCEANIDS DSS Platform and the EO Platform will be made available to the public/stakeholders/end-users.	As D5.1 and D5.2 are public deliverables these data will be available to a general audience (will be GDPR compliant through a dedicated form)	N//A
Will any personal data be used for the purposes of the project?	No. Especially data collected in WP1 are only for internal management and reporting to EC.	**NEREUS workshop:** everything related to the registration. **WTOC**: No	No	No	No	N//A

Table 3. NEW Datasets in every WP per Task

NEW DATASETS						
QUESTION	**WP1 (GSH)**	**WP2 (WTOC)**	**WP3 (HCMR)**	**WP4 (RG)**	**WP5 (GSH)**	**WP6 (METIS)**
List the data that will be generated in the context of the OCEANIDS project	WP1 has generated data reporting about the administrative, financial and legal management of the project. Patenting and IPR will eventually be managed within WP1.	**T2.1 CDP, NEREUS:** Workshop organization: attendees lists, feedback surveys. **T2.2 EARSC**: update database of EO service providers and relevant services, catalogue of needs, requirements and challenges identified by end users. **T2.3 WTOC**: The dataset created will include already publicly available information. It will include, metrics about the events (e.g., hurricane size, wind speed, rainfall etc.) and damages related (financial losses, deaths etc).	**T3.1 ICCS:** The output of Task 3.1 will provide the Oceanids Data Cubes that will be mainly NetCDF files stored in a Geo Server. These files will be distributed using OGC standards (i.e., WMS, WFS, etc.). **T3.2 OHB:** N/A **T3.3 HCMR:** Climate projection data and feedback from stakeholders will be merged to provide tailor-made information. The generated data will be provided in the form of Data Cubes. **T3.4 FMI:** Based on feedback from stakeholders, the climate projection data is analyzed and processed to deliver customized climate information. The resulting data will be presented in the form of Data Cubes. **T3.5 CREO:** No data will be generated by Creotech Instruments, which shall only be verified and validated using CREODIAS or a dedicated environment.	**T4.1 RG:** The risk assessment platform will generate risk estimates per exposed asset, given WP3 hazard data. **T4.2 OHB:** A selection of feasible New EO Services will be implemented regarding the gap analysis conducted within T2.2. **T4.3 GSH:** The O-DSP (OCEANIDS Decision Support Platform) will use all the data generated by T4.1 (risk assessment), T4.2 (EO data) and T2.4 (social networks).	**T5.1, T5.2 GSH:** Training and Validation activities: Registration of the participants (Name, Surname, email, entity type, phone number). Questionnaires and Interviews **T5.3 USE:** No personal information will be included, only metrics and analytics regarding the Validation activities. Data that would be relevant for validation activities: **1.** User Interaction Data (Usage Metrics, User Feedback) **2.** Performance Metrics (Accuracy and Precision, Response Time) **3.** Usability Data (User Experience (UX) Metrics, Heatmaps and Clickstreams)	**1.** Newsletter info: Email **2.** Website contact form: Name, Surname, email, entity type, phone number **3.** Social media and website visit analytics **4.** Workshop organization: attendees lists **5.** Use the BrandMentions platform for opinion mining. This tool will enable us to perform sentiment analysis and track keyword mentions related to Oceanids. The results will be compiled into a report.

		T2.4 IN2: Registration information containing login, username, email and associated posts and responses performed by users in the project's ephemeral network. The data will be collected only for the time spanning the life of the ephemeral network. After the closure of the network only aggregated anonymized information will be available.			**4.** Engagement Metrics (Session, Bounce Rate) **5.** Behavioural Data (Patterns and Trends, Conversion Rates) **6**. Stakeholder Engagement Data (Stakeholder Surveys, Collecting feedback, Collaboration Metrics)	
Will data or products/services generated in the project be made available?	Only for internal use and official reporting to EC. As for IPR and patenting, they will be managed according to corresponding rules.	**T2.1 CDP, NEREUS:** Workshop organization-attendees list only for internal use by CDP and NEREUS. **T2.2 EARSC**: some promotional materials will be generated based on collected service offers. **T2.3 WTOC:** Datasets will be available only to the partners of the project for the duration of the project. **T2.4 IN2:** User registration data will not be made available. Stakeholders will only have access to anonymized aggregated information at any time.	**T3.1 ICCS:** The data will be used internally in the project and will be publicized if necessary. **T3.2 OHB:** N/A **T3.3 HCMR:** The data will be shared with the project partners and stakeholders and will be publicized if necessary. **T3.4 FMI:** The data will be shared with project partners and stakeholders, and some of the data will be made publicly available. **T3.5 CREO:** Access to selected data sources will be ensured by relevant APIs or by keeping the data on a dedicated cloud storage space (CREODIAS). All data will be accessible via a common API. Basic query parameters will be available thanks to metadata extraction to the internal database.	**T4.1 RG:** Yes, the data will be made available. The data may be confidential based on the decision of the use case owners. **T4.2 OHB:** Yes, the New EO data services will be visualized in the integrated EO and spatial data platform and will be technically accessible via APIs and OGC services as WMS/WMTS/WF. **T4.3 GSH:** Yes, through the OCEANIDS Decision Support Platform (it includes visualisation of all the data).	Yes. As part of D5.1 and D5.2 which are public deliverables to the general audience. No personal information will be included, only metrics, feedback and analytics. Aggregated data.	Through the website and social media accounts. After the publication of the results of the OCEANIDS Project.

6 DMP Questionnaires/Dataset Identification

In this section, the DMP questionnaire template is introduced concerning the detailed description of each partner's datasets. These questionnaires will be distributed to the partners and will be repeated when considered important to maintain integrated documentation and ensure the optimal management of each dataset.

Table 4. Dataset identification Template

Partner name and acronym	
Filled in by	
Date	
Title of Dataset	

Dataset Summary	
Reference number/ID#	*Do not fill-will be inserted by the responsible person of the DMP*
State the time period covered by the dataset	
Will you re-use any existing data and what will you re-use it for?	
State the reasons if re-use of any existing data has been considered but discarded	
What is the type and format of the dataset generated or re-used?	
What is the expected size of the data that you intend to generate or re-use?	
What is the origin/provenance of the data, either generated or re-used?	
To whom might your data be useful outside your project?	

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

Making data Findable (FAIR Data)	
Will this dataset be identified by a persistent identifier?	
Will rich metadata be provided to allow discovery? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how	
Will search keywords be provided in the metadata to optimize the possibility for discovery and then potential re-use?	
Will metadata be offered in such a way that it can be harvested and indexed?	
Making data Accessible (FAIR Data)	
Please state the trusted repository where the dataset is deposited	
Have you explored appropriate arrangements with the identified repository where your data will be deposited?	
Will all data be made openly available? If certain datasets cannot be shared (or need to be shared under restricted access conditions), explain why, clearly separating legal and contractual reasons from intentional restrictions. Note that in multi-beneficiary projects it is also possible for specific beneficiaries to keep their data closed if opening their data goes against their legitimate interests or other constraints as per the Grant Agreement	
If an embargo is applied to give time to publish or seek the protection of the intellectual property (e.g. patents), specify why and how long this will apply, bearing in	

mind that research data should be made available as soon as possible.	
Will the dataset be accessible through a free and standardized access protocol?	
If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?	
How will the identity of the person accessing the data be ascertained?	
Is there a need for a data access committee (e.g. to evaluate/approve access requests to personal/sensitive data)?	
Will metadata be made openly available and licenced under a public domain dedication CC0, as per the Grant Agreement? If not, please clarify why. Will metadata contain information to enable the user to access the data?	
How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?	
Will documentation or references about any software be needed to access or read the data be included? Will it be possible to include the relevant software (e.g. in open-source code)?	
Making data Interoperable (FAIR Data)	
What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?	
In case it is unavoidable that you use uncommon or generate project-specific	

ontologies or vocabularies, will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?	
Will your data include qualified references8 to other data (e.g. other data from your project, or datasets from previous research)?	
Data re-usability	
How will you provide the documentation needed to validate data analysis and facilitate data re-use (e.g. readme files with information on methodology, codebooks, data cleaning, analyses, variable definitions, units of measurement, etc.)?	
Will your data be made freely available in the public domain to permit the widest re-use possible? Will your data be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?	
Will the data produced in the project be useable by third parties, in particular after the end of the project?	
Will the provenance of the data be thoroughly documented using the appropriate standards?	
Describe all relevant data quality assurance processes	
Allocation of resources	
What will the costs be for making data or other research outputs FAIR in your project	

(e.g. direct and indirect costs related to storage, archiving, re-use, security, etc.)?	
How will these be covered? Note that costs related to research data/output management are eligible as part of the Horizon Europe grant (if compliant with the Grant Agreement conditions)	
Who will be responsible for data management in your project?	
How will long-term preservation be ensured? Discuss the necessary resources to accomplish this (costs and potential value, who decides and how, what data will be kept and for how long).	
Data Security	
What provisions are or will be in place for data security (including data recovery as well as secure storage/archiving and transfer of sensitive data)?	
Will the data be safely stored in trusted repositories for long-term preservation and curation?	
Ethics	
Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? These can also be discussed in the context of the ethics review. If relevant, include references to ethics deliverables and ethics chapters in the context of the project	
Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data?	

Other relevant issue	
Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones (please list and briefly describe them)?	

7 Questionnaire/Use Of Personal Data

In this section, additional templates of Questionnaires are introduced concerning the use of personal data. These questionnaires will be distributed to identify how all of the personal data that will be processed are relevant and limited to the purposes of the research project (by the 'data minimization 'principle). Within the context of the Horizon Europe projects, detailed information on the informed consent procedures for the processing of personal data must be submitted.

Templates of the informed consent forms and information sheets about data processing (in language and terms intelligible to the participants, including DPO contact details for host institutions required to appoint a DPO under the General Data Protection Regulation 2016/679) must be submitted.

Partner name and acronym	
Filled in by	
Date	

A. Data Processing

1. Will you be collecting/processing personal data as part of your tasks? If yes, please specify which kind of personal data, for which Task/WP and why it is necessary to process such data ('purpose').

(*As per Article 4(1) GDPR, Personal data means any information relating to an identified or identifiable natural person who can be identified,* ***directly or indirectly****, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier (including IP address) or to* ***one or more factors*** *specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person*)

a. **What legal basis will be relied upon for processing such personal data? (*Article 6 GDPR*)**

2. **How will this data be collected?**
(e.g., Collected directly from researchers, pilot testers or systems? Indirectly from the use of technical systems? What research methods are you using? I.e., observations, interviews, surveys, workshops, participation in simulations, etc.?)

3. **Will you be collecting/processing special categories of personal data? If yes, why and for what purpose and for which WP?**

(As per Article 9(1) GDPR: Special categories of data are data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data to uniquely identify a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation)

a. **If affirmative, what legal basis will be relied upon for processing special categories of personal data?** (*Article 9(2) GDPR*)

4. **Will you be using personal data in the project that you have previously collected? A. In the affirmative, do you have an appropriate legal basis?** *(i.e., using personal data from previous projects*

B. Measures: Security, Technical and Organisational

1. **Please specify the security measures that will be implemented to prevent unauthorised access to personal data or the equipment used for processing** *(such as encryption, use of passwords, user accounts, log keeping, etc.)*

2. **Description of the technical and organisational measures that will be implemented to safeguard the rights and freedoms of the data subjects/research participants** (for *example: staff training on personal data, describing your organisation's cyber security measures, and measures to data loss prevention and recovery, or any certifications (e.g., ISO 27001)).*

3. **Please provide your organisation's data protection policy or similar, if any. If the organisation does not have a public document, please provide a summary**

Example →

Host	Data Protection Policy (please provide a link, if possible)
Partner X	Partnerx.com/privacypolicy

4. **Will you be applying anonymisation and pseudonymisation techniques to personal data?** If yes, please specify which techniques and how they will be implemented.

5. **Who will store the data? Where? How will you ensure it is stored securely?** *(e.g., migrating data to the best format and media, storing, and backing up the data, creating preservation documentation, and reserving the data, etc.)*

6. **Who will have access to the data?**

7. **How long will you keep it for?**

C. Data Sharing

1. **Will this data be shared with other project partners or third parties outside the project? If yes, for what purpose?**

2. **Does your organisation intend to transfer personal data *to* non-EU countries?**

   a. In the affirmative, which kind of data and to which countries?
   b. Describe the transfer mechanism according to Chapter V of the GDPR.

3. **Does your organisation intend to transfer personal data *from* non-EU countries to the EU as part of the TRIQUETRA project? Yes/no**

   a. In the affirmative, what type of data do you intend to import in the EU?
   b. Are such transfers by the legislation of the country from which personal data is transferred? Specify which legislation
   c. Are such transfers by the GDPR? If so, specify

D. Profiling

1. In case the research involves **profiling,** provide an explanation as to how the data subjects will be informed of the existence of the profiling, its possible consequences and how their fundamental rights will be safeguarded. (*As per Article 4(4) GDPR, profiling' means any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular, to analyse or predict aspects concerning that natural person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviours, location or movements*)

E. DPO Information

1. **Has your organisation appointed a Data Protection Officer ("DPO") or an equivalent data protection professional?**
   - **a.** In the affirmative, provide both a name and email address in the box below.

Example →

Host	DPO	Contact
Partner X	…..	Janedoe@partnerx.com

   - b. **If a DPO has not been appointed, please specify why.**

8 Ethics and Intellectual Property

8.1 Data Protection

Data protection regulations, such as the GDPR in the European Union, (Directive 2002/58/EC) set out specific requirements and obligations for organizations that collect, process, or control personal data. It ensures that data practices not only comply with legal requirements but also respect the privacy and autonomy of individuals whose data are being processed.
This preliminary DMP adheres to the GDPR and reflects a commitment to ethical data handling practices. As the collection and analysis of data play a pivotal role in research projects such as the OCEANIDS, it is of significant importance to ensure an optimal approach to data protection and privacy.

✓ Some of the **key components** of OCEANIDS's strategy for ensuring the highest standards of data protection and privacy, are described as follows:

- **Data Collection**: Clear protocols define what data are collected, how they are collected, and the legal basis for their collection, ensuring transparency and compliance with GDPR.
- **Data Storage and Security**: Data are stored in secure, EU-based servers with state-of-the-art encryption and access control measures in place to prevent unauthorized access and data breaches.
- **Data Processing and Analysis**: Processing activities are conducted with the utmost respect for privacy, employing data minimization principles and ensuring that personal data are anonymized or pseudonymized whenever possible.
- **Data Sharing and Transfe**r: Guidelines for data sharing and transfer are strictly aligned with GDPR requirements, ensuring that data are shared with third parties only under conditions that guarantee the continued protection of privacy and compliance with all regulatory requirements.

The project's approach to data protection and privacy is well described in deliverable D1.3 "Ethics", which has set the baseline ensuring the optimal handling, storage and sharing of data within the OCEANIDS project.

✓ The OCEANIDS project implements rigorous **security measures** to protect the data it handles.

These measures include:

- **Encryption:** All personal data are encrypted during transmission and storage, ensuring that data remain confidential and secure.
- **Access Controls:** Access to data is strictly limited to authorized personnel who have undergone ethics and data protection training, ensuring that only those with a legitimate need to access the data can do so.
- **Anonymization** and **Pseudonymization:** Whenever feasible, the project employs techniques to anonymize or pseudonymize data, thereby reducing the risk to individual privacy while still allowing for valuable research insights.

✓ Transparency and accountability are **key pillars** of the OCEANIDS project's approach to data protection and privacy. The project ensures that:

- **Informed Consent:** Participants are fully informed about the nature of the data being collected, how it will be used, and their rights regarding their data, including the right to withdraw consent at any time.
- **Data Protection Impact Assessments (DPIAs):** DPIAs are conducted for all activities involving personal data, and where necessary under the GDPR, helping to identify and mitigate risks to data privacy.
- **Compliance Monitoring:** Regular audits and reviews are conducted to ensure ongoing compliance with GDPR and the project's DMP, with findings reported to relevant oversight bodies.

8.2 Intellectual Property Rights

The consortium recognises that management of knowledge and IPR are fundamental for the smooth collaboration among the consortium members in the successful exploitation and sustainability of OCEANIDS outcomes within and after the end of the project. Through knowledge management and the protection of partners' interests, information bottlenecks related to confidentiality will be avoided, and thus maximise the chances for elevated market visibility and successful implementation of the project results. Management of knowledge and IPR issues are integrated within the framework of the Consortium Agreement (CA), drawn to be aligned with the policies and context for EC-funded projects under Horizon Europe and will be further addressed by the **IPR Management Plan**, that will be introduced in the following months and documented in the intermediate version. The CA specifies how and under which terms and conditions partners access existing or generated by other partners' knowledge.

9 Conclusions

Creating a concise DMP and keeping it up to date as the project moves forward, is one of the main elements of the overall management within the scope of Horizon Europe projects as it guides all aspects of data handling, from collection and storage to processing and sharing. It ensures that data practices not only comply with legal requirements but also respect the privacy and autonomy of individuals whose data are being processed.

The OCEANIDS consortium ensures that the scientific results of the project, comprising scientific papers, algorithm implementations and datasets, will be openly accessible to the research community. For scientific papers, a “green” open access model will be adopted, making the papers available through the project website, and additionally through a publication repository, the Zenodo Repository, introduced and described in this deliverable within the first semester of the project.

Taking into account that this deliverable is the preliminary DMP introduced and submitted on M6, and that the OCEANIDS project is still ongoing, two more versions will follow on M18 and on M32, respectively, providing updates as the WPs produce results. The Coordination team will make sure to keep this document up to date and integrate in the intermediate and final version all the new information gathered.

10 References

[1]. Nowak, K., Nielsen, L. H., & Ioannidis Pantopikos, A. T. (2016, May 24). Zenodo, a free and open platform for preserving and sharing research output. Zenodo. https://doi.org/10.5281/zenodo.51902

END OF DOCUMENT