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Plan for Dissemination, Exploitation and Communication Activities (PDEC)

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¹ Dissemination level: **PU**: Public

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Executive Summary

The MARCO-BOLO Plan for the Dissemination, Exploitation and Communication Activities (PDEC) outlines the EC's rights and the consortium's contractual obligations to the EC for the dissemination, exploitation and communication (DEC) of the project results. It adopts EC best practice guidelines and defines the objectives of MARCO-BOLO's DEC. It also identifies target stakeholders, specifies the communication tools and channels, and outlines responsibilities and resources to carry out effective knowledge management, and to measure the impact.

All project participants have an obligation to participate in the DEC of MARCO-BOLO results and outputs to create impact, especially in their own countries and in their own communities. Within the PDEC, the DEC activities to be performed are described, along with protocols and processes to be followed.

MARCO-BOLO has tasks within work package 7 (WP7) dedicated to these activities (T7.2 and T7.3 led by ERINN Innovation) specifically designed to support project communication activities to a wide audience and targeted dissemination and exploitation of results to specific stakeholders. To support participants in DEC of results, a portfolio of resources is being developed under WP7. This portfolio will be updated regularly, and additional resources made available as required. MARCO-BOLO will make use of the latest tools and communication channels to ensure cost effectiveness and maximum impact.

The PDEC has been developed by ERINN Innovation (ERINN), who will also oversee its continuous implementation. This is the first version of the PDEC and as it is a dynamic document, it will be evaluated throughout the project and updated at EC reporting stages.



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1. Introduction

Through active engagement with key stakeholders, MARCO-BOLO aims to deliver a transformative change in how marine, coastal and freshwater biodiversity is monitored and managed. Researchers will tailor research and observation data for direct use, delivering practical tools that will allow politicians and companies to determine biodiversity health, predict changes, monitor changes from imposed policies and proactively manage environments and their biodiversity. MARCO-BOLO will do so by 1) Improving the acquisition, coordination and delivery of marine, coastal and freshwater biodiversity observations to relevant users.; 2) Enabling technologies for cost-effective, timely and accurate biodiversity observations; 3) Testing new tools, technologies and models to better understand biodiversity decline and 4) Empowering European biodiversity observatory operators, data producers and users by creating and sharing best practice guidelines for gathering and using biodiversity data to contribute to biodiversity restoration efforts. To guarantee the adoption of MARCO-BOLO solutions, support uptake and to maximise the impact and legacy of MARCO-BOLO, the project has put in place effective communication, dissemination, engagement and knowledge transfer (KT) strategies within two work packages (WP6 and WP7) in which all project participants are involved.

1.1 Rationale

The MARCO-BOLO PDEC outlines the DEC strategies to be implemented by the consortium throughout the project lifetime and beyond.

Adopting the EC's best practice guidelines and aligning with rights and obligations outlined in the MARCO-BOLO Grant Agreement (GA) related to dissemination and exploitation, the PDEC describes internal processes and protocols set up to support communication, manage generated knowledge and to ensure exploitation of the MARCO-BOLO results. It identifies key project stakeholders, communication tools and channels and describes the means (tools, messages) of dissemination and measures to support exploitation.

1.2 Objectives

The PDEC aims to:

- Promote the project activities and results beyond the consortium by employing a range of DEC tools;
- Provide a useful guide to all members of the MARCO-BOLO consortium about rules and responsibilities surrounding DEC;
- Identify and profile the target stakeholders for the different project results;
- Define the most effective DEC channels, tools, and means, tailored to the relevant stakeholders;
- Outline the knowledge management and knowledge transfer (KMKT) principles and protocols to ensure effective transfer of Key Exploitable Results (KERs);
- Ensure timely and efficient KMKT while safeguarding intellectual property (IP);
- Maximise post-project uptake by developing thorough and forward-thinking plans that clearly outline the potential users and applications of the project's KERs and KT activities required to ensure objective and measurable short and long-term project impacts.

The MARCO-BOLO PDEC describes the DEC activities to be performed to ensure the exploitation of the project's outputs, its maximum impact, and the availability of the gained knowledge for all interested



organisations. It is a dynamic document and will be evaluated and updated at EC reporting stages, allowing for adjustments as needed.

2. Key Principles Guiding the PDEC

2.1 Definitions and Terminology

The foundation of the MARCO-BOLO PDEC is the knowledge management process which has been implemented from the start of the project and which informs communication, dissemination, and exploitation (KT), in line with the European Commission (EC) definitions³ as follows:

- **Communication** is a strategically planned process that starts at the outset of the project and continues throughout its entire lifetime. It is aimed at promoting MARCO-BOLO and its results. It requires strategic and targeted measures for communicating about MARCO-BOLO and the project's results to a multitude of audiences, including the media and the public, and possibly engaging in a two-way exchange. Activities used for communication purposes are, for example, a public website, press releases or social media.
- **Dissemination** is the public disclosure of the project results by any appropriate means (other than resulting from protecting or exploiting the results), including scientific publication in any medium. It makes research results known to various stakeholder groups in a targeted way, enabling them to use the results in their own work. Activities used for dissemination purposes are, for example, conferences, education and training events, clustering activities and collaboration with other EU-funded projects.
- **KT and exploitation of results** is more advanced than communication and dissemination, it involves the utilisation of results in further research activities other than those covered by the project, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities, or feeding back into policymaking activities. It requires several steps including identifying exploitation mechanisms and activities, focused on identified end users to ensure impact and uptake of the results, which will provide measurable impacts for MARCO-BOLO, while ensuring any project-generated IP is properly managed.

2.2 Rights, Rules and Obligations related to Results

This section outlines a summary of some key aspects of the rights and obligations relating to the protection of these results; however, it is not an exhaustive summary. For further details on the project and Horizon Europe rules surrounding ownership and protection of results please refer to the Grant Agreement (GA), Consortium Agreement (CA) and on specific rules for data outputs, please see D7.2 Data Management Plan (DMP; due in M6).

2.2.1 Ownership of Results

Results are owned by the participant that generates them. Two or more project participants' own results jointly if they have jointly generated them and it is not possible to establish the respective contribution of each participant, or separate them, for the purpose of applying for, obtaining, or

³http://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html;
https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/temp-form/report/periodic-report-horizon-euratom_en.pdf

maintaining their protection (GA Article 16.2 – Annex 5). The joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership (joint ownership agreement), to ensure compliance with their obligations under the GA. If valuable results are not protected, the Commission may under certain circumstances assume ownership of the results (see GA Article 16 – Annex 5 for further details).

2.2.2 Protection of Results

Each participant has an obligation to protect its results. Project participants which have received funding under the grant must adequately protect their results — for an appropriate period and with appropriate territorial coverage — if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation, the legitimate interests of the other project participants and any other legitimate interests.

2.2.3 Exploitation of Results

Each participant has an obligation to exploit its results. Project participants which have received funding under the grant must — up to four years after the end of the action — use their best efforts to exploit their results directly or to have them exploited indirectly by another entity, in particular through transfer or licensing.

If, despite a participant's best efforts, the results are not exploited within one year after the end of the action, the project participants must (unless otherwise agreed in writing with the granting authority) use the Horizon Results Platform to find interested parties to exploit the results (see GA Article 16 – Annex 5 for further details). Project participants must also continue to use their best efforts to exploit their results themselves throughout the subsequent four years.

Intellectual Property Rights (IPR) & Management

MARCO-BOLO will follow the rules for IP set out and regulated by the EC. More information can be found in GA (Article 16.4) "Intellectual Property Rights (IPR) — Background and Results — Access Rights and Rights of Use".

The project participants will ensure that adequate steps towards protection are taken prior to DEC, preventing unapproved public disclosure of results, tools, products and services. An IP Assessment Form (Section 3.1.2) for screening DEC activities will be implemented and shared on the project's intranet for project participants to complete to ensure protection of results.

2.2.4 Communication and Dissemination of Results

Each participant must disseminate their results as soon as possible by disclosing them to the public. However, no dissemination may take place before a decision is made regarding possible protection (section 3.1). Other participants may object if their legitimate interests in relation to their foreground or background could potentially suffer harm.

Project participants that intend to disseminate their results must give at least **15 calendar days prior notice** (see section 3.1.1) to other project participants (unless agreed otherwise), together with sufficient information on the results they will disseminate (GA Article 17 – Annex 5).

Any other participant **may object within** (unless agreed otherwise) **15 days of receiving notification** if it can show that its legitimate interests in relation to the results or background



would be significantly harmed. In such cases, the results may not be disseminated unless appropriate steps are taken to safeguard those interests (GA Article 17 – Annex 5).

Notwithstanding the above, certain dissemination activities that do not include results and which, by their nature, must be carried out in a timely manner (*e.g.*, social media posts, promotional articles and reports) will be exempt from the obligation to give prior notice to all project participants so as not to impede the project’s dissemination strategy, provided that all MARCO-BOLO project participants engaged in such dissemination are in agreement prior to such dissemination, and provided that the duty of confidentiality is respected (GA Article 13).

Open Science and Open Access to Scientific Publications

Open Science (or Open Research) is a broad term describing the transparent and collaborative approach to the scientific process based on open cooperative work, tools and diffusion of knowledge. Open Access (OA) is specifically applied to research outputs (publications, articles, data, books, *etc.*). This section outlines OA requirements for publications. For more information on open science in relation to research data and FAIR principles, please see D7.2 DMP.

Providing OA to publications in Horizon Europe funded projects is an obligation for all grants. All project participants must ensure OA to peer reviewed scientific publications relating to its results (GA Article 17 – Annex 5), and must:

- As soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a trusted repository for scientific publications.
- And, at the same time, provide information (about the research output, tools or instruments) needed to validate the conclusion of the scientific publication via the repository; moreover, the participant must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
- Ensure OA, via the repository, to the bibliographic metadata that identifies the deposited publication, including at least the following: publication (author(s), identifying those involved in the action, title, date of publication, publication venue); the terms “European Union (EU)” and “Horizon Europe”; the name of the project (“....”), acronym (“....”) and grant number (“....”); licensing terms; persistent identifiers. Metadata of deposited publications must be open (CC0 “No Rights Reserved” or equivalent) and in line with the FAIR principles (see D7.2 DMP).

There are three **OA Categories**⁴:

- **‘Publisher Open’** often referred to as ‘gold’, ‘hybrid’ or ‘bronze’ OA where an article is published in an OA journal or is accessible in a subscription journal. The final edited version of the publication can be read directly from the publisher’s website, usually immediately on publication.
- **‘Other Platform Open’** referred to as ‘green’ or ‘grey’ OA where the publication is shared online via a repository or website. A pre-print version of already existing or new articles can

⁴ <https://open.coki.ac/open/>

be uploaded to a domain specific, institutional other repository, generally without any extra cost.

- **‘Closed’** where the publication is not open and is closed to access.

Within the **Publisher Open** category, and as part of the EC’s continuous reporting requirements of publications, project participants must indicate whether the publishing venue is **‘Hybrid’**, **‘Full Open Access’** or **‘Full Subscription’**.

a) Hybrid means that the published article or final peer-reviewed manuscript is made accessible in a subscription journal with an open license. This involves making articles available in older journals that were historically subscription-based and have not transitioned to fully open access. This route almost always involves payment of an Article Processing Charge (APC) or some form of institutional payment through a “read and publish” agreement.

b) Full Open Access means that the published article or the final peer-reviewed manuscript is published in an OA journal. To qualify as an OA journal there must be clear re-use rights and certain quality measures need to be validated by the Directory of Open Access Journals.

c) Full Subscription means that the published article or final peer-reviewed manuscript is made accessible in a Subscription Publisher with no reuse rights. Publishers sometimes make articles available for limited periods or without guarantees. This makes more articles readable but doesn’t ensure long term accessibility.

Under the Horizon Europe Programme, ‘Publisher Open’ and ‘Other Platform Open’ are permitted (see above), however only publication fees in ‘Full Open Access’ or ‘Full Subscription’ venues are eligible for reimbursement (Article 17 – Annex 5).

For more information on OA, please consult GA Article 17 - Annex 5 (Communication, Dissemination, Open Science and Visibility).

2.2.5 Visibility of funding

Project participants are obligated to use the EU emblem when publishing and/or presenting work carried out under the MARCO-BOLO project (GA Article 17.2). Unless the Agency requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must display the EU emblem. This includes conferences, seminars, in information material (such as brochures, leaflets, posters, presentations, etc.), including electronic form via social media, etc. and any infrastructure, equipment or major result funded by the grant. When displayed in association with another logo, the EU emblem must have appropriate prominence. For the purposes of their obligations under this Article, the project participants may use the EU emblem without first obtaining approval from the Agency. This does not, however, give them the right to exclusive use. Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

Any communication or dissemination activity related to the project must include the following EU emblem and funding acknowledgement:





Funded by
the European Union

Funded by the European Union under the Horizon Europe Programme, Grant Agreement No. 101082021 (MARCO-BOLO). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

Any communication or dissemination activity related to the project in which non-EU funded participants are involved must include the emblem and acknowledgement above, as well as the following non-EU funding emblems and acknowledgements where relevant:

- UK Research and Innovation (UKRI) emblem and funding acknowledgement for UK participants (MS, MBA, NOC)



UK Research
and Innovation

UK participants in MARCO-BOLO are supported by the UKRI's Horizon Europe Guarantee under the Grant No. XXXXXXXX (MS); No. 10063994 (MBA) and No. 10048178 (NOC).

When displayed in association with these non-EU funding emblems and acknowledgements, the EU emblem must have appropriate prominence.

The EU and non-EU funding emblems and acknowledgements will be available on the [MARCO-BOLO Google Drive](#). If you have any queries about their use, please contact ERINN Innovation (avril@erinn.eu).

2.3 General Data Protection Regulation Implications

The General Data Protection Regulation (GDPR) (EU 2016/679) provides enhanced protection to individuals' data privacy rights. Organisations storing or using personal data (anything that allows identification of an individual) must clearly disclose what data is being collected and how, why it is being processed/used, how long it is being retained, and if it is being shared with any third parties. Personal data can be names, email addresses, job titles, phone numbers, and anything that allows identification of an individual.

2.3.1 GDPR compliance (website, mailing list and events)

The MARCO-BOLO project website (marcobolo-project.eu) managed by ERINN, is fully compliant with GDPR by incorporating a Privacy Statement and Cookie Bar informing website visitors about what MARCO-BOLO does with any personal data gathered. A 'Subscribe to News' button is clearly visible on the Homepage, allowing people to voluntarily sign up to the MARCO-BOLO mailing list. The sign-up page contains a link to the Privacy Statement, and subscription is on a double opt-in basis, whereby people who sign up need to confirm their email address to complete the subscription process and ensures compliance regarding consent under GDPR. The subscription system will send an automatic MARCO-BOLO email to the subscriber who then needs to click on the link in the email sent to them. The mailing list will only be used to share MARCO-BOLO-related information and news. Photographs and videos taken at MARCO-BOLO project events, workshops, meetings and promotional activities will comply with the GDPR through the use of consent forms to be signed by all persons involved. Personal data collected at events will be stored on secure databases and will not be used /shared for any other



purpose. For more information on the use of Personal Data and associated ethics, please see D7.9 Ethics Report.

3. Pre- and Post-Dissemination Requirements

3.1 Pre-Dissemination Requirements

3.1.1 Prior Notice Procedure

For all types of Publications, Dissemination and Communication Activities (including scientific publications, oral and poster presentations, non-scientific and non-peer reviewed publications, etc.) where MARCO-BOLO results or outputs are presented, the Prior Notice Procedure (protocol below) must be applied.

The main participant involved in the dissemination of results from the MARCO-BOLO project (owned by one or several parties) must give the other project participants at least 15 calendar days together with sufficient information on the results they will disseminate (GA Article 17 – Annex 5).

PROTOCOL – Prior Notice Procedure

- Participant(s) proposing a dissemination activity (submission/communication/publication) should inform all project participants of their intent via the [MARCO-BOLO Google Drive](#) WP7 folder **at least 15 calendar days** before submitting/communicating/publishing using the ‘Prior Notice Email Template’ below and upload/attach the planned submission/communication/publication (full draft, if possible, but at a minimum this must include an abstract including title, author(s), project participants involved and details on where it will be submitted/communicated/published and/or presented).
- Project participants have **15 calendar days** to object if they can show that their legitimate interests in relation to the submission/communication/publication would be significantly harmed if the disclosure is permitted.
- Any objection to the planned submission/communication/publication shall be made in accordance with the GA by written notice to the MARCO-BOLO Coordinator and to the participant(s) proposing the submission/communication/publication, within **15 calendar days after receipt of the notice**. Any objection needs to be justified and precise suggested modifications given. An objection is justified if:
 - ✓ It adversely affects protection of results/background of the objecting party.
 - ✓ Legitimate interests of the objecting party would be significantly harmed.
- If no objection is made within the above stated timeline, or if objections are addressed and accepted by the objecting participant(s), the submission/communication/publication is permitted.

Prior Notice Email Template:

Dear MARCO-BOLO colleagues,



We have prepared a *[insert planned disclosure e.g., communication/publication]* to be submitted to *[insert communication/publication name/item]* / presented at *[insert event name/location]* on *[insert date]*. Please see the *[insert document type/information]* attached.

In accordance with the Grant Agreement, any MARCO-BOLO participant who intends to disseminate their results must give prior notice to other project participants, who are then provided **15 calendar days to object** to the proposed dissemination activity. In exceptional circumstances where a dissemination activity is planned unexpectedly in a shorter timeframe, then notice to other project participants must be as soon as possible.

Objections are justified if:

- a) The protection of the objecting Party's Results or Background would be adversely affected, or
- b) The objecting Party's legitimate interests in relation to its Results or Background would be significantly harmed, or
- c) The proposed dissemination activity includes Confidential Information of the objecting Party.

Any objection must include a precise request for necessary modifications. Please submit justified objections, with precise modifications, to *[main participant email]* and the project coordinator (Nicolas Pade nicolas.pade@embrc.eu) within 15 days, so before *[insert date]*.

If no objections are received within this timeline, we assume that all parties agree with the dissemination of these results.

3.1.2 Intellectual Property (IP) Assessment Form

As outlined in the GA, an IP assessment will be implemented as part of the prior notice process, whereby participants who intend to disseminate results will be asked to confirm that there is nothing exploitable in relation to the results they intend to disseminate, to ensure no IP is accidentally exposed. Participants must send a completed IP Assessment Form to WP7 Communications lead ERINN who will assess the form, with support from relevant WP leads where needed, as outlined in the protocol below.

PROTOCOL – IP Assessment Form

1. Participant(s) proposing a dissemination activity (submission/communication/publication) involving **MARCO-BOLO results** should send information on the intended activity to WP7 Communications lead ERINN (avril@erinn.eu) with the completed IP Assessment Form for the respective results (Appendix Annex 3). Timeline = **latest 15 days in advance** of the intended dissemination.
2. ERINN will review and communicate with the proposing participant(s) in case of necessary clarifications. The assessment consists of:
 - a) Preliminary screening, *i.e.*, checking if all information required from the participant is included in the IP Assessment Form;
 - b) Reviewing of the activity (at least the abstract, but ideally the whole publication draft or similar) to identify potentially exploitable knowledge;
 - c) Identification of potential conflicts of interest related to ownership, authorship and institutions involved, including entities or other projects.



3. If any information is lacking or insufficient, ERINN will request further details from the proposing participant(s) and the assessment period will be suspended until the participant responds with adequate clarification.
4. If ERINN indicates that the result(s) could (potentially) be considered commercially exploitable, the participant must carry out their best effort to protect and exploit the result and the planned activities should be postponed:
 - a) In this case, firstly, ERINN will inform the proposing participant(s) about this situation and request that the relevant participant(s) (together with their technological transfer/IP legal officer(s)), confirm whether these results indeed are commercially exploitable and indicate whether there is an interest in exploiting such results, and how they want to proceed (each participant institution will have a disclosure of invention system).
 - b) If it is deemed that the result is commercially exploitable, and if no IP exploitation is envisaged by the owner(s) of the results, it is best practice to consider offering to transfer it to other project participants or third parties better positioned for the exploitation of the results and willing to seek their protection. In such case, the project participants' or third parties must accept to protect the results by written consent within 10 days to all project participants.
 - c) If such transfer is not done, project participants that have received EU funding but do not intend to protect their results, must inform the EC MARCO-BOLO Project Officer before any dissemination activity is carried out – by means of informing the MARCO-BOLO Coordinator as only the Coordinator can directly contact the EC Project Officer. This notification is mandatory for up to four years after the end of the project. Non-EU funded project participants must follow their funding body's policies.
 - d) The EC may – under certain circumstance – assume ownership of the results, except in any of the following cases:
 - i. It is not possible, reasonable or justified to protect;
 - ii. There is a lack of potential for commercial or industrial exploitation;
 - iii. The consortium participant intends to transfer the results to another participant, or third party established in an EU Member State or associated country that will protect them;
 - iv. An extension of protection would not be justified given the circumstances.

In the case that the EC will assume the ownership, the EC must formally notify the concerned participants within 15 days of receiving notification.
 - e) If owner(s) of the results, other project participants or third parties, and the EC do not assume the ownership and do not take the necessary measures to protect it, ERINN's assessment is complete with a recommendation in the IP Assessment Form. The IP Assessment Form is then signed by ERINN and sent to the proposing participant(s), with the Coordinator (nicolas.pade@embrc.eu) and the Project Manager (claire.laguionie@embrc.eu) in cc.
5. If the intended dissemination or communication activity involving MARCO-BOLO results does not involve exploitable results, ERINN's assessment is complete once the recommendation(s) is/are included in the IP Assessment Form, and it is signed by ERINN.
6. If there is any doubt on whether the result(s) could (potentially) be considered commercially exploitable, then ERINN will share the completed IP Assessment Form with the Project Implementation Committee (PIC) and ask them to support in the assessment (following the steps above)



7. If no exploitable information is identified, all documents (including the completed IP Assessment Form) are sent to the proposing participant(s), with the Coordinator (nicolas.pade@embrc.eu) and the Project Manager (claire.laguionie@embrc.eu) in cc to inform them that they can go ahead with the intended dissemination activity (submission/communication/publication) as planned.

3.2 Post-Dissemination Requirements

As part of the EU contractual requirements all Scientific Publications, Dissemination Activities and Communication Activities are reported as part of the Continuous Reporting of the project in the EC Funding and Tender Opportunities Portal (EC Portal).

3.2.1 Continuous Reporting of Scientific Publications

NOTE: Scientific Publications resulting from MARCO-BOLO will be collated and uploaded to the EC Portal by ERINN. Project participants do NOT need to upload this information to the Portal themselves. Participants are encouraged to send their publications to ERINN (avril@erinn.eu) and EMBRC (nicolas.pade@embrc.eu, claire.laguionie@embrc.eu) **as soon as available and no later than two weeks after the official publication date**, see detailed Protocol in section 3.2.2 below.

Scientific Publications must be uploaded to the EC Portal once they have been accepted for publication. This includes articles in journals, publications in conference proceedings/workshops, books/monographs, chapters in a book, thesis/dissertation, etc.

3.2.2 Continuous Reporting of Dissemination Activities and Communication Activities

NOTE: All Dissemination Activities and Communication Activities will be collated and uploaded to the EC Portal by ERINN. Project participants do NOT need to upload this information to the EC Portal themselves. To successfully manage the recording of these activities, ERINN requires all participants to routinely update the “MARCO-BOLO Continuous Reporting Log” which will be shared with all participants and located on the [MARCO-BOLO Google Drive](#) (Appendix Annex 4).

PROTOCOL – EC Reporting of Scientific Publications, Dissemination Activities and Communication Activities

1. All project participants are required to keep track of all their Scientific Publications, Dissemination Activities and Communication Activities during project implementation.
2. The “MARCO-BOLO Continuous Reporting Log” has been developed by ERINN to support with the reporting of these activities (Appendix Annex 4). The Continuous Reporting Log has been shared with all project participants.
3. Project participants should regularly contribute information to update the Log which contains separate worksheets to report on 1) Scientific Publications and 2) Dissemination Activities and 3) Communication Activities.
4. The log will be reviewed by ERINN for completeness and correctness at EC reporting stages.



3.2.3 Patents (IPR) Reporting

MARCO-BOLO participants are responsible for tracking their Intellectual Property (IPR) resulting from the project. Whenever new IPR has been filed (the EC recommends filing with the European Patent Office), participants are required to notify the coordinator (nicolas.pade@embrc.eu, claire.laguionie@embrc.eu) and ERINN (avril@erinn.eu) with the relevant information. ERINN will share the completed IP Assessment Form with the PIC (see section 3.1.2). Project participants are responsible for uploading the required information in relation to their IPR directly to the EC Portal.

Participants are required to provide the following details:

- Identification of IPR type and Confidentiality
- Type of IPR (Patent/Trademark/Registered Design/Utility Model/Other)
- Confidentiality (Yes/No)
- Application Title
- Embargo end date

3.2.4 Datasets

MARCO-BOLO participants are responsible for recording and uploading all datasets resulting from the project to the EC Portal. For further details on the project and Horizon Europe specific rules for data outputs, please see D7.2 DMP.

Table 1 Overview of Post-Dissemination Continuous Reporting Protocols

Item	Action needed by acting participant	Participant uploading to EC Portal
Scientific Publications	<ul style="list-style-type: none"> • Record Scientific Publications in the 'MARCO-BOLO Continuous Reporting Log' • Send Scientific Publications to ERINN and EMBRC 	ERINN
Dissemination Activities and Communication Activities	<ul style="list-style-type: none"> • Record all Dissemination Activities and Communication activities in the 'MARCO-BOLO Continuous Reporting Log' 	ERINN
Patents (IPR)	<ul style="list-style-type: none"> • Record and upload the required information • Notify EMBRC and ERINN of new IPR filed 	Participant owning the IPR
Datasets	<ul style="list-style-type: none"> • Record and upload all datasets 	Participant owning the dataset(s)

4. Stakeholder Engagement

The purpose of the engagement activities described in the MARCO-BOLO PDEC is to facilitate dialogue, build relationships and generate exchanges between MARCO-BOLO and relevant stakeholders as described below.



4.1 Internal Stakeholders - Project Bodies

General Assembly

The General Assembly is composed of one representative from each project participant and is chaired by the Coordinator, EMBRC. The General Assembly will be involved in the following decisions: 1) Content, finances and IPR; 2) Evolution of the consortium and 3) Appointments e.g., to the Project Implementation Committee (PIC). See CA Article 6.3.1 and D7.1 DMP for details.

Project Implementation Committee (PIC)

The PIC chaired by EMBRC is composed of the WP leaders and any other representatives of the project participants appointed to it by the General Assembly at the project kick-off meeting. The PIC is the decision-implementing body of MARCO-BOLO. It will oversee the operational management of all activities of the project and will also prepare and supervise the proper scientific and technical execution of the project, in particular integrating the recommendations from the Community of Practice (CoP). See CA Article 6.3.2 and D7.1 DMP for details.

Table 2 MARCO-BOLO PIC Members

Member	Organisation	Role in Project
Pier Luigi Buttigieg	AWI	WP1 co-leader
Dan Lear	MBA	WP1 co-leader
Kim Præbel	UiT	WP2 co-leader
Daniel Morais	UiT	WP2 co-leader
Lucie Zinger	CNRS	WP2 co-leader
Chris Bowler	CNRS	WP2 co-leader
Peter Haase	SGN	WP3 co-leader
Tina Sanders	HEREON	WP3 co-leader
Julie Robidart	NOC	WP4 co-leader
Sari Giering	NOC	WP4 co-leader
Patrizio Mariani	DTU	WP4 co-leader
Klaas Deneudt	VLIZ	WP5 co-leader
Christos Arvanitidis	Lifewatch-ERIC	WP5 co-leader
Cristina Huertas Olivares	Lifewatch-ERIC	WP5 co-leader
Ward Appeltans	UNESCO	WP6 co-leader
Kate Larkin	SSBE	WP6 co-leader
Nicolas Pade	EMBRC	Coordinator & WP7 co-leader
Isabel Sousa Pinto	CIIMAR	WP7 co-leader
Claire Laguionie	EMBRC	Project Manager
Avril Hanbidge	ERINN	Communications Officer

Project Management Team (PMT)

The PMT was proposed by the Coordinator and appointed by the PIC. It is composed of the Coordinator Nicolas Pade and project manager Claire Laguionie (EMBRC) and Communications Officer Avril Hanbidge (ERINN). The PMT assists and facilitates the work of the PIC as well as the day-to-day management of the project.



Community of Practice for Biodiversity Data Generators and Data Users (CoP)

The CoP is appointed by the PIC and includes representatives of organisations who have a coordinating role in the development of the biodiversity observing system as members of the Core CoP. The Wider CoP will consist of representatives from the implementing organisations of the biodiversity observing system (see D6.1 due in M12 – November 2023). The CoP will be chaired by UNESCO until a chair is elected by the Core CoP. The CoP brings together and empowers European (and beyond) biodiversity observatory operators, data producers and users. The overall purpose is to foster transformative change and overcome traditional barriers that have limited the generation, transfer and uptake of marine biodiversity knowledge. Through the CoP, generators and users of biodiversity data across Europe will be brought together to co-design and co-develop biodiversity tools and services that are fit for purpose and suit the needs of users (policy makers, industry, researchers, civil society and other stakeholder groups) at local, national, regional and international levels.

The CoP will be involved throughout the project duration to ensure that the work meets the requirements of the target stakeholder groups, and our project results follow the most efficient pathway to achieving the expected outcomes and impacts. The direct involvement of these stakeholders and end users in the assessment and transfer of MARCO-BOLO's Key Exploitable Results (KERs) will ensure effective exploitation of project results that have been assessed by the target stakeholder groups as having a good potential for achieving expected outcomes and long-term impact.

International Advisory Board (IAB)

The IAB will be appointed and steered by the PIC. The IAB will assist and facilitate the decisions made by the General Assembly. It will provide external points of view as to how to conduct the project to maximise beneficial outcomes to society and to advise the consortium on how best to exploit the most promising results. In particular, the IAB will:

- Advise the consortium on industrial, political and societal changes or concerns that may influence the projects objectives, priorities, methodologies, and expected impacts;
- Propose changes to the direction of the project in line with stakeholder/user priorities for maximising the exploitation and benefits of the project for the biodiversity sector;
- Support and amplify the dissemination of the project results;
- Advise the consortium where and how the most promising results, in terms of exploitation, should be transferred.

4.2 Stakeholder Engagement Strategy

To engage with its stakeholders, MARCO-BOLO will implement a structured knowledge management and knowledge transfer (KMKT) methodology. By focusing on Individual Outputs and associated Impact Plans, appropriate target and end users will be identified, along with potential application and exploitation routes.

The consortium has extensive experience in multinational, multi-lingual, multi-disciplinary and multi-participant collaborative research and innovation activities, and in effective communication of progress and results. By applying the Stakeholder Engagement Strategy, we have identified these various groups in society to have a vested interest in the MARCO-BOLO results.



4.2.1 Survey to profile stakeholders and assess data needs.

As part of its Stakeholder Engagement Strategy, MARCO-BOLO will profile stakeholders and their data needs based on a survey and qualitative interviews (WP6). UNIVIE conducted a scoping survey during the MARCO-BOLO kick-off meeting and several interviews within the consortium to gather existing expertise and experience related to stakeholder engagement and data flows. Based on the results, UNIVIE will develop a survey targeting different stakeholder groups to better understand their data needs and allow stakeholders to engage with MARCO-BOLO by joining the CoP or providing feedback within the co-design workshops. The survey will be announced on the MARCO-BOLO website and widely disseminated to reach as many stakeholders as possible.

The survey contains a set of different questions related to a) demographics, 2) monitoring experiences and need, 3) biodiversity data use, and 4) use of biodiversity repositories. We specifically focus on the challenges of using biodiversity data and aim to understand the barriers that different stakeholders have encountered. In addition, we aim to identify solutions and concrete data needs, including EBVs and EOVs. The survey will run from the end of June 2023 until the end of August 2023. Preliminary results will be circulated to the consortium at the end of July 2023 to ensure that our results are included in other stakeholder engagement activities. The survey will also be used a tool to educate the respondents about EBVs and EOVs and encourage them to reflect on their biodiversity data related behaviour.

The MARCO-BOLO Stakeholder Engagement Strategy is outlined below in Table 3. It includes the objectives, activities and expected impact of engagement per main target stakeholder group throughout the full project duration.

Table 3 MARCO-BOLO Stakeholder Engagement Strategy: Target Groups, Objectives, DEC measures and expected impacts.

<p>Target Group: INDUSTRY (e.g., Sensor manufacturers, AUV manufacturers, service laboratories specialised in eDNA-based techniques, aquaculture and other blue economy sectors, data users, national environmental protection agencies, national marine management bodies)</p> <p>Objectives: Showcase new technology and connectivity between sensors, their integration into underwater and surface vehicles. Demonstrate the use of marine biodiversity data to monitor environmental health, aquaculture sites, and predict change of conditions and potential harmful environmental changes that will impact production and environmental health.</p> <p>DEC Measures: Industry will be invited early in the project (via CoP) to contribute to the co-creation of MARCO-BOLO outputs, particularly those aimed at monitoring environmental health and industrial impact (positive or negative (T6.2). Bespoke KTPs will be created for industry to maximise uptake of new tools. Participation of MARCO-BOLO to ocean technology trade and fairs as well as a dedicated event will be hosted to demonstrate the technological advances achieved in MARCO-BOLO to the relevant industrial sectors at the end of the project (T4.4 & T6.3).</p> <p>Expected Impacts: Uptake of new technological developments by the relevant industrial sectors, and an increased understanding of how biodiversity monitoring and analysis can improve living resource production, reduce risk of stochastic environmental events (e.g., pollution, HABs) and improve environmental health. Finally, we will demonstrate to environment agencies the robustness and suitability of current biodiversity data to generate their indicators (WP1,3).</p>
<p>Target Group: SCIENTIFIC COMMUNITY (e.g., Academics and researchers in marine biology, ecology, environmental science, biodiversity observation; IPBES Data and Knowledge Task force; research</p>

infrastructures; marine observatories; observation and research data integrators - EMODNet, OBIS, research networks - EuroMarine; SCOR, ECSAEMODnet, EMB, concurrent EU Projects on biodiversity (e.g., DOORS, BRIDGE-BS, AtlantEco, EuroSea, FutureMares, Mission Atlantic, Blue Cloud, BUSEFUL, BIOcean5D), observation networks (e.g. eLTER, GEO-BON via MBON, EuroGOOS/EOOS/GOOS, European Tracking Network, EMOBON via EMBRC, OBON, POGO), academic-led data standards organisations and digital communities of practice (e.g. GSC, TDWG, ESIP), Biodiversity Partnerships (Biodiversa+)

Objectives: Provide the necessary tools to advance multidisciplinary knowledge on marine biodiversity processes & drivers of biodiversity decline, models and scenarios and to allow researchers and observation networks to generate Essential Variables (EVs), and statutory monitoring indicators (e.g., Water Framework Directive (WFD), Marine Strategy Framework Directive (MSFD), build augmented, multi sensor, and automated observatories, and introduce international standards to enable European biodiversity observation to contribute seamlessly with global efforts.

DEC Measures: Results of MBO will be presented in high-impact OA scientific journals. Data protocols and specifications for creating approved EV products will be verified by the GOOS Bio-Eco panel and GEO BON/MON and submitted to OBPS for OA (WP1). Recommendations for using eDNA protocols, multi-sensor biodiversity observation, and harmonisation of observation methodologies will be disseminated as a single document (T7.3) and as scientific publications. New analytical workflows and VREs will be deployed online for OA (T5.5).

Expected Impacts: Improved structuring and robustness of biodiversity observation efforts, based on SOPs and internationally agreed metadata standards, and providing societally relevant data products, better integration with global observation efforts, and smooth integration of data into European and global data archives. New models and tools to assess and predict biodiversity trends and drivers of change.

Target Group: POLICY

National level: EPA and standards agencies, national and local government departments for marine, national marine management bodies, national science-policy platforms (e.g., Belgian Biodiversity Platform, Foundation pour la recherche sur la biodiversité, Austrian Biodiversity Council, NeFo Germany, NFDI4BioDiv Germany, MEA and IPBES focal points).

European level: DGs ENV, MARE, Research, EEA and JRC, Biodiversa+.

International level: Convention on Biological Diversity, UNCLOS (BBNJ process), IPBES, IOC UNESCO, ICES, Regional Sea Conventions (OSPAR, HELCOM, UNEP-MAP).

Objectives: Protect the ocean commons and make biodiversity data and observation fit for decision and policy making by ensuring that current observation data can be used to generate the relevant monitoring indicators, new protocols tested in the project are adopted and create CoPs that will set standards and implement best practices across the biodiversity observation community, creating a structured and standardised observation platform in Europe.

DEC Measures: Established policy indicators (MSFD, WFD) will be enhanced by inclusion of novel observation approaches (e.g., eDNA, imaging) through protocol development (WP2, 4) and demonstration (WP3, 5). Workflows from observation data to policy supporting products on biodiversity trend assessment, blue carbon sequestration and invasive species will be co-created and verified with target stakeholders (WP6) and put in place (WP5) for future policy support. This work will be done in coordination with relevant projects that address the same policy makers and methods for effective knowledge transferred will be agreed across projects (WP7).

Expected Impacts: Provide a basis for sound governance and coordination of biodiversity monitoring observation, and increased uptake of biodiversity information to support for enabling European policies meant to on reduced environmental impact, reverse biodiversity decline, and enable science-based decision making, by providing predictive tools, ultimately leading to long-term support



for coordinated biodiversity observation and forecasting initiative at European level, in line with the international standards.

Target Group: SOCIETY (e.g., Marine biology, ecology, environmental science, biodiversity observation NGOs, consumers, general public, media, benchmarking associations (Marine Stewardship Council, World Benchmarking Alliance)).

Objectives: Share and showcase the importance and benefits of marine biodiversity in relation to microbiomes and biodiversity-friendly prevention/mitigation measures, and opportunities for biodiversity recovery. empower citizens to best engage with marine biodiversity observation activities.

DEC Measures: Regular maintenance of online project platforms, especially social media channels – engaging directly with stakeholders. Participation at outreach events, including non-scientific events e.g., stakeholder workshops (T6.2) will address how biodiversity data can be used to support policy and decision making. Publishing in non-scientific press sources e.g., testimonies from those trained in T6.3.3 will be uploaded to website and distributed through social media. Graphics and videos to explain the importance and benefits of marine biodiversity, the MARCO-BOLO observation solutions and applications (accessible to non-scientific viewers).

Expected Impacts: Greater awareness and interest in marine biodiversity in Europe, as well as the interrelations between biodiversity, health, food, soil, water, air and climate, in particular, risks associated with microbiomes and biodiversity-friendly prevention/mitigation measures, and opportunities for biodiversity recovery are identified. Improved environmental and human health and quality.

4.3 MARCO-BOLO-Specific Stakeholder Events

4.3.1 Stakeholder Co-Design Workshops

Co-Design, co-creation and stakeholder consultation will be carried out as part of T6.2 which is led by UNESCO. Three co-design/co-creation workshops will be organised to bring together relevant project participants and end users (policy, industry, civil Society, data/research). Through a phased approach this will setup the necessary feedback loops in the creation of MARCO-BOLO data products for biodiversity management to ensure end user needs and requirements are considered in the project's output development, the testing of prototype MARCO-BOLO products as well as inputting into the development of impact pathways for effective KT and uptake of the project's outputs by end users, promoting key achievements towards improved coastal marine biodiversity observation capabilities in Europe.

Depending on the outcomes of the co-design workshops and the targeted end user, outputs will be compiled into various resources to ensure maximum impact, which may include videos, policy briefs, infographics, guides and recommendations that address optimisation of marine biodiversity monitoring (tools, gaps, requirements) and blue carbon and the role of marine biodiversity (D6.4 (M48 – November 2026) and D7.5 (M12 – November 2023)). In addition to targeted invitations to the stakeholder workshops (WP6) and events (MS6.2), project participants will be encouraged to connect and share results with working groups of experts and relevant networks including research/advisory groups of these authorities.

4.3.2 Knowledge Transfer (KT)/Training Events

Dedicated events will be hosted to demonstrate to the relevant industrial sectors the technological advances achieved in MARCO-BOLO at the end of the project. Surveys led by UNESCO and UNIVIE in



T6.1 will prioritise biodiversity variables, define specifications and data format to then design training to take place in collaboration with stakeholders during the demonstrator T4.4 led by VLIZ with contributions from NOC, DTU and USE. This will facilitate knowledge exchange and adoption of biosensors and their associated data across site managers, industrial users, etc. as part of T6.3 and facilitate USE in delivering D4.3 (M44 – July 2026). As part of T4.4, a workshop will be organised to introduce stakeholders to the sensors, the data and to deliver an empirical understanding of real-world use cases across sectors from sustainability to the blue economy. The fieldwork and knowledge gained will be disseminated broadly by all project participants and particularly through D4.4 (M48 – November 2026). The resulting roadmap of sensor types, specifications and data flows will be delivered in collaboration with stakeholders to the data portfolio and D7.3 Best Practices for Biodiversity Observation (M48 – November 2026). As part of T6.3.3, led by SSBE with contributions from EMBRC, MBA, CIIMAR and UNESCO, sensor training courses will be provided for relevant industry and civil society stakeholders i.e., the future users of the MARCO-BOLO's technical and analytical methods, solutions etc.

5. Knowledge Management, Transfer and Exploitation of Results

5.1 Knowledge Management and Knowledge Transfer (KMKT) Overview

The EC has identified the importance of improving knowledge transfer (KT) between public research institutions and third parties, including industry and civil society organisations, as one of ten key areas for action⁵. MARCO-BOLO will employ a proven Knowledge Management and Knowledge Transfer (KMKT) methodology to effectively address this key aspect of facilitating project impact.

This methodology was originally developed in the FP7 MarineTT project (GA #244164), and further developed and applied by the H2020 COLUMBUS project (GA #652690 - www.columbusproject.eu). This methodology has been applied in many FP7 and Horizon 2020 funded projects such as AQUAEXCEL, AQUAEXCEL2020, AquaInnova, ARRAINA, COEXIST, COMMON SENSE, ECsafeSEAFOOD, MaCuMBA, MG4U, ParaFishControl, MATES, SIMBA, ERGO, REviveD water, RES4BUILD, SEALIVE, BIOGEARS, TechOceanS, MARBLES and WaterLANDS.

Knowledge Management (KM) is the process of identifying, capturing, organising, analysing, and storing knowledge to ensure its availability to be transferred effectively to specific and relevant users.

Knowledge Transfer (KT) is the process of creating, organising, capturing/sharing/distributing knowledge to ensure its availability for future users, focusing the research being conducted on the wider needs of society and industry⁶. KT encompasses both commercial and non-commercial activities such as research collaborations, consultancy, licensing, spinoff/spinout creation, researcher mobility, and publications *etc.* KT aims to support mutually beneficial collaborations between universities, businesses and the public sector. The ultimate end benefit of successful KT is the application and influence of knowledge on targeted communities with greater impact (short and long term) across academia, industry and society.

⁵ https://ec.europa.eu/invest-in-research/pdf/download_en/knowledge_transfe_07.pdf

⁶ http://europa.eu/rapid/press-release_MEMO-07-127_en.htm?locale=en

Project Outputs/Knowledge Outputs (KOs) are described as “a unit of knowledge or learning generated by or through research activity. It is not limited to *de-novo* or pioneering discoveries but may also include new methodologies/processes, adaptations, insights, alternative applications of prior know-how/knowledge” [Definition developed by AquaTT in the context of the COLUMBUS project]. Typically, such knowledge might be referenced as a small part of a published paper, potentially three to five years after the approach is pioneered in a research project.

Key Exploitable Results (KERs) within MARCO-BOLO are tangible or intangible outputs of the action, such as data, knowledge and information whatever their form or nature⁷ which have been deemed to be of **high priority** for project transfer actions. The means by which KERs will be identified from KOs is described in this section, but it is important to note that MARCO-BOLO is not implying any sort of value judgement between KOs and KERs. Rather, the project is simply using this distinction to allow knowledge that is of the most direct impact to the project, or is most feasibly transferable by the project, to be prioritised when assigning resources for transfer. By focusing on identifying KERs and transferring them when they have been assessed as having potential application and impact, it is possible to fast track them, providing a faster impact on target- and end-users external to the project.

End User(s) are the individual(s) who are identified as being in a position where they could feasibly **apply** a given unit of Knowledge (KO/KER) and by doing so create the desired eventual impact of that knowledge. The KO/KER may need to **evolve** in order to reach the end user.

Target User is an individual(s) (organisations should be avoided where possible as specificity is crucial), whose position makes them a potential stepping-stone needed for a KO/KER to progress towards an identified end user and eventual impact. Target users are individuals with a specific mandate or responsibilities relevant to the specific KO/KER being evaluated. Target users should not merely be potential users of knowledge but should be individuals whose application of the knowledge is likely to advance it down the Pathway to Impact.

A **Knowledge Transfer Plan (KTP) / Pathway to Impact Plan** is an informed stepwise plan for achieving the identified eventual impact of any piece of knowledge, regardless of whether this impact is achievable in the short, medium or long term. In MARCO-BOLO these will be developed for all selected KERs. The KTP identifies the end user capable of producing the desired eventual impact and outlines a specific series of transfer activities to intermediate target users.

Eventual Impact is the ultimate end benefit of the application of the knowledge (KO/KER). It is defined as an overall enhanced situation, generally for society but it can also be research or industry specific. Eventual impacts can be the adoption of new technologies, products or innovation identified and refined within the project, or a change in protocols.

The KMKP of MARCO-BOLO KERs is integrated into the project through WP6 and is the main focus of the MARCO-BOLO Community of Practice (CoP). The core CoP will monitor project progress, provide advice and by the end of the project be able to measure the impact of MARCO-BOLO and how it has improved the effectiveness of the current marine biological observing system (T6.1). UNIVIE will profile end users of MARCO-BOLO’s outputs and identify potential policy windows for impact (Subtask 6.1.2). Led by UNESCO, three co-design/co-creation workshops will be organised to bring together

⁷ <https://intellectual-property-helpdesk.ec.europa.eu/>

relevant project participants and end users (policy, industry, civil Society, data/research) to setup the necessary feedback loops in the creation of MARCO-BOLO data products for biodiversity management to ensure end user needs and requirements are considered as well as inputting into the development of impact pathways for effective KT (T6.2). Bespoke KTPs or Impact Plans will be developed by ERINN for individual or clusters of KERs assessed as being of high potential for contributing to the project’s objectives (Subtask 6.3.1). Depending on the outcomes of the co-design workshops and the KTPs, outputs will be compiled into various resources to ensure maximum impact, which may include videos, policy briefs, infographics, guides and recommendations that address optimisation of marine biodiversity monitoring (tools, gaps, requirements) and blue carbon and the role of marine biodiversity (Subtask 6.3.2; Subtask 6.3.3; D6.4; D7.4).

All project participants will contribute to the project’s KMKT activities by adhering to the protocols and assisting in the identification, analysis and transfer of MARCO-BOLO’s KERs to their end users.

5.2 Knowledge Management and Knowledge Transfer (KMKT)

This section of the PDEC outlines the stepwise process, which will be carried out within MARCO-BOLO’s WP6 Stakeholder Engagement and Community Integration led by SSBE. This methodology will see project outputs identified, reviewed, and prioritised to project KERs with developed KTPs. The Figure 1 below outlines an example from ERINN of a full ‘Pathway to Impact’.

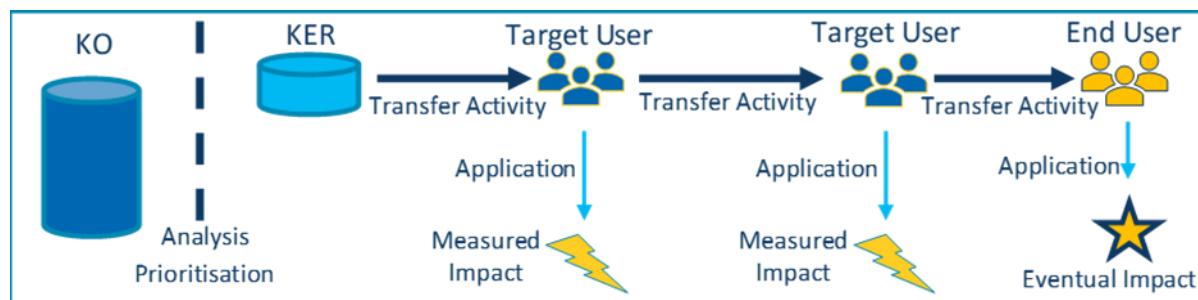


Figure 1 An example from ERINN of a full ‘Pathway to Impact’

5.2.1 Develop and Operationalise a CoP (Lead: UNESCO, contributor: UNIVIE)

Phase 1: Identifying and understanding outputs.

The KMKT of MARCO-BOLO KERs is integrated into the project through WP6 and is the main focus of the MARCO-BOLO Community of Practice (CoP). As part of T6.1, UNESCO will lead the establishment of a Core CoP with agreed terms of reference and membership (which includes WP leaders in an observer role) by M6 – May 2023. Members of the Core CoP will be representatives from organisations who have a coordinating role in the development of the biodiversity observing system. In contrast, the members of the Wider CoP will be representatives from organisations implementing the biodiversity observing system.

The Core CoP will meet virtually every six months to monitor project progress, impact and provide advice. By the end of the project the aim is for them to measure the impact of MARCO-BOLO and how it has improved the effectiveness of the current marine biological observing system. UNIVIE will perform a profiling of end users, identify success stories of how EOVS and EBVS are currently used

including current methods/forums for stakeholder engagement and identify potential policy windows for impact (Subtask 6.1.2).

Effective KT relies on careful identification and description of project outputs to ensure that all key information is provided which will result in effective transfer. Quality control measures will be performed, to ensure that the project output(s) can be clearly understood by others who may not be experts in the relevant disciplines. Each project participant will treat information from other participants as confidential unless otherwise stated and not disclose it to other parties unless the information is publicly available. It is important for all project participants to note that project outputs are not only the final results of research, but they can also be part of the methodology to obtain the final result, which could be an innovation for a research area or process.

This step aims to understand the positioning of a project output to be better able to carry out impactful KT activities. It intends to help clarify how the project output could be beneficial to different target and end users. This step identifies potential applications, target and end users and the eventual impact of a project output. This information will also inform the development of KTPs for KERs.

It should be noted that outputs/KERs, especially those identified early in the project, are likely to continue to develop over the course of MARCO-BOLO. Identified outputs will be periodically reviewed by UNESCO and participants asked to provide updates if applicable.

5.2.2 Co-Design, Co-Creation and Stakeholder Consultation (Lead: UNESCO, contributors: SSBE, MBA, CIIMAR)

Phase 2: Identified outputs are reviewed and assessed for potential application and impact.

Led by UNESCO as part of T6.2, three co-design/co-creation workshops will be organised to bring together relevant project participants and end users (policy, industry, civil society, data/research). Through a phased approach this will setup the necessary feedback loops in the creation of MARCO-BOLO data products for biodiversity management, to ensure end user needs and requirements are considered in the project's output development, the testing of prototype MARCO-BOLO products as well as inputting into the development of impact pathways for effective KT and uptake of the project's outputs by end users, promoting key achievements towards improved coastal marine biodiversity observation capabilities in Europe.

The Core CoP will plan two of the workshops. The first workshop will take place by M18 – May 2024 and will aim to get buy-in from the Wider CoP to ensure an effective co-design/co-creation/consultation phase as part of T6.2. The second workshop will take place by M46 – September 2026 and will aim to facilitate the successful uptake of the MARCO-BOLO KERs and resources, and therefore enable impact measurement of MARCO-BOLO on improving the effectiveness of the current marine biological observing system.

An essential step in the MARCO-BOLO KMKKT methodology is the identification of output applications, potential impact and respective end users (e.g., applications could be in various areas and sectors not just the one in the research area of the project) for each output which has been assessed as having high potential application and impact.

Those outputs that are validated and deemed to be of priority for the project will be re-labelled as **Key Exploitable Results (KERs)** and progressed to the third phase. Any output that is not made a KER will



continue to be periodically reviewed and any remaining at the end of the project will still be captured as evidence of project results for final reporting. The identification of target users in the analysis stage is critical to laying the groundwork for transfer and exploitation plans in the third phase. The exercises in this phase may also serve to identify potential stakeholders that are worth connecting with, even in cases where the knowledge may not yet be ready for transfer.

Depending on the outcomes of the co-design workshops and the targeted end users, outputs will be compiled into various resources to ensure maximum impact, which may include videos, policy briefs, infographics, guides and recommendations that address optimisation of marine biodiversity monitoring (tools, gaps, requirements) and blue carbon and the role of marine biodiversity (D6.4, D7.4). In addition to targeted invitations to the stakeholder workshops, project participants will be encouraged to connect and share results with working groups of experts and relevant networks including research/advisory groups of these authorities.

PROTOCOL

At periodic intervals, UNESCO will organise output and KER “expert analysis meetings” with the PIC and the Core CoP.

The frequency and makeup of these meetings will be determined in collaboration with the Coordinator EMBRC as well as based on the current status of output identification and management in the project.

The expert analysis meetings will carry out a thorough examination and evaluation of the outputs (identified so far) and their applicability and readiness for transfer. Particular attention will be paid to:

- Identification of all likely target- and end users. We encourage project participants to be as specific as possible and innovative when determining potential end users.
- It is important to consider the following when profiling target- and end users:
 - Understand the user’s mandate or responsibilities;
 - Consider their background knowledge, attitude, and practice in relation to the issue;
 - Understand their knowledge needs;
 - Understand what and who may influence their decisions;
 - Be aware of their preferred sources of information and knowledge.
- Identification of associated application and impact potential.

Assess the Technology Readiness Level (TRL) that could inform the development of an appropriate output pathway to impact, where the output requires further research, validation or scale-up.

Experts in these meetings will be asked to:

- Confirm the accuracy and feasibility of transfer both within and beyond the project (but as a direct result of the project) for each presented output, to the best of their understanding.
- Assign to each output a ranking to determine whether it should be prioritised as a KER based on its current status.
- Discuss and identify potential target users to whom the knowledge should be transferred to progress it towards its eventual impact.



Depending on the outcomes of the co-design workshops and the targeted end users, outputs will be compiled into various resources to ensure maximum impact, which may include videos, policy briefs, infographics, guides and recommendations that address optimisation of marine biodiversity monitoring (tools, gaps, requirements) and blue carbon and the role of marine biodiversity.

5.2.3 Knowledge Transfer (KT), Capacity Building and Exploitation of MARCO-BOLO Results **(Lead: SSBE, CIIMAR, MBA, contributors: ERINN, UNESCO)**

Phase 3: Carry out and report on KT activities; while measuring the impact of both the activity and the application of the Knowledge by the User(s).

T6.3 will build upon T6.1 and T6.2 to create and implement bespoke Knowledge Transfer Plans (KTP)/Pathway to Impact Plan and produce KT resources and assets that will draw upon stakeholder feedback to develop impactful resources to disseminate key outputs from the project to the four main stakeholder groups: Policy and Management/Decision Making (EU and International); Industry (focus on blue economy); Civil Society (including NGOs); and the Data/Research community.

For each KER, a customised KTP/Pathway to Impact Plan will be developed by ERINN with contributions from CIIMAR (for policy end users); SSBE (for industry end users); MBA (for civil society end users) and UNESCO (for the data/research end users) as part of Subtask 6.3.1. The KTPs will build upon the impact pathways and stakeholder profiling by UNIVIE, in order to obtain the maximum uptake and impact of each KER, Core CoP recommendations and best practices. Implementing an efficient KTP that is tailor-made to the needs and capacities of specific target and end users (profiled in phase 2) will maximise the chance of successful transfer resulting in uptake and application. The key to success is achieved through fully understanding the target- and end user and developing the KTP around them. There are several steps included in the KTP, and there are different downstream routes to reach its eventual impact. KTPs are the accumulation of numerous KT activities as represented in Figure 2.

KTPs will ensure KERs go through a Due Diligence process, whereby a more thorough examination and evaluation of the KER and its applicability and readiness for transfer will be investigated. Due Diligence will be undertaken so that any factors that could affect the transfer potential (confidentiality, competition, IPR) of the KER and ultimately the uptake and impact of the knowledge can be identified. The individual project participant within MARCO-BOLO best positioned to conduct the transfer will be identified and this phase will attempt to clearly describe how the impact of MARCO-BOLO's KERs will be measured, even after the project has come to a close.

The work carried out in this phase will not only be important for accurately reporting the full breadth of impact of the project to the EC, but it will also assist all project participants in carrying out exploitation activities. Not every KER transfer plan will be able to be reasonably executed during the lifetime of the project but, by delivering clear plans, the methodology will help establish how exploitation actions within the project will feed into the overall impact of the project as a whole and help achieve the societal goals of MARCO-BOLO.

Led by SSBE with contributions from MBA, CIIMAR and UNESCO, new KT materials, resources and assets will be developed that can be used for dissemination to stakeholders through the Core CoP and the Wider CoP, including KT sessions tailored to stakeholder groups (Subtask 6.3.2). A range of



resources will be produced (e.g., policy briefs, infographics, user guides, product portfolio). The exact topics and resource type will be decided upon after evaluating the outputs of the co-design workshops and the impact pathways for stakeholders (Subtask 6.3.1) to ensure maximal uptake. Potential topics, aligned with planned project outputs include:

- Optimising the marine biodiversity value chain: A guide for data managers, data services and users on Essential Biodiversity Variables (drawing upon WP1, and others);
- A guide to new and advanced technologies for marine biodiversity observation (eDNA, mapping, remote sensing, sensor network and integration) (drawing upon WP2-5);
- Blue Carbon and the role of marine biodiversity: A guide for policy makers (WP5).

Finally, the implementation of KT activities and the long-term legacy of MARCO-BOLO will be led by SSBE with contributions from EMBRC, MBA, CIIMAR and UNESCO (Subtask 6.3.3). Bespoke activities will be carried out with stakeholder groups to facilitate the uptake of KERs by end users. These will include specific sessions at the final CoP event in M46 – September 2026, co-designed with project participants and end users, utilising KT ‘assets’ developed by the project to communicate outputs and KERs. This task will also undertake specific dialogue with key actors in the marine biodiversity stakeholder landscape and with WP7 to explore opportunities for longer-term continuation and legacy of the MARCO-BOLO CoP and KERs.

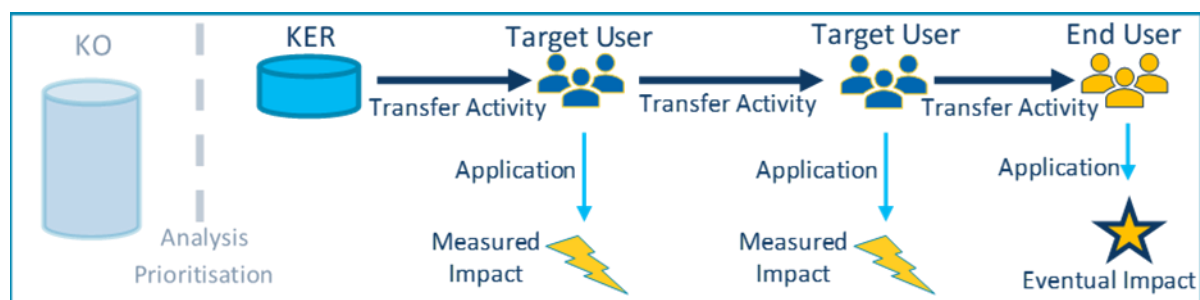


Figure 2 MARCO-BOLO Knowledge Transfer Methodology

PROTOCOL – Knowledge Transfer and Exploitation

For any knowledge/output that has been determined to be a KER:

1. ERINN will collaborate with the Core CoP, PIC and the owner(s) of a KER to develop a Knowledge Transfer Plan (KTP)/Pathway to Impact for each KER. In particular, this effort will focus on the following considerations regarding the first target user(s) in the plan:
 - a) Building on the impact potential identified in the first and second phases, ensure that a concise and compelling narrative for the opportunity/business case is developed.
 - b) The technical level of the target user; the depth of information needed; and the style of language most effective for communicating with them.
 - c) The background knowledge of the target user.
 - d) Any preconceived ideas that the target user may have relating to the area of interest.
 - e) Ways in which to relate the knowledge to examples with which the target user is familiar, or ones they can easily envisage.
 - f) The level of evidence or validation that the target user requires.

2. ERINN will be responsible for drafting these plans, which will then be provided to the Coordinator and generating project participant(s).
3. Once a KTP has been drafted and reviewed, it will be opened for feedback from the Core CoP and the PIC.
4. ERINN will work with all relevant project participants to assist where possible in the translation of KTPs into exploitation activities. The nature of these exploitation activities will be highly dependent on the KER, the target user, the transferring participant, the timeline, resources available, foreseen activities in the DoA, and other variable considerations. The exploitation activities themselves may be carried out within a range of externally focused tasks.

6. Dissemination and Communication Resources

All MARCO-BOLO project participants will dedicate time to perform DEC activities and will be encouraged to engage in a two-way exchange with the public at large, and where possible the media, with the aim to show how EU research and innovation funding has a positive impact on society. Through its communication activities, MARCO-BOLO will demonstrate why working together in a European consortium is important in addressing a challenge that affects society.

To facilitate DEC throughout the project, a portfolio of promotional project material has been developed by ERINN.

6.1 Promotional Materials

6.1.1 Logo and Brand

A specific project logo has been developed to visually represent the project. The project logo is an integral part of the brand as it is and will be included in all project's promotional materials both print and online. The MARCO-BOLO project logo is available in three different versions, a full colour, a black and a white version. The different versions and guidance on how to properly utilise the MARCO-BOLO logo (correct use of the logo in relation to the background, spacing, etc.) can be found in the Brand Guidelines that have been developed alongside the logo.

The Logo Suite and Brand Guidelines are available on the [MARCO-BOLO Google Drive](#) and can be requested from ERINN (contact: avril@erinn.eu).

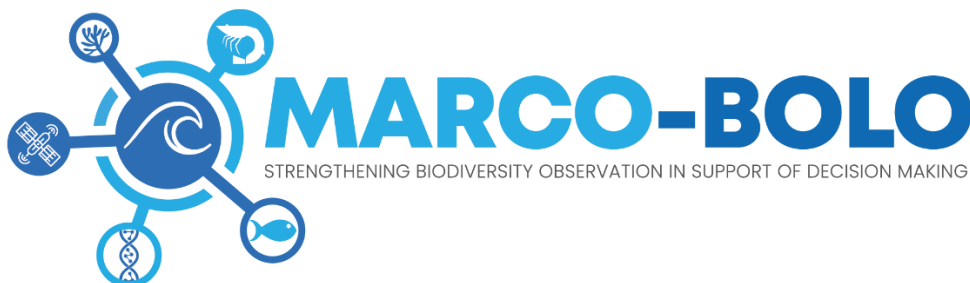


Figure 3 MARCO-BOLO logo (full colour)

PROTOCOL – Utilising MARCO-BOLO Branding alongside other Institutional Branding



While it is preferable that all participants use MARCO-BOLO branded resources when disseminating the project's results, we recognise that some institutions will require participants to use their own institutional branding for conferences and various presentations. To balance the interests of MARCO-BOLO, and our contractual obligations to the EC, with various institutional requirements, we require the following to be included at minimum:

- The MARCO-BOLO logo must be included on at least the Title Page and Conclusion/Thank You slide, however usage on all slides would be preferred.
- The EU emblem and funding acknowledgement (GA Article 17) must be visibly present on the first and last slide.

6.1.2 Project Dissemination Templates

MARCO-BOLO PowerPoint and Poster Presentation Templates, Factsheet, Pull-up Banner and Slide Deck have been developed to use at internal and external events when presenting the MARCO-BOLO project and/or its outcomes and can be downloaded from the [MARCO-BOLO Google Drive](#) and can be requested from ERINN (contact: avril@erinn.eu).

PROTOCOL – Dissemination Templates

Project participants should use the MARCO-BOLO Dissemination Templates when promoting the project's objectives or presenting project results.

Download the Templates from the [MARCO-BOLO Google Drive](#) and can be requested from ERINN (contact: avril@erinn.eu).

- When using the PowerPoint Presentation Template, choose to insert “new slide” and pick your preferred content template.
- Respect all of the Templates' format (background, font and layout).
- Always ensure that the correct EU Emblem, EU and non-EU funding logos and acknowledgements are present on any MARCO-BOLO presentations, deliverables and reports etc.

6.1.3 Factsheet

A promotional factsheet presenting the MARCO-BOLO objectives and expected results has been developed. The factsheet can be shared digitally and distributed at relevant events, both virtually and in-person. The factsheet will be used to raise awareness of the project and its goals. It can be found on the MARCO-BOLO website and [MARCO-BOLO Google Drive](#) and can be requested from ERINN (contact: avril@erinn.eu). Project participants are encouraged to distribute the factsheet through their networks and at relevant events. If participants wish to have the factsheet available in another language, they should follow the protocol outlined below.

PROTOCOL – Factsheet Translation

- Contact ERINN (contact: avril@erinn.eu) requesting the original factsheet template with English text.



- ERINN supplies the template with the original text in English to requesting project participant.
- Project participant translates the text (as laid out in the template) into their language.
- Project participant then sends translated text back to ERINN.
- ERINN applies the translated text to the factsheet template and publishes the new version of the factsheet, after validation and sign-off from the project participant responsible for the translation.

6.1.4 Pull-up Banner

A MARCO-BOLO Pull-up Banner has been designed and developed for use at internal and external events to raise awareness about the project, for example at exhibition booths. The banner can be found on the MARCO-BOLO website, [MARCO-BOLO Google Drive](#) and can be requested from ERINN (contact: avril@erinn.eu).

PROTOCOL – Pull-up Banner Printing

Project participants can make use of the MARCO-BOLO Pull-up Banner at internal and external events to raise awareness about the project.

- The template is designed to print as a standard pull-up banner measuring 800 mm wide by 2000 mm high, however if a project participant requires different dimensions, ERINN will endeavour to adjust the banner template to the participant's needs.
- Please print the pull-up banner in full colour, making no adjustments to the colour settings.

The pull-up banner can be found on the MARCO-BOLO website, [MARCO-BOLO Google Drive](#) and can be requested from ERINN (contact: avril@erinn.eu) for any queries around dimensions, printing and material requirements.

6.1.5 Website

The project website, (www.marcobolo-project.eu) will go live on time in M6 (May 2023) and has been developed following the EU's best practice guidelines for project websites. The website is fully compliant with the General Data Protection Regulation (EU 2016/679, GDPR) by incorporating a privacy statement and cookie bar informing website visitors about what MARCO-BOLO does with any personal data gathered. Google Analytics is used to track traffic and monitor the use of the website, which will be used to inform Continuous Reporting.

To ensure successful promotion of the project and to sustain the interest of the target audience and attract new users, the website's content will be maintained, continuously updated and populated with new information through the project's lifetime. The website will remain live for five years after the end of the project, serving as a valuable public resource of research information on the subject and promoting the outputs of this publicly funded research.

PROTOCOL – Website Content: Requests for posting and uploading

- ERINN will manage the MARCO-BOLO website and will be updating it on a regular basis.



- Project participants who might have feedback on the site or wish to upload materials, news or events to the website (e.g., calendar) should contact ERINN (avril@erinn.eu).
- Project participants are requested to include a link to the MARCO-BOLO website on their own institution websites as well as promote it through the MARCO-BOLO social media channels (see section 6.1.6).

6.1.6 Social Media

Social networking is an integral part of the MARCO-BOLO communication strategy. The project results and outputs will be actively disseminated through the [MARCO-BOLO Twitter](#) (managed by ERINN). Stakeholders are encouraged to follow MARCO-BOLO social media, which are forums for engagement with interested parties and contribute to capacity building, showing participant expertise and knowledge through active discussions.

As with other means of communication, attention should be paid to the content being shared on social media. The consortium should determine which information to keep private and which to publish, where and to what extent. If you have questions about what is appropriate, please contact ERINN (avril@erinn.eu).

In order for MARCO-BOLO to keep its reputation and create an engaging and thriving online community, it will be necessary to effectively manage potential risks. The following are guidelines for all participants who participate in social media and apply whether participants are posting to the MARCO-BOLO account, their own accounts or commenting on other accounts.

PROTOCOL – MARCO-BOLO Internal Code of Social Media Conduct

Participants should try to contribute to social media channels where possible. Support can be requested from ERINN.

General Rules

- Ensure the content is yours to share (research or opinions) or acknowledge the source accordingly.
- Ensure there are no IP issues.
- Use appropriate tags and hashtags to acknowledge funding (i.e., @REA_research; #HorizonEU).
- Do not use offensive language, argumentative or illegal content, etc.
- If you communicate publicly about MARCO-BOLO or MARCO-BOLO-related matters, you must disclose your role within the project.
- Be professional, use good judgement and be accurate and honest in your communications; unprofessional language or behavior reflect poorly on the project, and may result in liability.
- Unless approved by the coordinator EMBRC, your social media name, handle and URL should not include MARCO-BOLO project's name or logo.
- Be mindful around controversial subjects, where emotions may run high e.g., politics. It is important to show respect for others' opinions.

Twitter



Participants wishing to communicate via the MARCO-BOLO Twitter accounts have the following options:

- Send a short message (280 characters max) to ERINN (email avril@erinn.eu) who can post from the MARCO-BOLO account on your behalf. Ideally, include an image or short video to make it more visually appealing.
- Refer to MARCO-BOLO by tagging the project (using @MARCOBOLO_EU on Twitter) in your own tweets; ERINN will always aim to retweet/share such posts.
- Retweet/share MARCO-BOLO posts through your personal and institutional social media accounts.

Tips

- Social media is becoming increasingly visual — post pictures, videos, GIFs or data visualisations.
- Engage with your audience using replies, retweets/shares or tags.
- Ask questions instead of making statements to drive conversation.
- Leverage existing social media presence *e.g.*, the host institution, researchers, team members or other relevant organisations, and tag and follow relevant accounts, particularly EC accounts (*i.e.*, @REA_research, @HorizonEU, @EUScienceInnov) and use hashtags (*i.e.*, #HorizonEU)
- Follow the news and use trending hashtags where appropriate.
- Content could include the announcement of milestones, results, scientific publications, press releases, newsletters, *etc.* or when the project is featured at a conference or event.

6.1.7 Press Releases

Press releases are issued to appropriate media outlets (trade press, journals, web portals) to ensure that industry, communities, civil society, policymakers, and the wider community are aware of the project, its objectives and its later outcomes. The strategy is intended to ensure that there is media coverage at local, regional, European and international levels. ERINN will share project news through internal (consortium mailing list, stakeholder database and project participant networks) and external (press releases, social media, *etc.*) channels, which ensures a broad awareness of the project across the spectrum of relevant stakeholders. Project participants are encouraged to publish articles and press releases at regional, national, and international levels, making use of their own communication networks and channels. ERINN can support project participants in these activities.

PROTOCOL – Press Releases

Project participants should notify ERINN if there is news suitable for an official project press release:

- ERINN will develop a draft and seek approval from the MARCO-BOLO Coordination team.
- Once approved, press releases will be disseminated using appropriate channels.
- They will be uploaded to the project website and all project participants are encouraged to distribute at national or regional level.
- Give the MARCO-BOLO Project Manager (claire.laguionie@embrc.eu) at least 15 days' notice of an upcoming press release so that she can notify our EC Project Officer to support its promotion.



- Where necessary the project participants can adapt the press releases to customise them to their audience and if needed translate the articles.

NOTE: Project participants may also initiate the writing of press releases (e.g., local, national). ERINN can then support writing and editing if required. Participants are asked to provide a short summary in English if the original communication is in another language. Participants who publish any article/press release at a regional or national level must send a copy to ERINN and where possible provide metrics to demonstrate uptake by other news channels/readership.

6.1.8 Video

A professional MARCO-BOLO video will be developed for project participants to disseminate and promote the MARCO-BOLO project at events and on social media. The video will showcase the project to the general public, explaining the approach and the value of the research being conducted by MARCO-BOLO. The video will be promoted on the MARCO-BOLO project website under the Resources section and [MARCO-BOLO Google Drive](#). Participants will be encouraged to add it to their accounts of video-sharing websites, such as YouTube and Vimeo. Participants are also encouraged to share the video with their wider networks and so it is hoped the video will be adopted by the consortium for use in their existing international outreach activities.

6.1.9 Other Resources and Tools

As the project progresses short videos, infographics, animations, social media visuals and GIFS, *etc.* will be created to present the project activities in an attractive and dynamic way. At least five short media clips will be developed for participants to disseminate and promote the MARCO-BOLO project and its outcomes. These other resources and tools will be uploaded to the MARCO-BOLO website under the Resources section and participants will be encouraged to share them through their channels. Other promotional material can be developed as required, depending on budget availability and considering sustainability. Please contact ERINN (avril@erinn.eu) with any other ideas for promotional material to support your communication and dissemination activities.

7. Dissemination and Communication Activities

The purpose of MARCO-BOLO's DEC activities is to make the project, its results and activities known to society at large so that all stakeholders, also beyond the project's own community, will be able to understand its messages. All MARCO-BOLO participants will dedicate time to perform DEC activities and will be encouraged to engage in a two-way exchange with the public at large, and where possible the media, with the aim to show how EU research and innovation funding has a positive impact on society. Through its DEC activities, MARCO-BOLO will demonstrate why working together in a European consortium is important in addressing a challenge that affects all societies.

7.1 PDEC Tools, Channels and Target Groups

A key component of the MARCO-BOLO communication strategy is co-development by ongoing engagement with key stakeholders and as the project progresses, it will be critical to ensure that the project outcomes are effectively and efficiently transferred to the relevant applications by policy, community, and research users, *etc.* A distinct strategy will be applied to each targeted audience, using appropriate messages, means, and language. In order to effectively promote and spread awareness about the MARCO-BOLO concept and results so as to achieve the expected impacts, the



following communication tools and activities (Table 4) will be designed and implemented by the consortium and coordinated and monitored by WP7 Communications lead ERINN.

Table 4 MARCO-BOLO DEC Tools, Channels and Target Groups (high level)

Communication tools to increase visibility and showcase the work throughout the project sharing regular related news and result updates to reach out and communicate to target audiences raising awareness about the project and triggering their interest to engage with the project's outputs	Industry	Scientists	Policy makers	Citizens
Project Website: Will constitute the main communication tool as it provides easy access to a broad audience around the world. The website will be designed following the best practice guidelines for EU project websites. Online latest at M6 and for at least another 5 years after project end. Target: >10,000 visits over the project duration, >100 signed up to 'Subscribe to News' through the website	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Branded Portfolio: Presentation templates, infographics, factsheet – presented and distributed at relevant events and online by all project participants Target: Reach >5,000 people overall.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Press Releases & Promotional Articles: Press releases will be produced regularly making use of a range of services and publications aiming at increasing awareness about the project's objectives, progress and outcomes. Target: At least 6 press releases or promotional articles published, leading to publication of at least 15 articles in websites, press and specialised publications.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Videos: Will introduce the project and its objectives, as well as project outcomes and contributions. Target: One professional video and at least 5 shorter media clips will be viewed by >10,000 people in total.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Social Media Strategy: A project Twitter account will target the general public as well as specific targeted stakeholders. All project participants' social media accounts will share content and point out the relevance for their specific target groups, and thus direct their audience to MARCO-BOLO's channels and website. Target: Social media presence latest from M3 and for the full duration of the project, with Twitter and other social media activity with targeted promotional campaigns (for promoting specific topics) reaching >30,000 people.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Participation in relevant virtual and physical events: Represented in the major relevant international (research, policy and industry) events over the full duration of the project. Meetings will be planned in synergy with the other consortium accepted for funding (e.g., OBAMA-NEXT). Target: Represented in >10 relevant international events (e.g., World Aquaculture & Fisheries Conference, European Marine Biology Symposium, Ocean OPS, Ocean Sciences Meeting, national stakeholder workshops & working group meetings by external organisations).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Project network and events: Active cooperation with the other project selected under this call topic (e.g., OBAMA-NEXT) and complementary successful projects (BIOcean5D, Biodiversa+, EuropaBON, EU4OceanOBS, DTO BioFlow, MBON). Target: Interaction with and capitalise on other marine biodiversity projects & initiatives (section 1.2); form a cluster with the other project co-funded from the call/with concurrent biodiversity governance projects (T7.4) and reaching out to UN Decade Programmes to optimise synergies and avoid overlaps; organise stakeholder co-creation workshops (T6.2); conduct sensor training courses (T6.3.3) for relevant industry and civil society stakeholders (future users of the MARCO-BOLO's technical and analytical methods/solutions).	✓	✓	✓	✓
OA Scientific Publications (in high impact peer-reviewed journals), review articles and editorials: The consortium will publish at least 20 OA articles over the full duration of the project. A selection of science, industry and policy journals will be identified that are the most appropriate. Target: >20 publications providing mapping, monitoring and data access to relevant biodiversity attributes to improve coastal marine biodiversity observation capabilities and restore ocean health (e.g., Marine Biology, Frontiers in Marine Science, Marine Biology Research).	✓	✓	✓	
Stakeholder Co-Design Workshops: 3 workshops organised in T6.2, KT assets and resources developed in T6.3 and other outreach activities in T7.3 and T7.4. Target: The CoP to engage key stakeholders in co-design and co-creation of products for biodiversity management and promote key achievements towards improved coastal marine biodiversity observation capabilities in Europe.	✓	✓	✓	✓

7.2 External Events

All project participants have a responsibility to engage the public in their research activities and results and take advantage of the potential for public interest that MARCO-BOLO generates. Project participants are encouraged to initiate dissemination activities that are appropriate for the irrespective contributions and ERINN can provide support as required. Examples include live broadcasts, blogs, institute open days/nights, etc.

The project results will also be presented as oral presentations, posters, etc. at major international meetings and conferences of relevance to MARCO-BOLO. Conferences, seminars, workshops, and other meetings are very useful forums to consult with MARCO-BOLO target audiences in a face-to-face capacity and to address issues relevant to the work done in the project. International and sector relevant conferences, meetings, etc. will be frequently attended to communicate the results of the project to the maximum number of persons. See protocol for public outreach activities below.

Table 5 below shows a list of potential events that may be of interest to MARCO-BOLO participants or stakeholders. These events will be added to the project website.

Table 5 Relevant events for MARCO-BOLO consortium and stakeholders

Event	Location	Date
World Aquaculture & Fisheries Conference	Global	Annually (Next: May 2023 in Japan)



Copernicus Marine General Assembly	European	Annually (Next: June 2023 in Brussels)
Symposium for European Freshwater Sciences (SEFS13)	European	Annually (Next: June 2023 in England)
International Conference on Aquatic Ecosystems and Freshwater Biodiversity (ICAEFB)	Global	(Next: June 2023 in Japan)
International Congress for Conservation Biology (ICCB)	Global	Every two years (Next July 2023 in Rwanda)
International Conference on Marine Ecosystems and Freshwater Biodiversity (ICMEFB)	Global	(Next: August 2023 in New York)
European Marine Biology Symposium (EMBS)	Europe	Annually (Next: September 2023 in Iceland)
10 th EuroGOOS International Conference	Europe	Every three years (Next: October 2023 in Ireland)
GEO BON Global Conference: Monitoring Biodiversity for Action	Global	Next: October 2023 in Canada
Ocean Sciences Meeting	Global	Every two years (Next: February 2024 in New Orleans)
Biennial Conference on the Biology of Marine Mammals	Global	Every two years (Next: November 2024 in Australia)
UN Water Conference	Global	Annually

PROTOCOL – Public Outreach Activities: Internal and External Events

Project participants should notify ERINN if there is news suitable for an official project press release:

- Project participants should inform the Project Coordinator and ERINN of their planned outreach activities so they can be promoted.
- Project participants should inform other participants about the event via email. If the planned outreach activity involves the dissemination of MARCO-BOLO results, the pre-dissemination requirements of the prior notice protocol and the IP Assessment Form must be carried out (see section 3.1).
- All activities, including attendance at external events should be added to the MARCO-BOLO Continuous Reporting Log, providing insight on type of activity, objectives, target audiences, reach (number of people) and the total cost allocated for the activity (see section 3.2).
- All public engagement and outreach activities must be reported during (internal and external) reporting periods.
- ERINN will include events on the MARCO-BOLO website.
- ERINN will update the EC Portal on all Dissemination Activities.

7.3 Scientific Publications – Relevant Journals

The consortium expects to publish at least 20 OA publications over the full duration of the project. These publications will provide mapping, monitoring and data access to relevant biodiversity attributes to improve coastal marine and freshwater biodiversity observation capabilities and restore ocean health. A selection of science, industry and policy-relevant journals that are relevant to the project include: Marine Biology, Frontiers in Marine Science, Marine Biology Research, Marine Biodiversity, Water Frontiers in Ecology and Evolution.

8. PDEC Monitoring and Evaluation

The PDEC functions as an operation manual and will be updated throughout the project. WP7 Communications lead ERINN will continue to review and amend the PDEC in line with the latest DEC activities and project results. As part of the revision process, each subsequent version of this deliverable will be validated by the consortium. Furthermore, the project coordinator (EMBRC) and project participants will also review the PDEC at each review stage and provide recommendations. The current version will function as the operational manual and will be revised as part of D7.6 Joint actions report – Report on the joint actions, communication & exploitation products and activities, targeting end-users of common interest, and update of D7.4 (M48 – November 2026).

9. Project participants involved in the work

All project participants are expected to carry out DEC activities. ERINN will provide coordination and support to all activities.



Appendix

Annex 1 – Acronyms

AUV: Autonomous Underwater Vehicle

CoP: Community of Practice

Copernicus: EU Union's Earth Observation Programme

DANUBIUS-RI: The International Centre for Advanced Studies on River-Sea Systems

DEC: Dissemination, Exploitation and Communication

EBVs: Essential Biological Variables

eDNA: Environmental DNA

EEA: European Environmental Agency

eLTER: European Long-Term Ecosystem, critical zone and socio-ecological systems Research Infrastructure

EBV: Essential Biodiversity Variable

ECSA: European Citizen Science Association

EEA: European Environment Agency

EMB: European Marine Board

EMO BON: European Marine Omics Biodiversity Observation Network

EMODNet: The European Marine Observation and Data Network

EOOS: European Ocean Observing System

EOV: Essential Ocean Variable

EPA: Environmental Protection Agency

EV: Essential Variable

FAIR: Findable, Accessible, Interoperable, Reusable

GBIF: Global Biodiversity Information Facility

GEO BON: The Group on Earth Observations Biodiversity Observation Network

GEOS: Global Earth Observation System of Systems

GOOS: Global Ocean Observing System

HAB: Harmful algal bloom

HELCOM: Baltic Marine Environment Protection Commission

ICES: International Council for the Exploration of the Sea

IOC-UNESCO: The Intergovernmental Oceanographic Commission of UNESCO

IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

JRC: Joint Research Centre

KMKT: Knowledge management and knowledge transfer

KTP: Knowledge Transfer Plan

LTER: Long-Term Ecosystem Research

MEA: Marine Energy Alliance

MBO: MARCO-BOLO

MBON: Marine Biodiversity Observation Network

MSFD: Marine Strategy Framework Directive

NeFo: The German Network-Forum for Biodiversity Research

OBIS: Ocean Biodiversity Information System

OBON: Ocean Biomolecular Observing Network

OBPS: Ocean Best Practices System

OA: Open access

OSPAR: Oslo and Paris Conventions

POGO: The Partnership for Observation of the Global Ocean

SCOR: Scientific Committee on Oceanic Research

UNCLOS: United Nations Convention on the Law of the Sea

UNEP-MAP: United Nations Environment Programme Mediterranean Action Plan

WFD: Water Framework Directive

Annex 2 – Glossary

“Access rights” are the rights to use results or background related to the project, as set out in the Grant Agreement (<https://ec.europa.eu/info/fundingtenders/opportunities/portal/screen/support/glossary>).

“Background” Any data, know-how and/or information, whatever its form or nature (tangible or intangible) – including any rights such as intellectual property rights – which are needed to carry out the project or exploit its results. (<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/glossary>).

“Dissemination” means the public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium. (https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/FS-Plan-for-the-exploitation-and-dissemination-of-results_1.pdf). Communication, dissemination and exploitation are interlinked concepts that are sometimes being confused. Read this [handy flyer](#) from the EC to find out what is the difference between them.

“End Users” are last Target User identified on the *Knowledge Output Pathway*, i.e., individual(s) who will apply the *Knowledge Output* at the end of the *Knowledge Output Pathway*. Once they apply the KO, Eventual Impact is reached. The Knowledge Output may have undergone several revisions/adaptations through the value chain before reaching/being relevant to the needs of the end-user. Definition according to COLUMBUS (Horizon 2020 project: 652690).

“Exploitation” means the use of results in further research activities other than those covered by the action concerned, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities. (https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/FS-Plan-for-the-exploitation-and-dissemination-of-results_1.pdf). Communication, dissemination and exploitation are interlinked concepts that are sometimes being confused. Read this [handy flyer](#) from the EC to find out what is the difference between them.

“Eventual Impact” the ultimate end benefit of the application of the *Knowledge Output*, and its influence/effect once taken up and applied by the target community. It is defined as an enhanced situation that is contributing to a need (political, industrial, scientific or societal). Definition according to COLUMBUS (Horizon 2020 project: 652690).

“Knowledge Management” is the process of identifying, capturing, analysing, organising, and storing knowledge to ensure its availability and ability to be transferred effectively to specific users. It comprises a range of practices used by organisations to identify, create, represent, and distribute knowledge for reuse, awareness and learning. Definition according to MarineTT (FP7 project number 244164); COLUMBUS (Horizon 2020 project: 652690).

“Knowledge Outputs” are units of knowledge or learning generated by or through research activity. They are not limited to de-novo or pioneering discoveries but may also include new methodologies/processes, adaptations, insights, alternative applications of prior know-how/knowledge. Definition according to COLUMBUS (Horizon 2020 project: 652690).



“Knowledge Output Pathway” can be a single step or a series of steps required to carry a Knowledge Output to its Eventual Impact. Where there are a series of steps, it will include detailed mapping of the steps, the users involved at each step and their predicted role in the pathway to Eventual Impact. Definition according to COLUMBUS (Horizon 2020 project: 652690).

“Knowledge Transfer” is the term for the overall process of moving knowledge between knowledge sources to targeted potential users of knowledge. Knowledge Transfer consists of a range of activities which aim to capture, organise, assess and transmit knowledge, skills and competence from those who generate them to those who will utilise them. Definition according to COLUMBUS (Horizon 2020 project: 652690).

“Target User” is the individual(s) who you have identified in your Knowledge Output Pathway to whom a Knowledge Output will be transferred. They are not necessarily the end-user or participant of the KO; rather they can be the steppingstone needed for a KO to progress towards an *Eventual Impact*. More than one Target User can be part of one KOP. Definition according to COLUMBUS (Horizon 2020 project: 652690).



Annex 3 – IP Assessment Form

IP Assessment Form for screening of dissemination and communication activities to ensure protection of results. Cells to be filled by author, cells to be filled by WP7 Communications lead ERINN.

IP Assessment Prior to Dissemination	Description / Comments
Title of the Dissemination or Communication Activity	
Type of Dissemination or Communication activities, including details on names, dates, places, etc. <i>Scientific Publications: Article in Journal; Publication in Conference proceedings/ Workshop; Book/ Monograph; Chapter in a Book; Thesis/ Dissertation; Other</i> <i>Dissemination and Communication activities: Organisation of a Conference; Organisation of a Workshop; Press release; Non-scientific and non-peer-reviewed publication (popularised publication); Exhibition; Flyer; Training; Social Media; Website; Communication Campaign (e.g., Radio, TV); Participation to a Conference; Participation to a Workshop; Participation to an Event other than a Conference or a Workshop; Video/ Film; Brokerage Event; Pitch Event; Trade Fair; Participation in activities organized jointly with other Horizon Europe project(s); Other</i>	
Where to find it (if it is/will be published)? <i>Give information on where to find the Dissemination or Communication Activity, if it will be in the public domain, e.g., website address, scientific journal details, etc.</i>	
Have all contributors to the Dissemination or Communication Activity been included in the author list where relevant, or are otherwise properly acknowledged? <i>Include the names of the authors here</i>	
Do all authors agree on this Dissemination or Communication activity? <i>Declaration of the main/ corresponding author</i>	
<ul style="list-style-type: none"> Q1: Have different institutions been involved in this Dissemination or Communication Activity? Q2: If yes, have you taken care of ownership issues? How? 	<ul style="list-style-type: none"> Answer to Q1: Answer to Q2:
Is appropriate acknowledgment to EU included? <i>Note: always include the statement indicated in the MARCO-BOLO Brand Guidelines into any MARCO-BOLO Dissemination or Communication Activity.</i> <i>If possible, also include the EU emblem</i>	
Which part of the MARCO-BOLO project does the Dissemination or Communication Activity correspond with? <i>Include WP number and, if possible, tasks numbers</i>	



Does the Dissemination or Communication Activity include work originating also from non-MARCO-BOLO work, e.g., from other EU or nationally funded projects? <i>Include name/ code (Grant Agreement number) of the project</i>	
<ul style="list-style-type: none"> Q1: Is the result you are aiming to disseminate considered to be commercially/ industrially exploitable? Q2: If yes, have you protected the result prior to dissemination, please give details? 	<ul style="list-style-type: none"> Answer to Q1: Answer to Q2:
Do you, as a reviewer, consider the result that is aimed to be disseminated here, to be commercially/ industrially exploitable? Please give clarifications.	
Does the information contain any personal data? If yes, has permission been obtained for the public use of such data? If yes, please include this.	
Do all authors agree on the Dissemination or Communication Activity being disclosed through the MARCO-BOLO channels (e.g., project website) once accepted/ presented? <i>A declaration of the main/ corresponding author indicates that all participants agree</i>	
Which stakeholders could be interested in knowing about the results and the conclusions of your Dissemination or Communication Activity? <i>Choose the relevant target group(s) among:</i> A) Industry B) Policy/ decision-makers C) Scientists D) Consumers/ general public E) Other stakeholders (please specify) <i>Please specify as detailed as possible</i>	
Date of submission to WP7 Comms Lead ERINN	

Recommendations:


WP7 Comms Lead ERINN recommendation (To publish or protect)	
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Authorisations:

Main author publication	WP7 Comms Lead ERINN
Date:	Date:
Signature:	Signature:




Annex 4 – MARCO-BOLO Continuous Reporting Log



Please record all publications related to MARCO-BOLO here!

The information provided below will be used in the Periodic Report for the EC and added to the Continuous Reporting area of the Funding & Tenders Portal (SEDIA), so please ensure that all boxes are completed.

Publications													
ID# Number	Type of PID (Repository)	PID (publisher version of record)	Type of publication	Link to publication	Title of the scientific publication	Authors	Title of the Journal or equivalent	Number of the journal, proceeding or book	ISSN or eISSN	Publisher	Month of publication	Year of publication	Was the publication in the repository
To be completed by EFRINN	Select from the drop down list	Insert the Publisher Identification (PID) of the publisher version of the record	Select from the drop down list	Please add a link to the publication on the journal or publisher website	Insert title of the publication	Insert authors' name(s), comma-separated	Insert title of the Journal/Proceedings/Book series/Book (for book chapters)	Insert number, date or frequency	Insert ISSN or eISSN number	Insert name of the publisher	Insert month of publication	Insert year of the publication	Select: Yes/No
1													
2													
3													
4													



Please record all dissemination activities related to MARCO-BOLO here!

The information provided below will be used in the Periodic Report for the EC and added to the Continuous Reporting area of the Funding & Tenders Portal (SEDIA), so please ensure that all boxes are completed.

Dissemination Activities												
ID #	Dissemination activity name	Type of dissemination activity	Description of the objective(s) (max 200 characters)	Status	Target audience	Estimated number of persons reached	Target audience 2	Estimated number of persons reached 2	Target audience 3	Estimated number of persons reached 3	Add more columns as needed	Project Partner
To be completed by EFRINN	E.g. conference title, meeting title, etc.	Select from drop-down list	Short description of the activity, including a description of the objective(s) of the activity with reference to a specific project output	Select from drop-down list	Select main target audience from the drop-down list (Use the other columns if the activity involves more than one target audience)	Estimated number of persons reached for this type of audience	Select 2nd type of audience from the drop-down list	Estimated number of persons reached for this type of audience	Select 3rd type of audience from the drop-down list	Estimated number of persons reached for this type of audience	Insert additional columns here if you have more than 3 different types of audiences for your Dissemination Activity	Select from drop-down list
1												
2												
3												
4												





MARCO-BOLO

STRENGTHENING BIODIVERSITY OBSERVATION IN SUPPORT OF DECISION MAKING

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