DTO-BioFlow
Integration of biodiversity monitoring data into the Digital Twin Ocean

D6.2 Dissemination, Communication and Exploitation (DC&E) strategy and plan_M18

28/02/2025

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Project Title	Integration of biodiversity monitoring data into the Digital Twin Ocean
Project Acronym	DTO-BioFlow
Project Number	101112823
Type of project	IA – Innovation Action
Topics	HORIZON-MISS-2022-OCEAN-01-07
Starting date of Project	01 September 2023
Duration of the project	42 months
Website	https://dto-bioflow.eu/

D6.2 – Dissemination, Communication and Exploitation (DC&E) strategy and plan_M18

Work Package	WP6 | Dissemination, Communication and Stakeholder outreach
Task	T6.1 | Outreach, Communication, & Dissemination
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Peer reviewers	Carlota Muñiz, Klaas Deneudt (VLIZ)
Version	V1.0
Due Date	28/02/2025
Submission Date	28/02/2025

Dissemination Level

X	PU: Public
	CO: Confidential, only for members of the consortium (including the Commission)
	EU-RES. Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)
	EU-CON. Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)
	EU-SEC. Classified Information: SECRET UE (Commission Decision 2005/444/EC)

Version History

Revision	Date	Editors	Comments
0.1	24/01/2025	Fabiana De Carlo (Trust-IT)	ToC definition
0.2	07/02/2025	Fabiana De Carlo (Trust-IT)	Section 1, 2
0.3	10/02/2025	Fabiana De Carlo (Trust-IT)	Section 3
0.4	12/02/2025	Fabiana De Carlo (Trust-IT), Sara Pittonet (Trust-IT)	Section 3, 4, 5, first complete draft for internal review
0.5	17/02/2025	Carlota Muñiz, Klaas Deneudt (VLIZ); Oonagh McMeel (SSBE)	First review

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0.6	21/02/2025	Christina Pavloudi (EMBRC)	Contribution in Section 3.2.2, Section 3.4, Section 4.1.2
0.7	27/02/2025	Oonagh McMeel (SSBE)	Second Review
1.0	28/02/2025	Fabiana De Carlo (Trust-IT), Sara Pittonet (Trust-IT)	Final version

Glossary of terms

Item	Description
ARMS	Autonomous Reef Monitoring Structures
DC&E	Dissemination, Communication and Exploitation
DTO	Digital Twin Ocean
DUC	Demonstrator Use Case
EC	European Commission
EMODnet	European Marine Observation and Data Network
FAIR	Findable, Accessible, Interoperable, Reusable
GOOS	Global Ocean Observing System
KPI	Key Performance Indicator
MBON	Marine Biodiversity Observation Network
MSFD	Marine Strategy Framework Directive
OBIS	Ocean Biodiversity Information System
SG	Stakeholder Group
SMART	Specific, Measurable, Achievable, Relevant, Time-bound
ToC	Table of Contents
WISE	Water Information System for Europe
WP	Work Package

Keywords

Digital Twin Ocean, Biodiversity data, Dissemination, Communication, Exploitation

Disclaimer

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EXECUTIVE SUMMARY

The main aim of Work Package 6 (WP6) is to develop, implement and update the DTO-BioFlow Communication, Dissemination & Exploitation strategy, ensuring effective stakeholder engagement. This document, D6.2, is the updated version of D6.1 "Dissemination, Communication and Exploitation (DC&E) Strategy and Plan" released in December 2023 and serves as a reference for the implementation of outreach campaigns and related activities across all work packages.

This report documents the results and impact of communication efforts undertaken from September 2023 (M1) to February 2025 (M18). The present report provides preliminary information on the impact already achieved by the project activities and outputs, through the project's actions which were mainly dedicated on establishing the project's visual identity and ensuring initial visibility and recognition, and at promoting the visibility and engagement of DTO-BioFlow open calls for data holders.

Towards the end of the project, this document will be updated twice in its final version D6.5 (M28) and D6.6 (M40).

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Table of Contents

EXECUTIVE SUMMARY 4
Table of Contents 5
1. Introduction 7
2. Communication, Dissemination, Outreach Objectives 8
2.1 Key assets for dissemination 8
2.2 Target Stakeholders 12
3. Dissemination & Communication preliminary results 13
3.1 Campaign 1: DTO-BioFlow project communication 13
3.1.1 Website Development and traffic 13
3.1.2 Social Media 17
3.1.3 Newsletters 18
3.1.4 Other Communication Activities 19
3.1.5 Videos 21
3.1.6 Promotional & Dissemination Materials 22
3.1.7 Press Releases 24
3.1.8 Publications 27
3.1.9 Campaign KPIs 28
3.2 Campaign 2 - Biodiversity Providers Onboarding Campaign 28
3.2.1 Visibility and Promotion of DTO-BioFlow open calls for data holders 29
3.2.2 Data Provider onboarding kit 32
3.2.4 Campaign KPIs 35
3.3 Campaign 3 - User uptake of DTO Outputs 36
3.3.1 Campaign KPIs 36
3.4 Campaign 4: International community building in support of the Mission & UN Decade of Ocean Science 37
Campaign KPIs 37
4. 4.DTO-BioFlow Events & Workshops 38
4.1 DTO-BioFlow Events 38
4.1.2 Outcomes of the Data Grants Holders workshops 41
4.2 Third-party events 42
5.Exploitation plans for RP2 43
6. Next steps 44

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Table of Figures

Figure 1 - Example of Diagram developed for the D3.1 - DTO-BioFlow Data Flow Blueprint 9
Figure 2 Graphic & Browsable version of Technical Factsheet 9
Figure 3 Graphic & Browsable version of Barriers Playbook 10
Figure 4: DTO-BioFlow stakeholder groups 12
Figure 5: Website traffic overview (sessions and total users) 14
Figure 6: Geographic distribution of users 14
Figure 7: Referral traffic breakdown 15
Figure 8: DTO-BioFlow Homepage Hero as of February 2025 16
Figure 9: Examples of DTO-BioFlow social media posts 17
Figure 10: The DTO-BioFlow website archive of published newsletters 18
Figure 11:The DTO-BioFlow LinkedIn newsletter 19
Figure 12: Website news item on DTO-BioFlow featuring in Euronews Ocean Documentary Series 20
Figure 13: Frame from the "Digital Twins & Observation Systems for Monitoring Marine Biodiversity and Change" seminar recording 20
Figure 14: Banner of the article featuring DTO-BioFlow on BioDT website 21
Figure 15: Youtube Dashboard 22
Figure 16: An example of DTO-BioFlow promotional material 23
Figure 17: : Examples of DTO-BioFlow promotional and dissemination material 23
Figure 18 Browsable version of the Playbook 24
Figure 19: Social media posts highlighting the Open Calls 30
Figure 20: Examples of promotional social media posts to highlight the Open Calls 31
Figure 21: Examples of social media posts from Mission Ocean channels to highlight the Open Calls 32
Figure 22: A technical A4 Technical Factsheet “Integration of biodiversity monitoring data into the Digital Twin Ocean” 34
Figure 23 The DTO-BioFlow Barriers Playbook 34
Figure 24: Pamphlet on the benefits and opportunities to become a biodiversity data provider 35
Figure 25: Dedicated Use Cases webpage on the DTO-BioFlow website 36
Figure 26: Banner for the technical meeting with eDNAqua Plan and MARCO BOLO 37
Figure 27: Statistics form the evaluation survey 42

Table of Table

Table 1 Social media community figures 18
Table 2 Results of the promotion of the Press Release 27
Table 3 List of Pubblications 28
Table 4 Campaign #1 KPIs 28
Table 5 Cmapign #2 KPIs 35
Table 6 Campaign #3 KPI 36
Table 7 Campaign #4 KPIs 38

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1.Introduction

This document is the first updated version of the "Dissemination, Communication, and Exploitation Strategy and Plan" (D6.1) released in December 2023 and presents early achievements and outputs from the first reporting period (M1-M18) of activity.

The core mission of the DTO-BioFlow project is to unlock "sleeping" and new biodiversity data , enabling their sustained flows via primary integrators, such as EMODnet, into the EU Digital Twin Ocean (DTO). It will create a digital replica of marine biological processes transforming new and existing data flows into environments supporting the development of evidence-based knowledge.

DTO-BioFlow WP6 focuses on Communication, Dissemination, and Exploitation (DC&E), led by Trust-IT, and ensures outreach beyond the specific consortium network towards the wider community of stakeholders, end-users, and public. The project planned to achieve its communication and dissemination objectives through a trusted methodology based on a series of campaigns that ensure outreach, participation and capacity-building amongst key target audiences. These campaigns contribute to support the successful delivery of the project vision and objectives by ensuring wide promotion of the project and its results to key target audiences via sound digital communications (website, social media presence, materials & digital marketing actions), presence at key events and networking **(Campaign #1)**, building durable relationships with DTO data providers via onboarding mechanisms to increase sustained flows of biodiversity data via EMODnet Biology into the DTO **(Campaign #2),** promoting user uptake of DTO outputs with potential users **(Campaign #3)**, and ultimately strengthening knowledge exchange and professional relations amongst key stakeholder groups via the organisation and roll-out of workshops, networking and consultation activities, and building connections with international communities in support of the UN Decade of Ocean Science **(Campaign #4).** WP6 is also responsible for creating impact, promoting the uptake and sustainable exploitation of project results beyond the consortium boundaries and the project-end in support of the EU Mission: Restore our Ocean and Waters.

Most of the efforts during the reporting period were dedicated to **Campaign #1**, focused on establishing the project's visual identity and ensuring initial visibility and recognition, as well as **Campaign #2**, aimed at promoting the visibility and engagement of DTO-BioFlow open calls for data holders. These efforts laid the foundation for the subsequent campaigns and broader project objectives.

The DC&E strategy remains flexible and adaptable, allowing the project to respond to new opportunities, stakeholder feedback, or evolving circumstances. All DC&E activities are coordinated by Trust-IT within Work Package 6 (WP6) building on activities and outputs in other WPs and with contributions from all partners. Key project activities, maximise the exploitation of project outputs, and create a lasting impact beyond the project's duration, contributing to long-term biodiversity monitoring efforts.

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2. Communication, Dissemination, Outreach Objectives

The Dissemination, Communication, and Exploitation (DC&E) Strategy for the DTO-BioFlow project maintains the two primary objectives detailed in the first version of the Communication, Dissemination, Outreach Plan (D6.1):

1. **Promote the DTO-BioFlow project** by raising awareness and ensuring high visibility for the project and its results among diverse stakeholders through a comprehensive and dedicated communication campaign. Over the first year of the project, this campaign has included a range of activities, such as communicating using the project's professional branding and visual identity, regular website updates, storytelling about the project's advancements, and social media outreach. These efforts have already engaged project partners, their networks and wider marine biodiversity and digital twinning communities, supporting outreach to the broader public, research communities, and policy stakeholders, while explaining the societal value and innovative aspects of DTO-BioFlow. As part of an innovative and opportunistic approach, the consortium has proactively discussed alternatives to certain dissemination channels and identified new opportunities. For example, in response to Twitter's declining traffic and the removal of statistical features, alternative platforms are being explored to maintain effective engagement. Additionally, coordinated communication efforts with the Mission Ocean Projects Communication team are strengthening the impact of outreach activities across Mission Ocean's projects.
2. **Maximise engagement of key target audiences** through three specific communication and outreach campaigns. Each campaign has a clear purpose and is aligned with the project's key action lines and expected outcomes: onboarding data providers, showcasing user uptake of DTO-BioFlow outputs, and fostering community building in support of the Mission Ocean and the UN Ocean Decade. This also includes cross-disciplinary collaboration to ensure the project's impact reaches a broad range of sectors.

2.1 Key assets for dissemination

The Communication, Dissemination and Exploitation (CD&E) Strategy focuses on ensuring that the project's key assets are communicated widely, delivered to target stakeholders and their uptake monitored. These assets come from the collaborative efforts across various Work Packages (WPs) and contribute to the overall objectives of the DTO-BioFlow project.

As the project progresses, certain assets have already been produced, some are currently in development, while others will be completed in the later stages. Among the assets identified in D6.1, the following are being released and their impact is being communicated and disseminated to the DTO-BioFlow community. They include:

1. **Inventory and analysis of biodiversity monitoring frameworks:** The deliverable *D3.1 - DTO-BioFlow Data Flow Blueprint* provides an overview and assessment of existing biodiversity monitoring frameworks, analysing their alignment with identified needs, gaps, shortcomings, and international efforts. It also includes key recommendations. As the deliverable is still awaiting approval from the European Commission (EC), WP6 has extracted non-sensitive information and developed a webpage

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"Data Flow" under the "Resources" menu. This webpage reports the envisioned data flows for emerging biodiversity data types that lack established pathways for long-term integration into repositories. It sets a general framework for data flow towards the DTO for sources such as genomics, plankton imaging, biologging, and passive acoustic observation networks. WP6 has developed schematic diagrams showing the different type of dataflows (Genomics observation networks, Plankton imaging observation networks, Fish, mammal, and bird biologging networks, Cetacean passive acoustic observation networks, Other relevant biodiversity data sources) and their related icons.

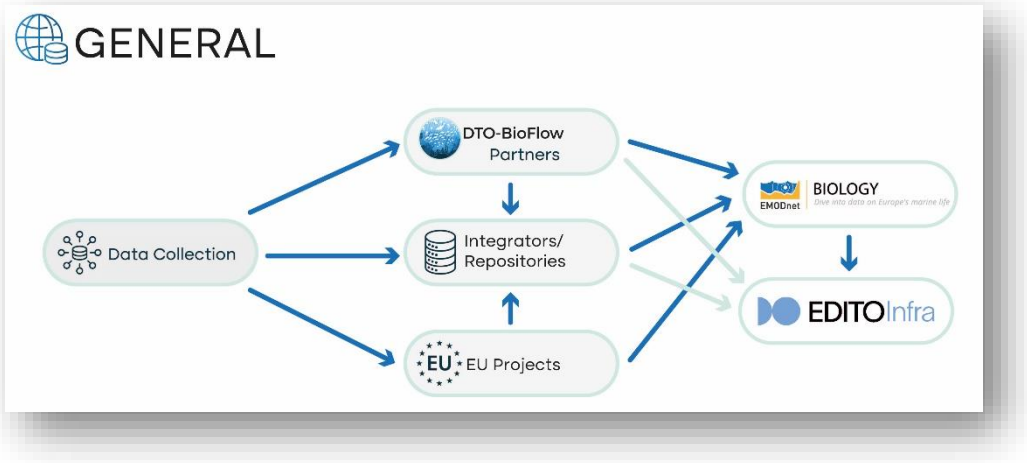

Figure 1 - Example of Diagram developed for the D3.1 - DTO-BioFlow Data Flow Blueprint

A graphic technical factsheet "Integration of biodiversity monitoring data into the Digital Twin Ocean" was also developed, and a printed version has been distributed at events, while a browsable version is available on the webpage and in the Media Kit.

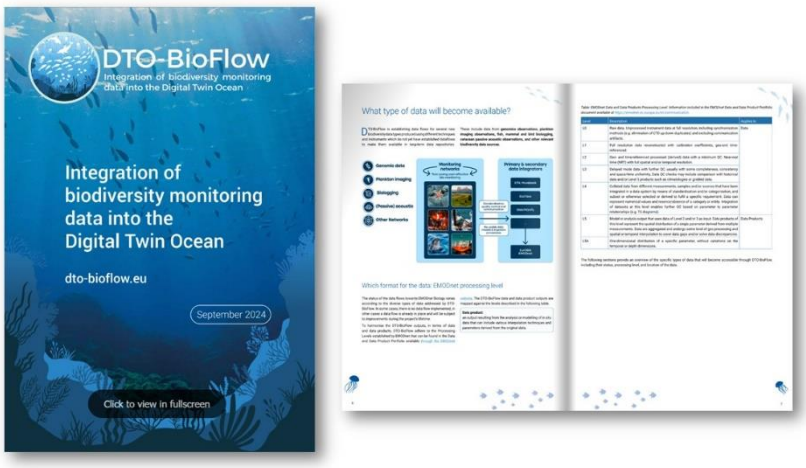

Figure 2 Graphic & Browsable version of Technical Factsheet

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Currently, two inventories have been created and stored on private links on the DTO-BioFlow website, with access restricted to the Project Officer for review. They are: the **Online inventory with metadata description of data products created within WP3 (D3.3)** (https://dto-bioflow.eu/system/files/2025-01/WP3%20Dataset%20inventory%20website.xlsx and the **Online inventory of unavailable data sources** ranked and prioritised for integration into the DTO infrastructure (https://dto-bioflow.eu/system/files/2025-01/Inaccessible-inventory_V9.xlsx) . WP2 is also identifying potential data sources for ingestion to primary and secondary integrators that will connect to the DTO data repositories being developed in other projects (D2.9).
The inventories will be strategically promoted through the project's communication activities after their approval.

2. **Assessment of the impact of missing data:** D2.8 "Report on the impact of missing data" will assess the impact of missing data on digital solutions' ability to represent reality and forecast future scenarios. It is expected to be publicly available later in the project (August 2025). Its release will be strategically promoted through the project's communication activities.
3. **Barriers Playbook:** The Barriers Playbook is a publicly available report identifying and analysing barriers (impediments) to the access and use of biodiversity data in Europe and proposing scenarios to address these. The final version of the playbook is scheduled for release in Autumn 2026 (D2.3, M36), and will include technical solutions related to data formats, integration tools, and automation, governance models with real-world examples for data sharing agreements; case studies from the genomics, plankton imaging, biologging, and cetacean passive acoustics pathways; holistic strategies for data management from collection to integration, ensuring long-term sustainability of data flows into the EU Digital Twin of the Ocean (EU DTO). While waiting for the official release of the Playbook, a summary of the main key barriers to marine data access was published on the DTO-BioFlow website (dto-bioflow.eu/barriers-playbook) and promoted on the project Social Media Channel and newsletters.

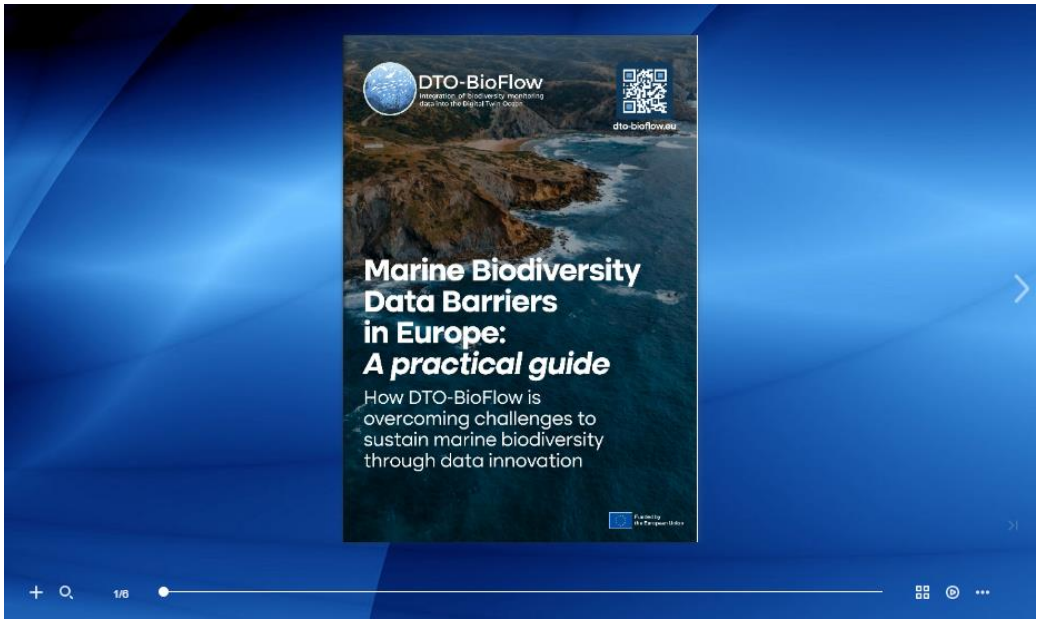

Figure 3 Graphic & Browsable version of Barriers Playbook

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- **New sustained flows of biodiversity monitoring data available via DTO infrastructures:** This includes efforts to connect with biodiversity monitoring networks, such as plankton and ARMs genomic observations, plankton imaging, biologging for fish, mammals, and birds, as well as cetacean passive acoustic monitoring. Additional data sources, including citizen science, official environmental reporting (e.g., MSFD, WISE), marine industrial activities, literature-based data, and global datasets, are also being explored. To support this, **two Open Calls for Data Holders** have been launched, engaging 20 organizations across two calls. The first Open Call was successfully completed, and the second is currently being concluded at the time of reporting. More details on the Open Calls can be found in section 3.2.2.
- **Increased FAIR biodiversity data and products:** available via EMODnet Biology and the EDITO infrastructure. This in the end will represent the main output of the DTO-BioFlow project, and the pathway to achieve such new available data will be highlight promoted, included the benefits for sharing data, as it's been recently described in a pamphlet on the benefits and opportunities to become a biodiversity data provider (D6.3).
- **Demonstrators use cases:** DTO-BioFlow project is working to develop demonstrator use cases that will deliver the biodiversity component of the DTO. These policy-relevant use cases aim to showcase how digital replicas of real biodiversity systems can support environmental management and address policy challenges. Developed by WP3, they will demonstrate the end-to-end approach of DTOBioFlow, from integrating new biodiversity monitoring data flows to their potential application in digital twin environments. Some preliminary steps have already been taken; for example, at the time of writing, a dedicated section for the Use Cases is being created on the project website in a dedicated section accessible from the main menu. As the Use Cases reach a more advanced stage of development, communication efforts will shift towards their promotion, storytelling, and engagement with stakeholders. More details can be found in section 3.3.
- **Data providers onboarding kit:** Publicly available capacity-building resource for biodiversity data providers to help them share their data in a FAIR way according to best practices. At the moment, the kit is being developed, and the material is stored online at https://dto-bioflow.eu/background-training-material

The following assets are still being shaped, and will be further promoted in the upcomgin reporting periods:

- **Validated and scalable new digital tools and services:** New re-usable digital tools and services compatible and interoperable with, and scalable across, the different existing DTO infrastructures.
- **New knowledge** on marine biodiversity monitoring, sustained data flows, and application in digital twin architectures, contributing to informing science and policy in key marine ecosystem challenge areas.
- **Strategic foresight report for increasing biodiversity data flows into DTO by 2030:** a policy-relevant horizon brief proposing SMART targets to increase the flow of biodiversity monitoring data into the DTO framework by 2030 will be produced at the end of the project.

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2.2 Target Stakeholders

The broad categories of stakeholders that DTO-BioFlow is targetting are confirmed as the same as at the start of the project in September 2023. DTO-BioFlow stakeholders are considered in two broad categories: 1) "Contributors", i.e., those who contribute to DTO-BioFlow, mainly in terms of data but also in terms of knowledge and participation to specific project activities; and 2) "Users", i.e., those who will exploit DTO BioFlow outputs. Both categories are present in a range of stakeholder groups.

The figure below gives an overview of which stakeholder groups (SG) will be targeted through the overall duration of the project; what each will contribute to DTO-BioFlow; and what outputs they will use.

Figure 4: DTO-BioFlow stakeholder groups

During the first 18 months of the project, communication efforts have focused on engaging various stakeholders. Campaign #1 targeted a broad spectrum of stakeholders, aiming to involve all key groups in the project's early stages. Campaign #2, instead, adopted a more specific approach, concentrating primarily on the 'Contributors' group. This focus was driven by the two rounds of open call, designed to directly engage and mobilize contributors. The success of these targeted efforts is evidenced by the strong participation in the two rounds of open calls, which will be further detailed later in this document."

As of February 2025, 110+ individuals from 100+ different organisations signed up for the DTO-BioFlow website to apply to the open calls. Registered users come from 24 different countries[1].

Additionally, at the project's outset (as documented in D6.1), a preliminary list of linkages with other projects and initiatives was established. As the project evolved, this list was further refined and categorized based on their contribution to and/or uptake of the project's activities and outputs. During the reporting period, DTO-BioFlow has built preliminary synergies with some of these projects (see section 3.4 of this report).
Some valuable of the multipliers identified in D6.1 helped the project to reach a consistent and always increasing number of stakeholders with results of giving visibility of the open calls, with the results documented in section 3.2.1.

[1] NB: data refer only to the Second open Call

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3. Dissemination & Communication preliminary results

The DTO-BioFlow CD&E Strategy is organised around four major campaigns that were initiated at the start of the project, enabling an agile implementation and assessment of activities across key target audiences. Over the initial 18-month period, the focus has been primarily on the first two campaigns, which have laid the foundation for effective stakeholder engagement and provided valuable insights. This campaign-based approach allows for continuous monitoring and adjustment of actions, ensuring efficient resource allocation and maximizing impact. It also facilitates sustained efforts toward the project's results exploitation and long-term sustainability. In this document, we present the preliminary results of these early campaigns, highlighting the progress made to date.

3.1 Campaign 1: DTO-BioFlow project communication

Since its launch in September 2023, Campaign 1 has been pivotal in translating the objectives of the DTO-BioFlow DC&E Strategy into tangible preliminary outcomes, reinforcing the project's commitment to raising awareness and ensuring high visibility among a diverse range of stakeholders. Over the period up to February 2025, our multi-channel approach has generated impressive engagement figures: 3,471 total users on the website, a combined following of 1,112 on LinkedIn and Twitter, and 211 direct newsletter subscribers. These metrics provide a robust foundation that echoes the strategic intent outlined in the Communication, Dissemination, Outreach Plan (D6.1), showcasing our capacity to reach and captivate audiences across different platforms. Our active involvement in key events and initiatives within the marine research environment has further extended our reach, fostering valuable collaborations and dialogues with research communities. Complementing these engagements, the production of 12 video interviews and 2 promotional videos has enriched our storytelling efforts, effectively conveying the innovative aspects and societal value of DTO-BioFlow. Additionally, in March 2024 (M8), the DTO-BioFlow communications team was invited to participate in the Mission Ocean Communication Collaborative meetings organized by the Mission Ocean and Waters Implementation Platform. This new involvement has strengthened our communication efforts by amplifying our message and expanding our audience through connections with other marine research projects and initiatives.

The following sub-paragraphs will provide a detailed analysis of each communication tool, illustrating how they have contributed to the overall success of Campaign #1.

3.1.1 Website Development and traffic

Since its launch in September 2023, the DTO-BioFlow project's website has consistently delivered a solid performance, recording 4,406 engaged sessions and 3,471 total users through February 2025. Analysis of the traffic data clearly indicate peaks during the Open Call periods in early 2024 and early 2025, underscoring the role these events play in driving visitors to the site. Additionally, robust session durations and high page views per session show that once users arrive, they spend a significant amount of time exploring our content. This sustained engagement demonstrates the website's effectiveness in keeping stakeholders informed about ongoing project developments and emerging opportunities.

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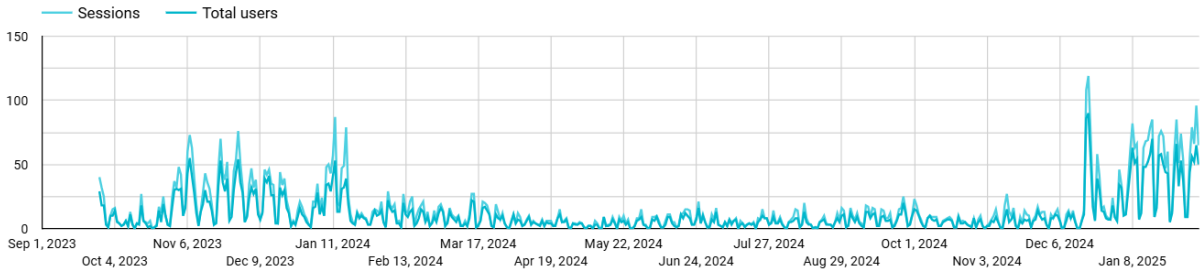

Figure 5: Website traffic overview (sessions and total users)

The three most popular sections of the DTO-BioFlow website in terms of visits - aside from the home page with more than 2,259 views - were the following:

- Second Open Call for Marine Biodiversity data – 2,292 views
- Open Call beneficiaries – 428 views
- Events section – 342 views

In addition, the geographic distribution of sessions shows that our audience is international, suggesting that our messaging resonates across different regions in Europe.

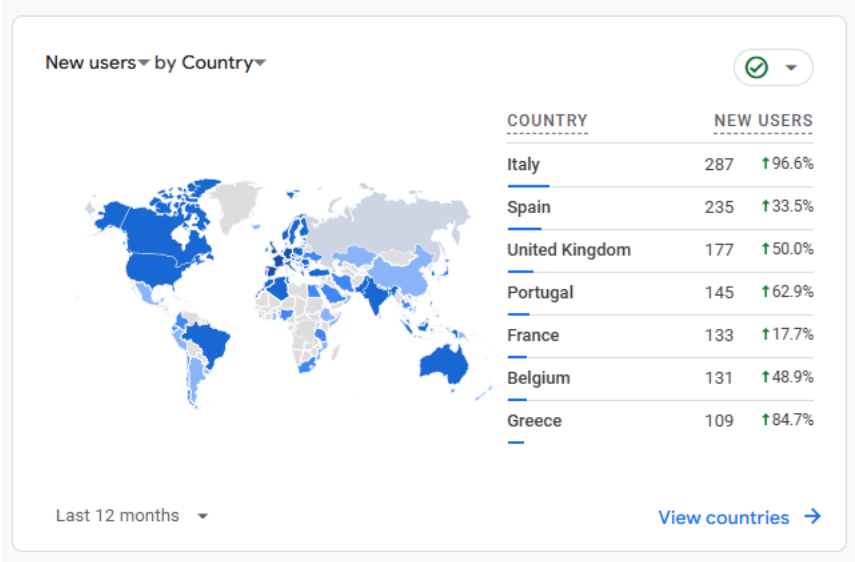

Figure 6: Geographic distribution of users

The referral analysis further reveals that our traffic is driven by a well-balanced mix of organic search, direct visits, and social media channels, demonstrating the effectiveness of our comprehensive communication approach.

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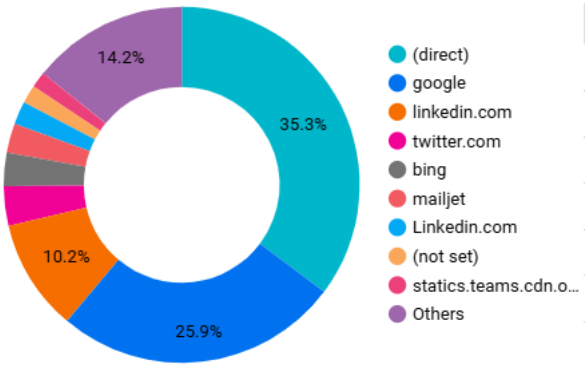

Figure 7: Referral traffic breakdown

Concerning traffic to the project website, the following must be considered: since the beginning we adopted a strict and transparent approach to user consent and cookies on the web platform. As a result, no cookies for traffic and website usage statistics (Google Analytics) are placed without the explicit consent of visitors. While this approach aligns with privacy best practices, it also has the inherent drawback of significantly underestimating statistics in Google Analytics, as users often decline cookies when presented with a clear and neutral consent option, without employing persuasive design elements to encourage acceptance. To gain a more accurate estimate of actual website traffic, we have maintained **c**ompletely anonymised and aggregated statistics on cookie acceptance rates. Between September 2023 and February 2025, the analytics cookie acceptance rate has been 38.68%, indicating that most visitors opted out of analytics tracking. Consequently, the reported website traffic in Google Analytics is likely underestimated, which could be a key factor in not officially reaching the KPI, despite the possibility that actual visitor numbers were higher.

In parallel with these positive traffic figures, significant enhancements have been implemented to improve content accessibility and navigation since the first iteration described in D6.1. For example, the homepage hero banner, once dedicated to showcasing the winner of the first open call, now prominently features the Second Open Call, keeping the content fresh and reflective of current project priorities. Additionally, new menu items have been specifically created for key elements of the DTO-BioFlow project: the website now includes a dedicated menu entry for Open Calls that leads to a comprehensive landing page explaining their objectives, with separate pages for each call. Additionally, the First Open Call page, in particular, features a section highlighting the selected data providers.

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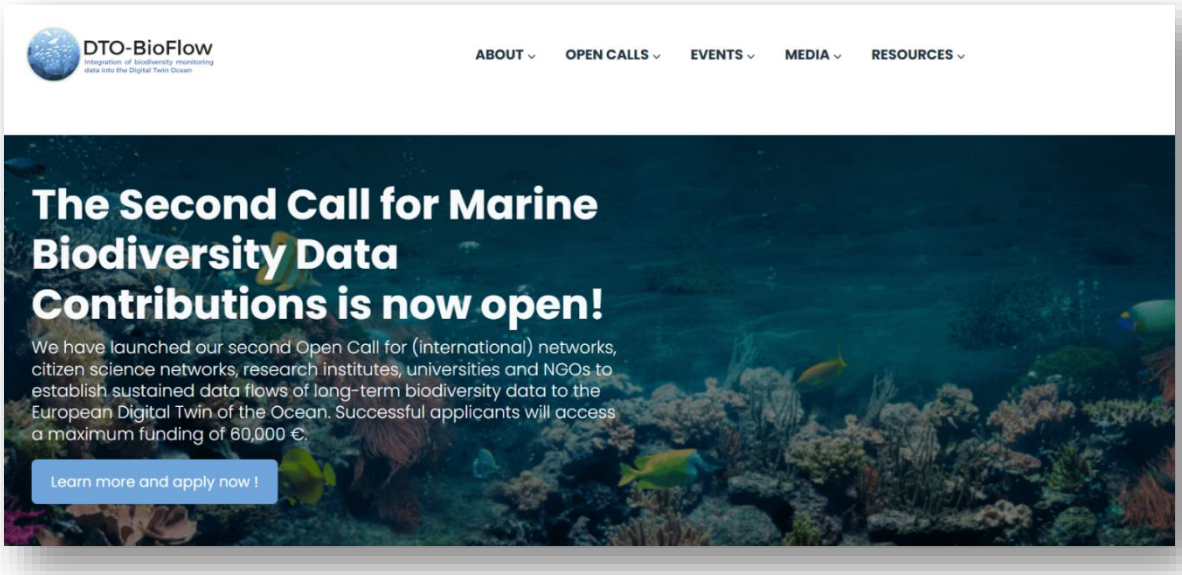

Figure 8: DTO-BioFlow Homepage Hero as of February 2025

Other improvements include:

- **News and Events Section:** Regular project updates are prominently displayed on the Home Page, and the Events page is now organized into "upcoming" and "past" events for easier navigation.
- **Media Section:** A new Media menu aggregates resources related to news, newsletter issues (accessible through a dedicated repository page), communication kits, and a new dedicated section for the video interviews.
- **Resources Section:** This section consolidates assets from other work packages, featuring a Biodiversity Data Flow page based on the Blueprint document (which clarifies data integration into the Digital Twin of the Ocean and DTO-BioFlow's contribution to EMODnet Biology), background training materials from the first Data Holders Workshop, and a dedicated page for the Barriers Playbook—scheduled for official release in Autumn 2026 but already introducing key challenges in data flow.
- **Use Cases Section**: This new section provides an overview of the project's key application scenarios, showcasing how DTO-BioFlow integrates marine biodiversity monitoring data into the DTO. It builds on the content of the dedicated deliverable (D4.2) on Use Cases, offering concise, structured information for each case study. Each Use Case is presented through a "calling card" format, designed to provide essential details at a glance. The information includes an overview of the Use Case, the challenge it addresses, the proposed solution, monitoring and sensor resources, data sources, analysis tools, expected outputs, target stakeholders, and the specific Digital Twin features being demonstrated.

Furthermore, we are actively working towards a second version of the website. This update will bring a refreshed Home Page with dedicated blocks for Open Calls, winners, videos, and other critical updates, ensuring our digital presence continues to evolve alongside the project.

dto-bioflow.eu @DTOBioFlow @DTOBioFlowProject in @company/dto-bio-flow
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3.1.2 Social Media

The social media activity of DTO-BioFlow focuses on its Twitter, LinkedIn, and YouTube channels, offering a direct, timely means of communication with community members and potential stakeholders. Frequent posting and interaction keep the project visible, showcasing event participation, sharing news, and highlighting progress.

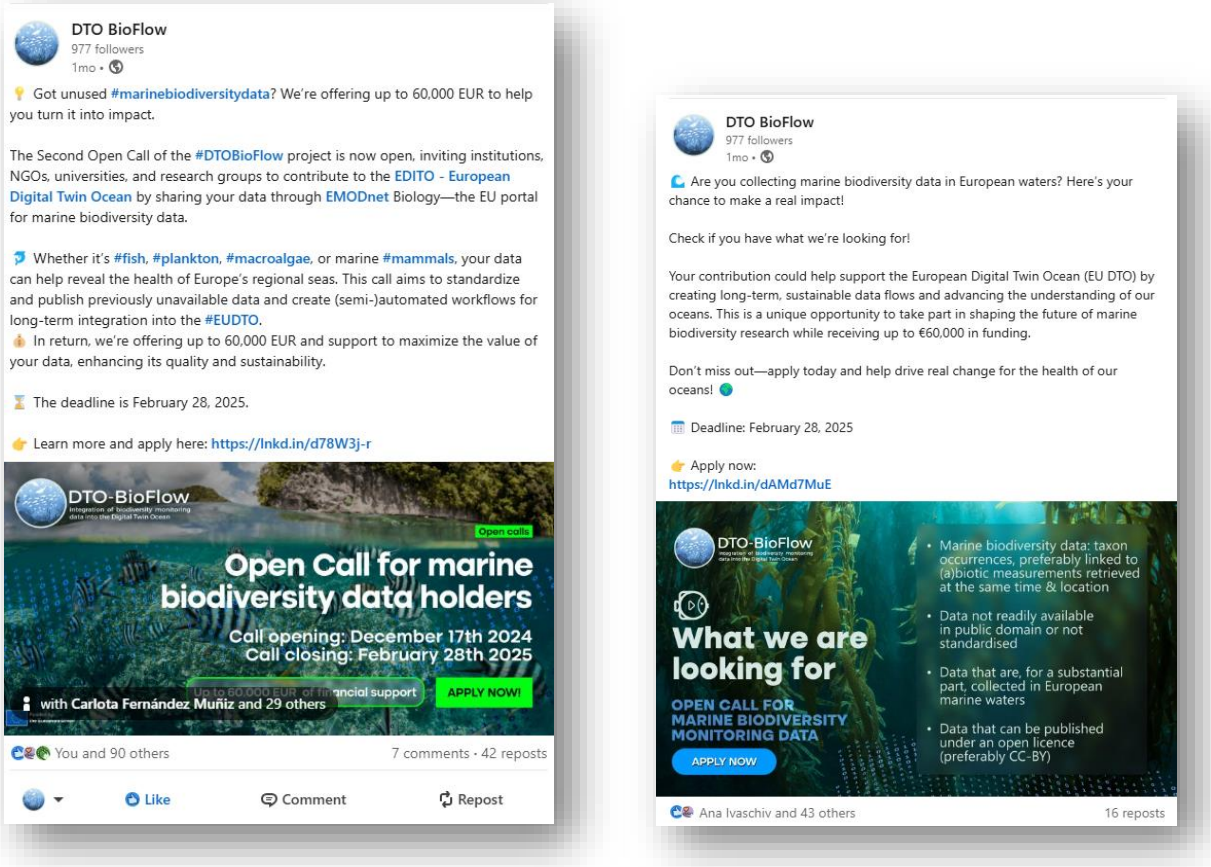

Figure 9: Examples of DTO-BioFlow social media posts

By M18 (February 2025), the community had grown to 1,250 followers across these platforms. In light of ongoing changes on the Twitter platform, such as declining traffic and the removal of key reporting feature, the project has proactively evaluated alternative platforms.

Channel	Link	Followers as of M3	Followers as of M18
Twitter	twitter.com/DTOBioFlow	99	213
LinkedIn	linkedin.com/company/dto-bio-flow	275	1017
YouTube	youtube.com/@DTOBioFlowProject	9	20

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Table 1 Social media community figures

After a discussion with the Steering Committee, it was decided to establish a BlueSky profile by the end of February 2025. While DTO-BioFlow will not completely abandon Twitter to avoid losing its existing audience base, the strategy will involve gradually encouraging those followers to transition to BlueSky. This dual approach allows the project to maintain continuity while exploring new opportunities for engagement.

3.1.3 Newsletters

The newsletter experienced a robust launch, marked by high initial engagement that persisted through early 2024, and it saw a significant rebound in July—reflecting an increasingly strong connection with our audience. Distributed via Mailjet, our newsletter has reached over 200 subscribers at the time of writing, with an impressive average open rate of 62%, indicating that nearly two-thirds of our recipients are actively engaging with our content.

Since the project started in September 2023, five editions of the DTO-BioFlow newsletter were sent, meeting the project KPIs. An archive of these past editions is now available on the website, serving as a comprehensive repository for stakeholders and interested parties to catch up on earlier project updates-

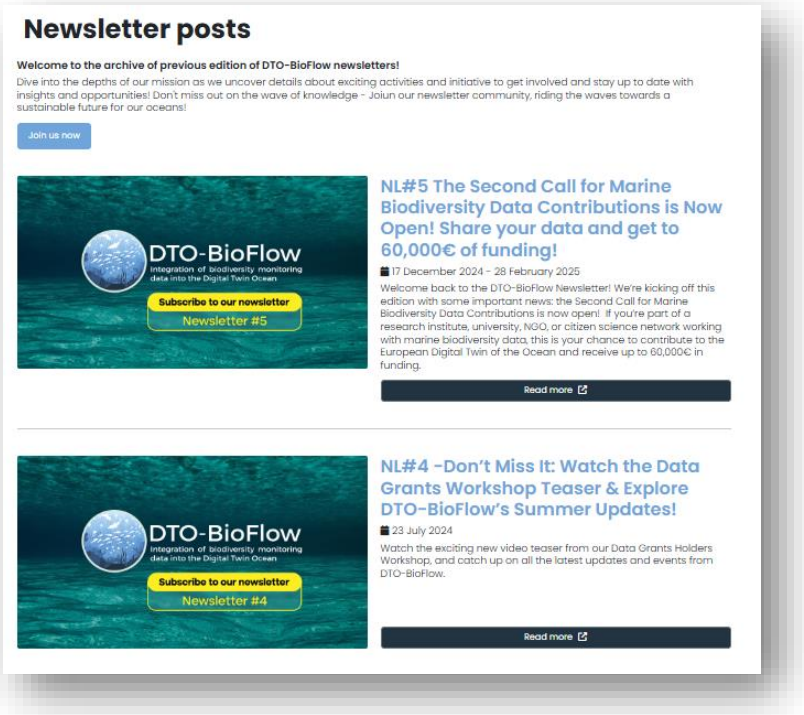

Figure 10: The DTO-BioFlow website archive of published newsletters

In parallel with the traditional newsletter, a LinkedIn Newsletter has been introduced to further capitalize on our strong social media presence and to offer curated content tailored specifically for the platform. Launched with the announcement of the Second Open Call, this tool automatically invites our new LinkedIn followers to subscribe, ensuring they receive distinct, platform-appropriate updates without duplicating the broader communications. Notably, the LinkedIn Newsletter adopts a different tone—more conversational and immediate—to suit the social media context, thereby fostering enhanced engagement and real-time

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interaction. As of the latest update, 422 subscribers have opted into the LinkedIn Newsletter, indicating a promising level of initial acceptance among our audience.

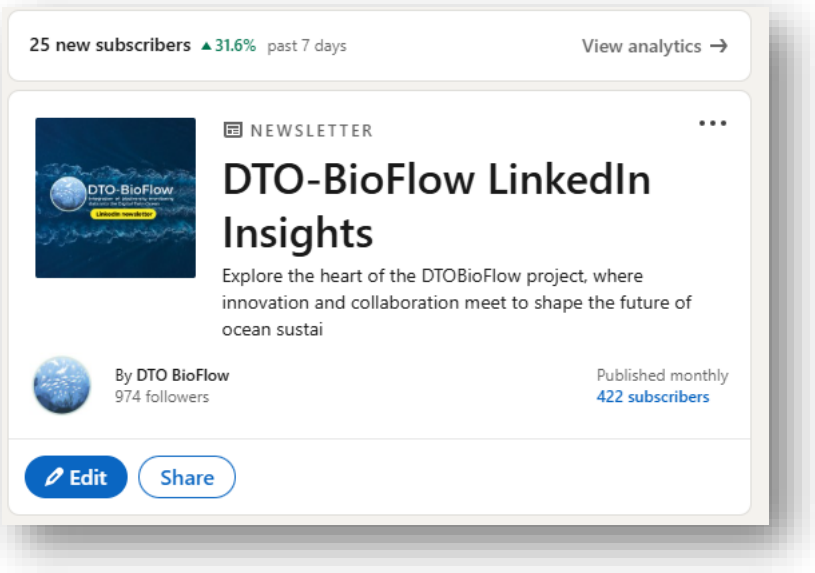

Figure 11:The DTO-BioFlow LinkedIn newsletter

These developments represent a strategic diversification of our communication channels. The continued evaluation of both the Mailjet and LinkedIn Newsletter formats will help refine our approach to disseminating critical project updates, ensuring that each channel effectively meets the needs and preferences of our diverse stakeholder community.

3.1.4 Other Communication Activities

As part of Campaign #1, DTO-BioFlow has engaged in broad communication efforts to promote the project beyond its core stakeholders, reaching the general public, media, and wider scientific community.

A key highlight was DTO-BioFlow's feature in the Euronews Ocean documentary series (https://www.youtube.com/watch?v=Hn9tBj3MghQ), an 8-minute episode available in seven languages, broadcast online and on the Euronews YouTube channel, significantly increasing the project's visibility, having received over 1000 views to date. The episode offers brief insights into our project, including comments from coordinator Klaas Deneudt and other team members on the significance of our work in preserving marine ecosystems. The episode is also featured in an article by Euronews Green, where DTO-BioFlow is quoted as one of the projects helping to build the EU's groundbreaking Digital Twin of the Ocean.

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Figure 12: Website news item on DTO-BioFlow featuring in Euronews Ocean Documentary Series

Another important outreach activity was a one-hour online seminar on the RISE (Research Institutes of Sweden) YouTube channel, which is followed by almost 25k people. The seminar titled "Digital Twins & Observation Systems for Monitoring Marine Biodiversity and Change" was presented by Matthias Obst (University of Gothenburg and WP4 leader). He provided an overview of the role of Digital Twin technologies in marine biodiversity research and highlighted DTO-BioFlow's contributions in this field. The session helped inform researchers, foster discussions, and attract potential collaborations. The YouTube registration is available at [this link.]

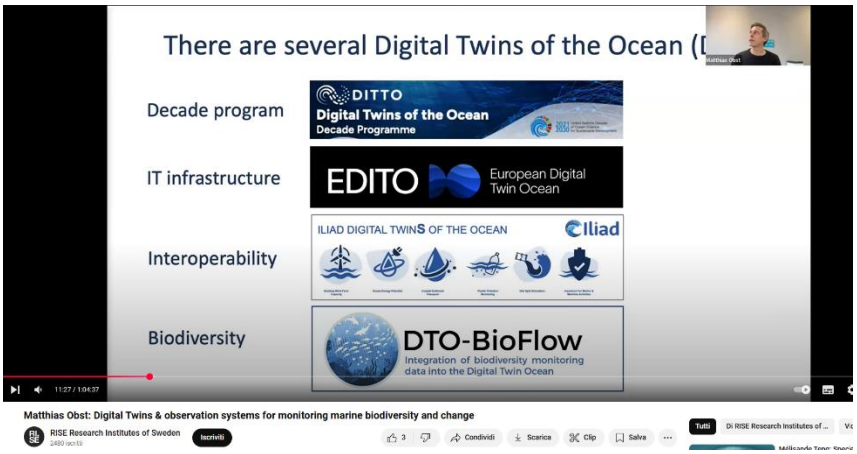

Figure 13: Frame from the "Digital Twins & Observation Systems for Monitoring Marine Biodiversity and Change" seminar recording

Additionally, DTO-BioFlow is featured in Chapter 5 of the European Marine Board's strategic foresight publication, "Navigating the Future VI", which explores "Ocean and Biodiversity". The project is recognized for its role in bringing "sleeping" biodiversity data into DTO digital systems, reinforcing its significance in advancing marine data accessibility and integration (link).

DTO-BioFlow has also been featured in news articles and dissemination pieces on Digital Twins, including within Horizon Europe projects such as BIODT and in research networks such as Scientify Research.

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Figure 14: Banner of the article featuring DTO-BioFlow on BioDT website

3.1.5 Videos

As part of our ongoing communication efforts, the DTO-BioFlow project has produced a variety of video materials designed to inform, engage, and inspire our stakeholders. Since the start of the project, we have created 12 video interviews and 2 promotional videos. These videos feature project participants, researchers, and key stakeholders, providing insights into the project's objectives, progress, and expected outcomes.

A special highlight among these is the series of interviews with the DTO-BioFlow data providers, winners of the first open call, registered during the first Data Grants Holder workshop in Ostend, April 2024. These interviews give the data providers an opportunity to share their experiences, discuss their contributions, and provide valuable perspectives on the support that DTO-BioFlow gave to their work. By showcasing these contributors, the project celebrates its achievements but also encourages other stakeholders to see the tangible benefits of engaging with DTO-BioFlow initiatives and perhaps convince new Data Providers to onboard and share data with DTO-BioFlow.

All video content is housed on our dedicated YouTube channel, ensuring easy access for stakeholders and the wider public. Additionally, a dedicated section to the Videos on the website was created and added under the Media Kit main entry on the menu. The production of these videos reflects a commitment to leveraging dynamic, multimedia formats to communicate the value of DTO-BioFlow's work. As we continue to produce new content, we will maintain a focus on quality, storytelling, and clarity to ensure that our stakeholders remain well-informed and engaged.

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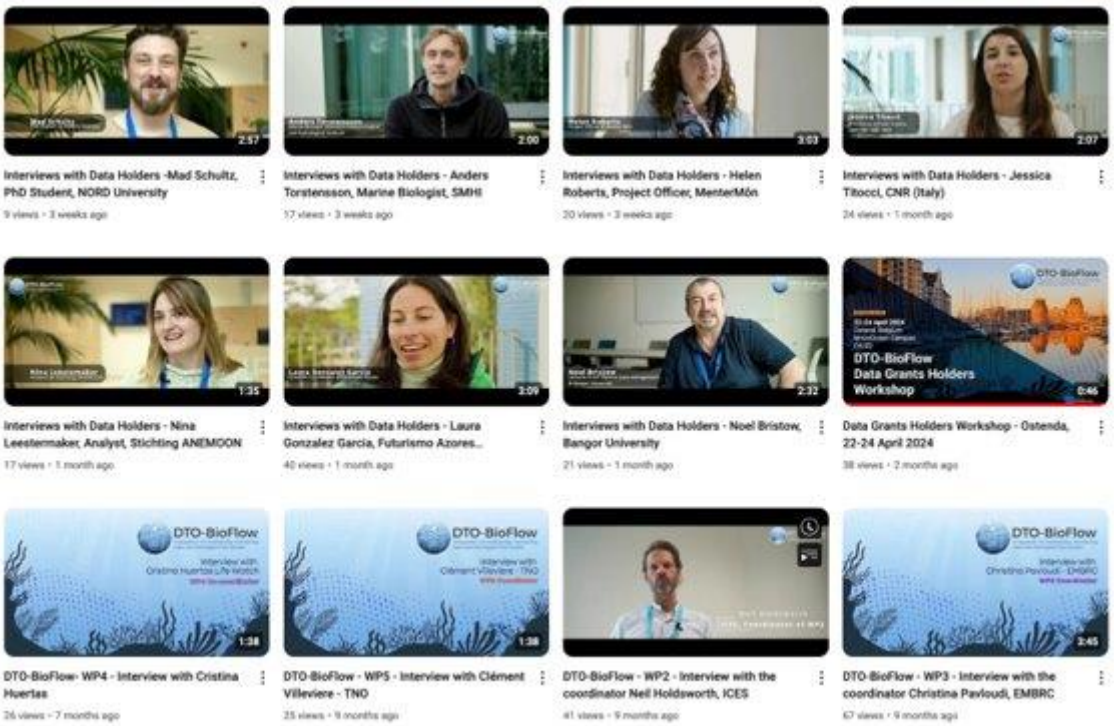

Figure 15: Youtube Dashboard

3.1.6 Promotional & Dissemination Materials

A set of branded material was developed during the first year of DTO-BioFlow to support outreach activities and participation in external events. In addition to the logo and roll-up banner, which were first presented during the Kick-off Meeting (KoM) in M3, a communication package was provided to partners for conferences and events. This included a poster, an A4 flyer, and a round sticker, with notable distribution at the EMODnet Conference in November 2023. In May 2024 (M10), an updated version of the flyer was released, featuring a new section explaining the DTO-BioFlow workflow to enhance clarity on data integration processes.

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Figure 16: An example of DTO-BioFlow promotional material

In September 2024, the first technical factsheet was published, based on the content of the Blueprint deliverable (D3.1). This factsheet serves as one of the introductory items of the Onboarding Kit, which is further detailed in S**ection 3.2.2**. It outlines how DTO-BioFlow integrates marine biodiversity monitoring data into the Digital Twin Ocean (DTO), detailing the data types collected—such as genomics, plankton imaging, biologging, and passive acoustic data—their formats, and their processing for integration into repositories such as EMODnet Biology. It also highlights how these data flows contribute to policymaking, environmental monitoring, and research. About 200 hard copies of the factsheet were distributed at the ICES Conference in September 2024 and at the DTO-BioFlow General Assembly in Spain in October 2023, where partners also received hard copies to share at their respective events.

Figure 17: : Examples of DTO-BioFlow promotional and dissemination material

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More recently, efforts have focused on creating a graphical version of Deliverable D2.2 “Barriers Playbook”, which presents DTO-BioFlow’s work on identifying the barriers to seamless data flow, barriers that currently limit the full potential of marine biodiversity data and hinder its effective use. This version in a folded A5 format with six faces serves as a preliminary draft of the DTO-BioFlow Playbook, scheduled for release in April 2026 (M32). Additionally, work is underway on the graphical version of Deliverable D6.3, a pamphlet highlighting the benefits and opportunities of becoming a biodiversity data provider.
All graphic materials are available on the DTO-BioFlow website under the Communication Kit section (https://dto-bioflow.eu/communication-kit), accessible via the Media menu. As a new feature and in an effort to enhance the presentation and accessibility of digital resources, a browsable version of the these outputs are being introduced on each page dedicated to DTO-BioFlow’s key resources (e.g. at the bottom of the page dedicated to the Barrier Playbook) (Figure 18). This new approach is intended to make materials more interactive and user-friendly and is set to be actively promoted in the months following the closure of the Second Open Call.

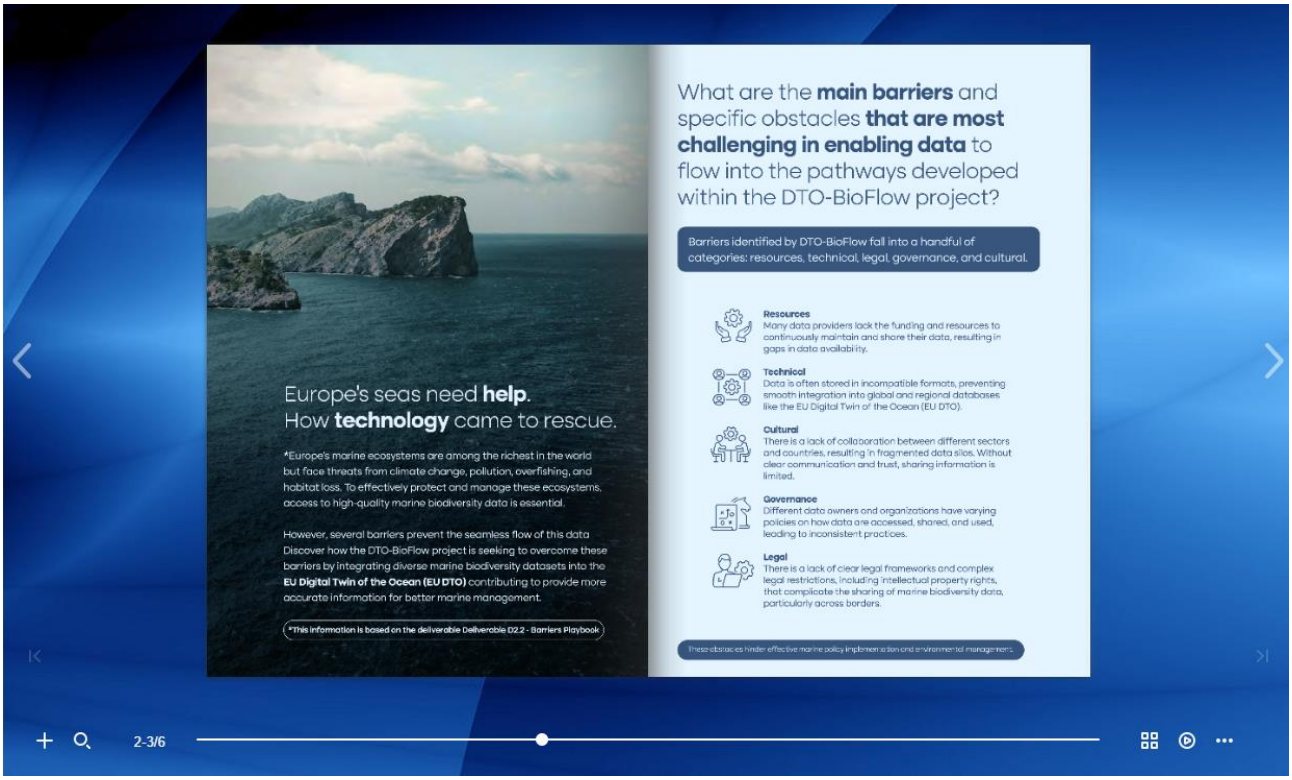

Figure 18 Browsable version of the Playbook

These materials will continue to be promoted to stakeholders through social media and events, and a selection of them will also be included in the Data Provider Onboarding Kit, further detailed in Section 3.2 of this deliverable.

3.1.7 Press Releases

DTO-BioFlow has issued a series of press releases to highlight key project milestones and ensure broad dissemination of its activities. The information on the launch of the first press releases, including the project launch announcement and the First Open Call, were included in the first version of this deliverable (D6.1).

dto-bioflow.eu @DTOBioFlow @DTOBioFlowProject in @company/dto-bio-flow
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These Press Releases were successfully distributed, reaching a wide audience through various channels and stakeholders.

A press release announcing the winners of the First Open Call was also published. While its visibility on websites was somewhat limited, it gained traction through social media channels, where it was widely shared by partners and stakeholders. This helped ensure that the information reached relevant communities in a more dynamic and interactive way.

The press release announcing the Second Open Call also achieved strong visibility, with significant engagement from stakeholders, including EU projects, research infrastructures, and thematic platforms that helped amplify the announcement. Some of the press clippings resulting from this press release are shown in the table below, while more details on the overall communication strategy for the Open Call are provided in the dedicated section of this deliverable (see 3.2.1).

Category	Stakeholder/Platform	Dissemination Result
EU-funded projects & initiatives	Blue-Cloud 2026	https://www.blue-cloud.org/news/building-digital-replica-our-seas-dto-bioflow-project-launches-second-open-call-address https://www.linkedin.com/posts/blue-cloud-org_opencall-research-marinebiodiversity-activity-7282411103437930498-Ee0z?utm_source=share&utm_medium=member_desktop
	BioDT	https://www.linkedin.com/posts/biodt_opencall-digitaltwin-missionocean-activity-7282703851311316993-v4GJ?utm_source=share&utm_medium=member_desktop
Biodiversity marine data services and research infrastructures (SG#2)	EMODnet Portal	https://emodnet.ec.europa.eu/en/building-digital-replica-our-seas-dto-bioflow-project-launches-2nd-open-call-addressing-marine
	MARINE-B	https://listserv.heanet.ie/cgi-bin/wa?A2=ind2501&L=MARINE-B&P=2642
	Seascape Belgium	https://x.com/SeascapeBelgium/status/1876636326688333933 https://www.linkedin.com/feed/update/urn:li:activity:7282401696088035330 https://seascapebelgium.be/news/building-digital-replica-our-seas-dto-bioflow-project-launches-second-open-call-address
	LifeWatch ERIC	https://www.lifewatch.eu/2024/12/27/dto-bio-flow-second-open-call-launched/

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	ENVRI Infrastructure Communication (on Slack)	n.a.
	Swedish Biodiversity Data Infrastructure	https://biodiversitydata.se/news/open-call-to-address-critical-marine-biodiversity-data-gaps/
	OBIS	https://obis.org/2025/01/17/eudto-2ndcall/
EU and International Organisations (SG#5)	Horizon Europe Office	https://horizon-europe.org.ua/en/news/calls/the-second-open-call-for-marine-biodiversity-data-within-the-eu-water-restoration-mission/
	Technology Centre Prague - National Information Centre	https://www.horizontevropa.cz/en/news/yiifnews/3069
	Obiettivo Europa	https://www.obiettivoeuropa.com/bandi/dto-bioflow-invito-a-presentare-proposte-per-i-dati-sulla-biodiversita-marina-monitoraggio
	FIRST (Finanziamenti per l'Innovazione, Ricerca e Sviluppo)	https://first.art-er.it/news/dto-bioflow-aperta-la-2deg-call-biodiversita-marina
Research and Academia (SG#4)	Springer Nature	https://communities.springernature.com/posts/building-the-digital-replica-of-our-seas-dto-bioflow-project-launches-a-second-open-call-to-address-critical-marine-biodiversity-data-gaps
	GEANT	https://connect.geant.org/2025/01/14/building-the-digital-replica-of-our-seas-dto-bioflow-project-launches-a-second-open-call-to-address-critical-marine-biodiversity-data-gaps
	National Biodiversity Future Centre (NBFC)	Shared on their Instagram Stories
	ProBleu	https://mailchi.mp/6a046872636b/newsletter-jan-25-blue-school-accreditation-now-open?e=[UNIQID]
	EMIBOS	https://www.linkedin.com/posts/embimos-group-citsci_biodiversidad-emodnet-activity-7287786356460720130-psfW?utm_source=share&utm_medium=member_desktop
Ocean governance	Mission Ocean & Waters Portal	https://projects.research-and-innovation.ec.europa.eu/en/funding/funding-

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and policy (SG#1)		opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters/dto-bioflow-second-open-call-marine-biodiversity-data
Others	Plumtri	https://www.plumtri.org/DTO-BioFlow_Project_Second_Call_for_Marine_Biodiversity-monitoring_Data
	DARPE - Development Assistance Roadmap Portal (Middle East)	https://darpe.me/darpe-entries/second-open-call-for-marine-biodiversity-monitoring-data/
	Europa Innovazione	https://www.europainnovazione.com/dto-bioflow-aperta-la-seconda-call-per-dati-sulla-biodiversita-marina/
	Bruxelles, Regione Campania portal	https://bruxelles.regione.campania.it/index.php/2024/12/19/news-bandi-dto-bioflow-integrazione-dei-dati-del-monitoraggio-della-biodiversita-nelloceano-gemello-digitale-richiesta-di-dati-sulla-biodiversita-marina-monitoraggio-horizon-miss-2022-ocean-0/
	Innovation Place	https://www.innovationplace.eu/what-is-innovation-place
	Cascade Funding Hub	https://cascadefunding.eu/open-call/dto-bioflow-2nd-open-call/

Table 2 Results of the promotion of the Press Release

3.1.8 Publications

DTO-BioFlow has contributed to peer-reviewed scientific literature, advancing knowledge in marine biodiversity monitoring, digital twin applications, and genetic research. These publications highlight the project's role in environmental monitoring, long-term ecological research, and the detection of non-indigenous species. The following table summarizes the published and upcoming scientific articles related to DTO-BioFlow:

Title	Authors	Journal	DOI / Link
A Digital Twin of the Trondheim Fjord for Environmental Monitoring—A Pilot Case	Antonio Vasilijevic, Ute Brönner, Muriel Dunn, Gonzalo García-Valle, Jacopo Fabrini, Ralph Stevenson-Jones, Bente Lilja Bye, Igor Mayer, Arne Berre, Martin Ludvigsen, Raymond Nepstad	Journal of Marine Science and Engineering	10.3390/jmse12091530

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A Long-Term Ecological Research Data Set from the Marine Genetic Monitoring Programme ARMS-MBON (2018–2020)	Daraghmeh et al.	Molecular Ecology Resources	10.1101/2024.09.26.614897
Using the Long-Term Genetic Monitoring Network ARMS-MBON to Detect Marine Non-Indigenous Species Along the European Coasts	Pagnier et al.	Biological Invasions (Upcoming 2025)	10.1007/s10530-024-03503-2

Table 3 List of Pubblications

3.1.9 Campaign KPIs

Indicator	**Measure M18**	**Expected Value**	
		By M18	**by M42**
Website	3k session*	>1k	3k
Social Media	1250o f followers across all platforms	3k	5k
Videos	817 total views on YouTube	300	1500
Newsletter	5 newsletters published	4	18
Press release	4 press releases launched	1	4
Publications	3 articles published in Open Access & peer-review magazines & journals	n.a.	5

* The KPIs listed in the GA refers to session/month while it should refer to overall session on a yearly basis

Table 4 Campaign #1 KPIs

3.2 Campaign 2 - Biodiversity Providers Onboarding Campaign

The main objective of Campaign 2 is to onboard new providers of biodiversity data for the Digital Twin Ocean (DTO) and raise awareness of the formats, standards, and practices necessary to ensure data usability within the DTO framework. The support to the launch and set-up of the open calls for data holders is at the core of the Campaign #2.

As of M18, the First Open Call has successfully concluded, while the Second Open Call is actively being promoted, already generating significant engagement through increased website traffic and interest from various institutions. These efforts were conducted in close collaboration with WP2 (Task 2.5 “Organise open calls to data holders”), leveraging multiple communication channels to maximize reach.

Another key element of this campaign is the development of the Onboarding Kit, designed to provide data providers with structured guidance, including training materials, FAQs, and best practices. Some of the first components of the kit have already been made available, and additional materials will be developed as the project progresses.

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The next phase of Campaign 2 will focus on expanding the Onboarding Kit and further refining the onboarding process in collaboration with relevant work packages, ensuring effective support for data providers integrating into the DTO.

3.2.1 Visibility and Promotion of DTO-BioFlow open calls for data holders

The DTO-BioFlow open calls for data holders serve as a key mechanism for expanding the project's data network, integrating new biodiversity datasets into the Digital Twin Ocean (DTO), and ensuring broad participation from diverse stakeholders. At the time of writing, the First Open Call has successfully concluded, and the Second Open Call has been launched, with promotion efforts actively ongoing. Both the First and Second Open Calls have been prominently showcased on the DTO-BioFlow website, with a dedicated menu entry providing clear guidance on eligibility, application processes, and evaluation criteria. The communication and outreach strategy established for the First Open Call, as outlined in D6.1 (M3), was also applied to the Second Open Call, with an expanded list of contacts to maximize engagement and reach new data providers.

Results of the First Open Call

The First Open Call received over 20 applications, demonstrating strong interest from a broad range of regions, including the UK, Netherlands, Sweden, Portugal, Norway, Italy, and Israel. Following a structured evaluation process, nine projects were selected as beneficiaries of the DTO-BioFlow Financial Support to Third Parties (FSTP) grants. These projects represent a diverse range of topics and institutions, employing various data collection methods such as citizen science observations, AI-assisted imaging, net trawls, and benthic grabs. The focus areas span different marine organisms, including cetaceans, plankton, and benthos, with datasets collected from geographically diverse regions, from the Arctic Ocean to the Mediterranean and the Azores. This diversity aligns with DTO-BioFlow's goal of sourcing data from multiple ecosystems, contributing to a comprehensive dataset that enhances marine biodiversity assessments.

Beyond the selection process, significant promotional efforts were undertaken to highlight the winners of the First Open Call. A dedicated social media campaign introduced the selected institutions and their winning projects, providing visibility to their contributions and reinforcing the importance of their datasets in the context of DTO-BioFlow (See fig.15). Additionally, a dedicated page on the DTO-BioFlow website was created to present the selected projects, offering further details on their scope and objectives. As a follow-up, video interviews with grant recipients were conducted, providing a firsthand perspective on their work and the relevance of their contributions. These videos were later actively promoted across DTO-BioFlow's digital channels, further engaging stakeholders and showcasing the project's impact.

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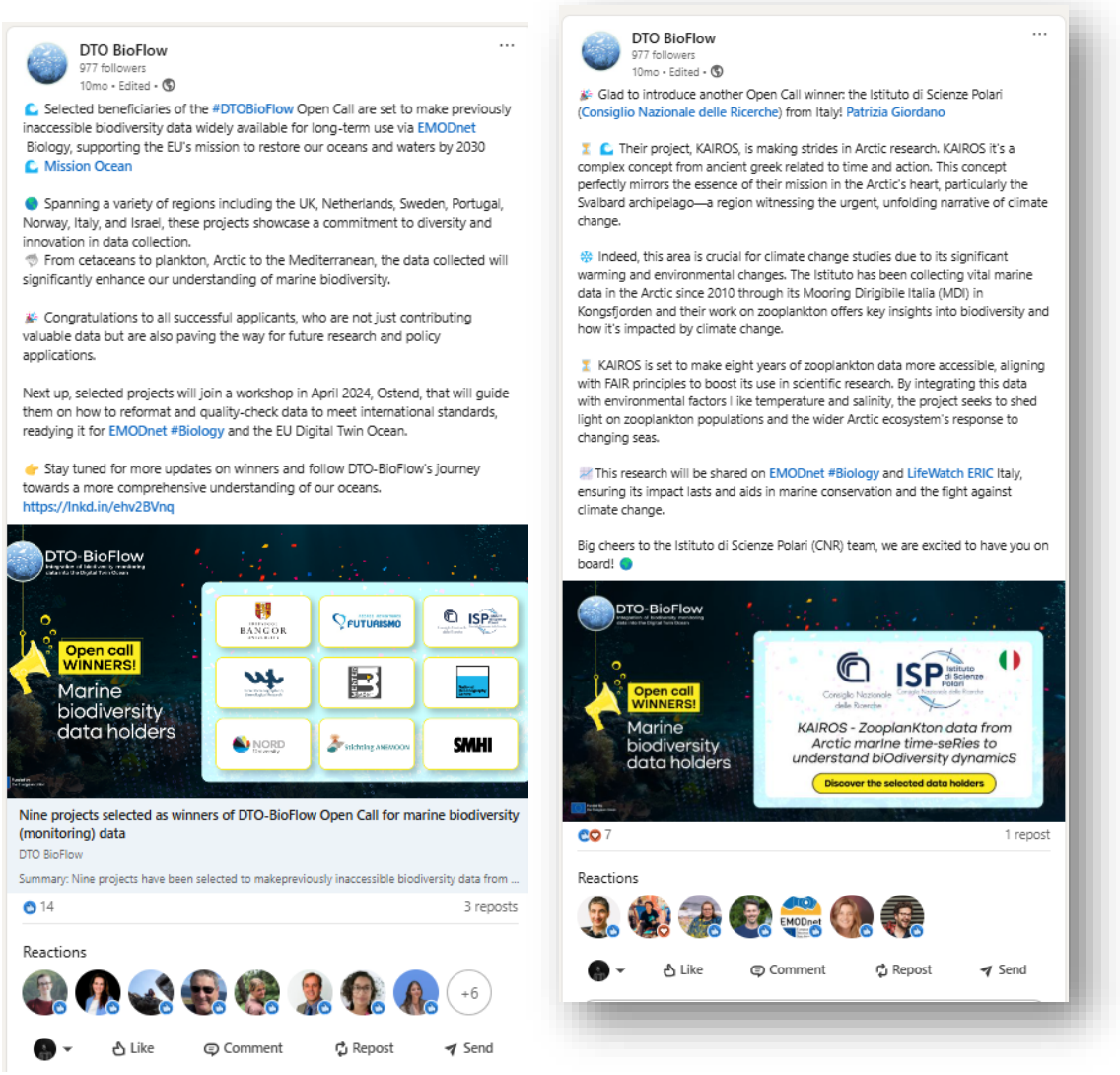

Figure 19: Social media posts highlighting the Open Calls

As part of their onboarding, representatives from the selected projects participated in a dedicated workshop in Ostend, with two participants per project, some attending in person and others joining remotely. This event provided an opportunity for beneficiaries to engage with DTO-BioFlow experts, gain insights into data integration requirements, and strengthen collaboration within the project framework (details in the section 4.1.2). Additionally, video interviews with grant recipients were recorded, further showcasing the significance of their contributions to the DTO-BioFlow initiative.

Ongoing Promotion of the Second Open Call

With the Second Open Call now launched, promotion efforts are actively ongoing, following the same structured outreach approach while leveraging a broader network of contacts to extend its reach. The dedicated webpage for the Second Open Call is available at this link, accessible directly from the main menu of the DTO-BioFlow website. It provides detailed guidance on eligibility, funding opportunities, and

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application requirements. The webform allows registered users to apply, and a support service is available through *opencalls[at]dto-bioflow.eu*- ensuring that interested stakeholders can request clarifications or additional details throughout the application period. A targeted email campaign was carried out to distribute the press release and detailed information about the Open Call directly to relevant stakeholders, research networks, and potential data providers (see par 3.1.6 Press Release). This ensured that the call reached the most suitable audiences and generated interest among institutions with relevant datasets.

In parallel, a structured social media campaign was launched, introducing a new branding identity specifically for the Second Open Call, ensuring visual consistency across platforms and the project website. Throughout January, one post per week was published, progressively highlighting different aspects of the Open Call, such as eligibility criteria, the application process, and the expected impact of the selected projects. For the occasion, the first issue of the LinkedIn Newsletter was published. To further drive engagement, the campaign also features video interviews with previous data holders, showcasing their experiences and the value of contributing to the Digital Twin Ocean. These testimonials served as real-world examples, encouraging new institutions to take part in the initiative and share their biodiversity data. Some examples of the promotional efforts in this campaign are showcased in the photos below.

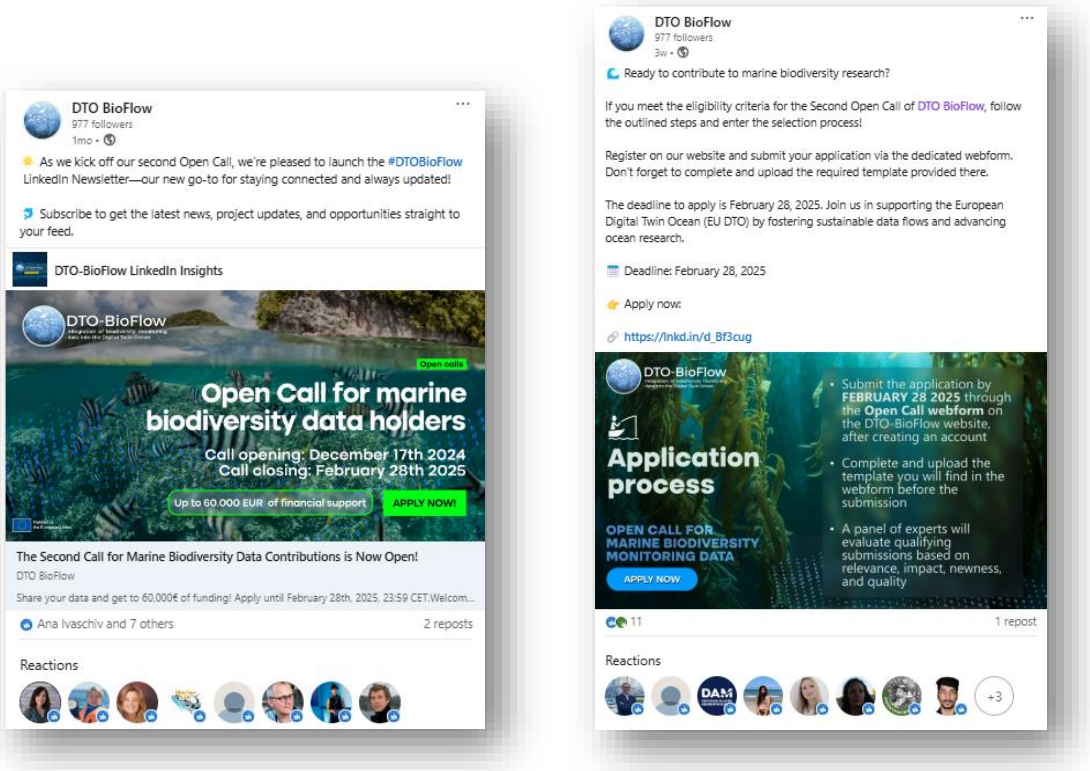

Figure 20: Examples of promotional social media posts to highlight the Open Calls

At the time of writing the Open Call press release was published and distributed across 30+ channels and networks.

A particularly notable collaboration in this round was established with Mission Ocean, further amplifying the visibility of the Open Call within the EU ocean research and policy community. The Open Call was presented

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in the Mission Ocean Communication Meeting held on January 8, 2025, and additionally featured on the Mission Ocean and Waters Service Portal under the "Calls for Proposals" section, reinforcing DTO-BioFlow's alignment with broader European efforts in marine data and ecosystem research. Google Analytics figures recorded 15 new users, with 5 returning users landing on the website from the Portal, demonstrating sustained efficacy of the channel. Additionally, Mission Ocean's social media channels supported the promotion, ensuring that the call was widely disseminated with a consistent and coherent branding identity, in line with DTO-BioFlow's visual strategy.

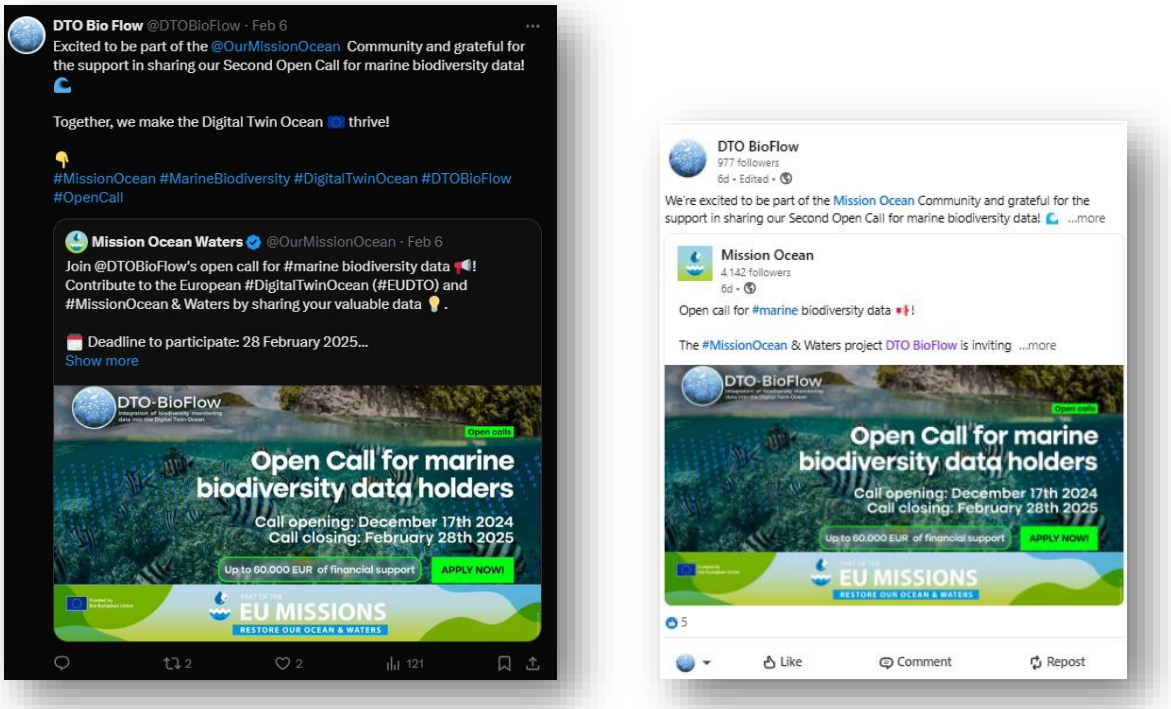

Figure 21: Examples of social media posts from Mission Ocean channels to highlight the Open Calls

As the selection process moves forward, the successful applicants will be publicly announced on the DTO-BioFlow website within 30 days of the evaluations being completed. This announcement will provide a transparent overview of the selected projects, including the dataset title, the organisation, and the country of the successful applicants.

3.2.2 Data Provider onboarding kit

The development of the Data Provider Onboarding Kit began after M8, with the goal of creating a comprehensive set of online and digital materials to facilitate the integration of new biodiversity data into the DTO. The final version of the onboarding kit will serve as an entry-level resource, offering guidance on key stakeholders in the biodiversity data landscape, an overview of existing data providers, frequently asked questions, and direct links to the inventory of data sources (WP2), which feed into the DTO. All these materials will be accessible via the DTO-BioFlow website to ensure ease of use and accessibility for potential data contributors. At present, the onboarding toolkit already includes several informational resources, which have been uploaded across different sections of the website, such as the slide deck from the 1st Data Grants Holders Workshop. WP6 is actively working on consolidating these materials under the "Resources" section

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of the website, ensuring a structured and easily navigable repository. This section will be regularly updated as the project progresses and new outputs are developed, providing a dynamic and evolving support system for data providers engaging with the DTO-BioFlow initiative.

While the KPIs for this reporting period have not yet been fully met, both in terms of the number of materials included in the kit and its outreach, further content will be developed and promoted in the coming months. The closure of the Second Open Call (M19) will mark the beginning of a more structured promotional phase for the onboarding kit, ensuring that the outreach objectives are progressively achieved as the project advances.

Additionally, new materials will be added to the kit, particularly after the development of the DUCs, which will include dedicated posters and factsheets, additional training materials and the full DTO-BioFlow Playbook. These efforts will contribute to expanding the onboarding kit and ensuring that all necessary resources are available to potential data providers, ultimately allowing the KPI targets to be met towards the final stages of the project.

DTO-BioFlow training guidelines

A preliminary slide deck, i.e. a non-exhaustive version of the Training Guidelines, is now available on the DTO-BioFlow website under the “Resources” menu, in the "Background Materials" section. It includes the presentation and background material from the 1st Data Grants Holders Workshop. A more comprehensive version will be released after the 2nd Data Grants Holders Workshop, ensuring a complete and well-rounded package before actively promoting it for broader dissemination and download. Additionally, we will explore the possibility to add the training guidelines of the onboarding kit at the Marine Training platform, which is an EMBRC-ERIC service platform dedicated to Marine education and training.

The training guidelines will explain to potential data holders and future data providers how to make their data “DTO Compatible”. Guidelines for the standardisation and harmonisation of data production and exchange will cover data deriving from different biodiversity observation networks and will act as an open best practices recommendation to complement the flow of data in the DTO. The guidelines will be made publicly available online for all interested parties and stakeholders.

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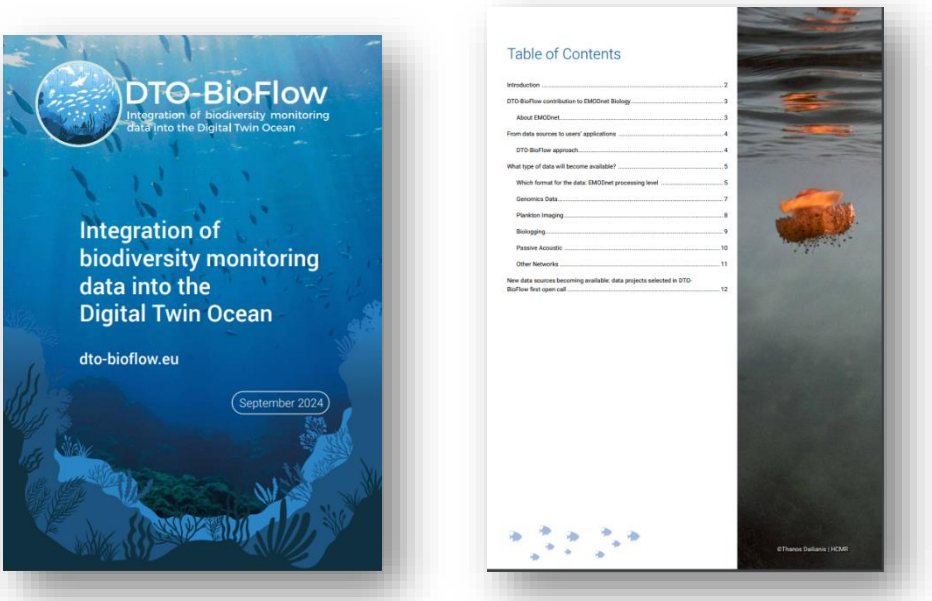

Figure 22: A technical A4 Technical Factsheet "Integration of biodiversity monitoring data into the Digital Twin Ocean"

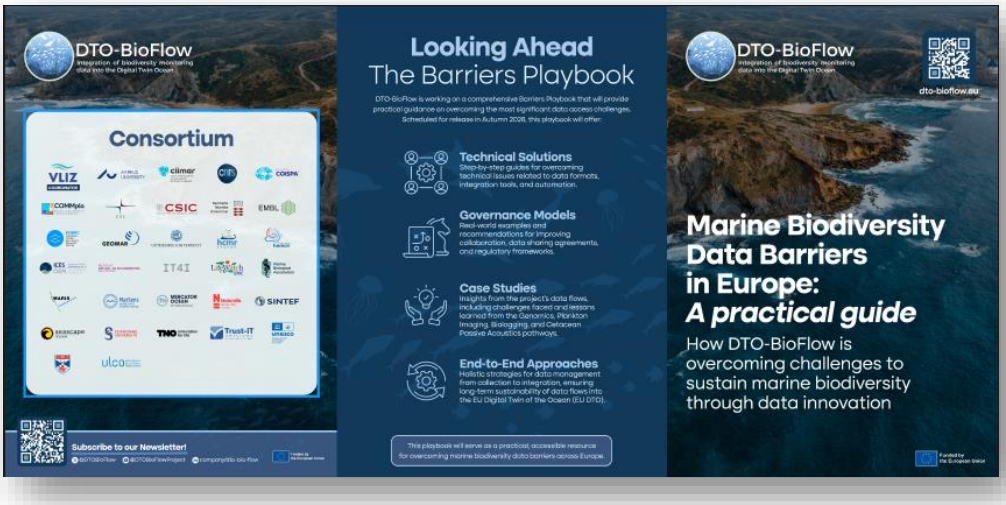

Figure 23 The DTO-BioFlow Barriers Playbook

In the context of WP6, a pamphlet showcasing the benefits and opportunities of becoming a biodiversity data provider was created (D6.3). The pamphlet also includes technical and training aspects for the potential biodiversity data providers, and it is designed in a standard stapled booklet format. The pamphlet will be widely disseminated and will support the "Biodiversity Data Providers Onboarding Campaign", to encourage and train more biodiversity data collectors to make their data FAIR and available through EMODnet and the EU DTO. The pamphlet is designed to be an engaging output with easy to digest information, including concise text supported by visually appealing graphics and visualizations.

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Figure 24: Pamphlet on the benefits and opportunities to become a biodiversity data provider

3.2.4 Campaign KPIs

Indicator	Measure	Expected Value	
		By M18	by M42
Open calls applications	9# of projects selected in the first open call	Min 8 max 10**	Min 16 and max 20**
Data provider onboarding kit	5# of items available in the kit	>10	>50
Training guidelines	Total downloads on Zenodo - not yet available (waiting for approval)	200	800

*** The total budget available for the 2 open calls is 1.000.000€, so each call has an indicative budget around 500.000€. Considering a maximum amount or 60.000€ allocated per successful project, the number of overall projects selected for funding will vary between 16 and 20, according to the requested budget.*

Table 5 Cmapign #2 KPIs

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3.3 Campaign 3 - User uptake of DTO Outputs

As the project progresses, the focus is now shifting towards Campaign 3: User Uptake of DTO Outputs, ensuring that the data and insights generated within DTO-BioFlow are effectively adopted and utilized by relevant stakeholders. While some preliminary steps have already been taken, the campaign will now gain momentum, particularly as the Use Cases have reached a more advanced stage of development. This phase will emphasize engagement with end-users, demonstrating the practical applications of DTO outputs, and fostering adoption within scientific, policy, and industry communities. The next steps will build upon existing efforts, incorporating tailored outreach strategies and targeted communication activities to maximize the impact of DTO-BioFlow's results.

Digital user stories will be produced in collaboration with WP3 and WP4 as downloadable best practices to describe use cases, applications and demonstrators as examples for further uptake by similar communities. They will include details useful for further exploitation of the models and data products (e.g., owners, TRL, replicability, costs).

At the time of writing, a dedicated section for the Use Cases is being created on the website at this link.

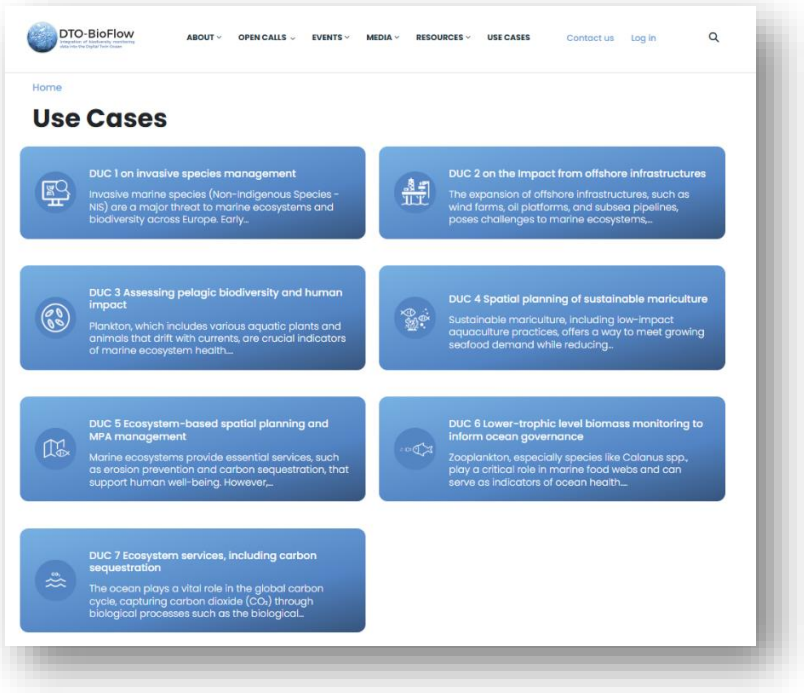

Figure 25: Dedicated Use Cases webpage on the DTO-BioFlow website

3.3.1 Campaign KPIs

Indicator	Measure	Expected Value	
		By M18	by M42
Biodiversity DTO User stories	# of stories produced	n.a.	10

Table 6 Campaign #3 KPIs

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3.4 Campaign 4: International community building in support of the Mission & UN Decade of Ocean Science

Campaign #4 is being orchestrated to ensure that a community of relevant international stakeholders across all stakeholder groups is engaged to exchange best practice, build capacity, define targets and commitments to increase flow of biodiversity data into the DTO by 2030.

Recent examples of collaboration have included DTO-BioFlow participation to the DiverSEA General Assembly in October 2024. Moreover, an initial technical meeting was organized in November 2024 (M14) together with eDNAqua-Plan and MARCO BOLO projects to explore potential collaborations and synergies between the three projects. Representatives from the projects presented their project's overview during this first preliminary technical stakeholder meeting; the presentations were followed by an open discussion on overlaps, synergies, links and continued collaboration between the projects.

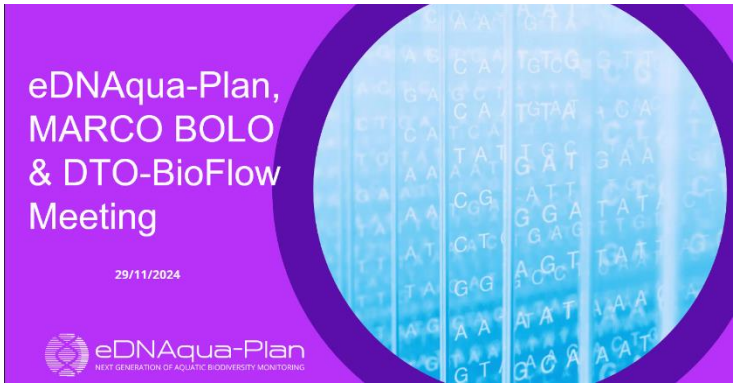

Figure 26: Banner for the technical meeting with eDNAqua Plan and MARCO BOLO

Additionally, collaborative efforts have already begun with other projects such as BioDT and BlueCloud-2026, with representatives from both expressing interest and highlighting promising opportunities for further development. Preliminary e-mails were sent to initiate contact and identify the key individuals to involve in the next steps. These initial communications aimed to establish a foundation for collaboration and ensure that the right stakeholders are engaged in the upcoming activities. As a next step, a first introductory call will be organized to further align objectives and define potential synergies.

Discussions have also been initiated towards planning for the DTO-BioFlow final event, with consideration being given to arranging the final event to coincide with the VII World Conference on Marine Biodiversity 2026, taking place in Bruges in November 2026.

Campaign KPIs

Indicator	Measure	Expected Value

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		By M18	by M42
DTO & Ocean Decade collaborations	2# of Collaborations established	2	10
International workshop	# of participants	n.a.	100
Final conference	# of participants	n.a.	300

Table 7 Campaign #4 KPIs

4. 4.DTO-BioFlow Events & Workshops

4.1 DTO-BioFlow Events

At this stage of the project, DTO-BioFlow has successfully organized one internal workshop and one of the two planned Data Grants workshops for the winners of the First Open Call. These events have been instrumental in engaging data holders and other stakeholders, fostering discussions on biodiversity data integration, and supporting data holders in aligning their datasets with DTO standards. To better connect with DTO-BioFlow's diverse audiences, a series of targeted events will continue to be organized throughout the project. These events will follow a structured approach, including pre-event organizational support, such as agenda development, speaker engagement, and event webpage setup with registration procedures. Their promotion will be actively managed through targeted outreach efforts, including social media campaigns, direct mail marketing, and press coverage – when needed, ensuring maximum visibility among relevant stakeholders.

The organization of DTO-BioFlow's event series is closely aligned with the needs and activities of various project Work Packages (WPs), providing a structured platform to support the delivery of key results. The DTO-BioFlow communication team will tailor the branding for each event series to enhance impact and strengthen "brand memory", making the project's presence more recognizable within the wider marine biodiversity and data communities. Additionally, these events will serve as a valuable opportunity to extend DTO-BioFlow's current network, building new collaborations and reinforcing existing ones.

DTO-BioFlow events may be organized as stand-alone initiatives or, when appropriate, co-hosted with other projects and initiatives to maximize impact and resource efficiency. Below, two detailed tables outline the events that have already taken place, and the internal events planned for the remainder of the project.

Table X: Overview of DTO-BioFlow events already organised (M1-M18)

What	Milestone / deliverable	Goal	Stakeholders	Tentative timeframe & KPI	KPI in Current Reporting Period
Workshop w/ monitoring network (WP3 & WP4)	**Milestone 11**	Workshop with data monitoring networks to assess potential new data flows against the needs of the Demonstrator Use	Marine Data Services & Research Infrastructures; Ocean	October 2023	1 workshop organised

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		Cases to address marine ecosystem challenges.	Governance & Policy		
Data Grants Workshops (WP2 & WP3)	**Milestones 21, 22**	Physical workshops to train the Open Calls selected data holders on how to properly submit their data	Marine Data Services & Research Infrastructure; Research & Academia; Blue Economy Networks; Civil Society	April 2024 & March 2025 KPI: 8 participants each workshop	10+ Participants at the April 2024 workshop

Table X: Overview of DTO-BioFlow events to be organised

What	Milestone / deliverable	Goal	Stakeholders	Tentative timeframe & KPI
Workshops to build data Flows (WP5 - in support of WP2, WP3, WP4)	**Milestone 13**	Online workshops organised with sensor networks, data providers, HPC stakeholders to design, test and assess the models and products developed - Supporting operationalized data streams & demonstrators by digital tools & services to support WP2, WP3 and WP4 and biodiversity data providers to accelerate data processing workflows.	Marine Data Services & Research Infrastructures; Ocean Observing; Blue Economy Networks	December 2025 & December 2026 KPI: 50 workshop participants aggregated per year - perhaps in synergy with related workshops
Matchmaking online events (WP6)	**Milestone 25**	Virtual, moderated and guided with paired DTO-BioFlow experts and potential users to promote uptake and application of DTO-BioFlow generated data and digital outputs	Marine Data Services & Research Infrastructures; Research & Academia; Ocean Observing; Blue Economy Networks; Digital Twin & EOSC Communities	August 2025, February 2026, August 2026. KPI: 40 participants each workshop
Users Stories Webinars (WP6 & WP4)	–	Workshops with DTO developers, intermediate users of the demonstrator use	Marine Data Services & Research Infrastructure; Research & Academia;	October 2025, December 2025, February 2026 & April 2026

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		cases, to address the technical aspects of migration to the DTO and facilitate their implementation in the DTO	Blue Economy Networks; Civil Society	KPI: 20 participants each workshop
DUC performance review Workshops (WP4)	**Milestone 14**	Workshops with DTO developers and WP4 & WP5 experts to review the performance of the DUC on the DTO infrastructure to document and fill the remaining data, model, algorithm, and service gaps necessary to achieve an end to-end approach	Marine Data Services & Research Infrastructure; Mission Lighthouses & BlueParks; Ocean Observing	January 2026 KPI: 20 participants each workshop
DUC model outputs design & dissemination Workshop (WP4)	**Milestone 15**	Workshop with DTO developers, and relevant project experts/stakeholders to design and plan the dissemination of the digital tools and services, DUC, and their outputs to relevant end-users, including the ecological narratives and associated training materials for non-specialist users	Research & Academia; Ocean Observing; Blue Economy Networks.	May 2026 KPI: 20 participants each workshop
Ocean Decade International Workshop (WP6)	**Milestone 23**	To engage with international DTO communities & relevant programmes of the UN Decade of Ocean Science	Ocean Governance & Policy; Blue Economy Networks; Civil Society; Digital Twin & EOSC Communities	August 2026 KPI: 100 participants
Horizon Brief Expert Meetings (WP6)	**Milestone 26**	Expert workshops synthesising findings into "Horizon Brief", proposing SMART targets to increase the flow of biodiversity data into the DTO framework by 2030	All stakeholders	October 2025 – April 2026 KPI: 8-10 participants each workshop
Final conference & exploitation exhibition	**Milestones 24**	Pitch project results to policy stakeholders, promote relevant conclusions and recommendations	All stakeholders	July 2026 KPI: 300 participants

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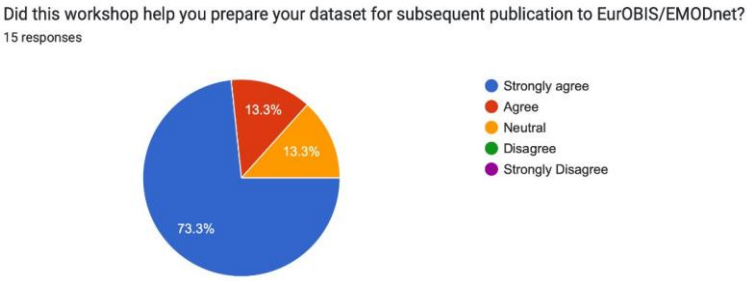
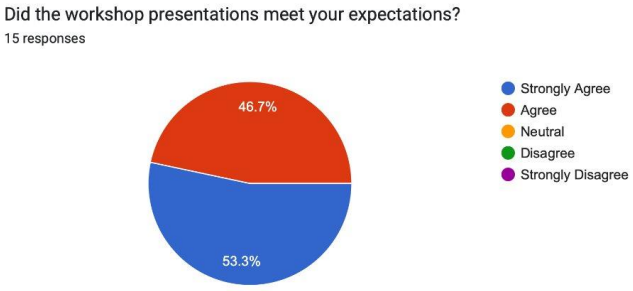
		towards increasing the flow of biodiversity monitoring data into the DTO framework by 2030		

4.1.2 Outcomes of the Data Grants Holders workshops

The workshop aimed to provide the awarded data owners from the first Open Call for Data Holders with the essential skills for data quality control (in accordance with international standards), and to support them in implementing workflows and procedures to submit their datasets to EurOBIS and EMODnet Biology, and thus make them datasets available to the EU DTO. The event was organised by EMBRC-ERIC in April 2024 in Ostend, Belgium. 14 data providers from 8 institutions took part to the workshop in person, with 11 participants from 6 institutions following the workshop online. Results of evaluation survey suggest a highly positive reception of the workshop across various aspects, with most participants feeling that their expectations were met, and they were well-prepared for subsequent data publication.





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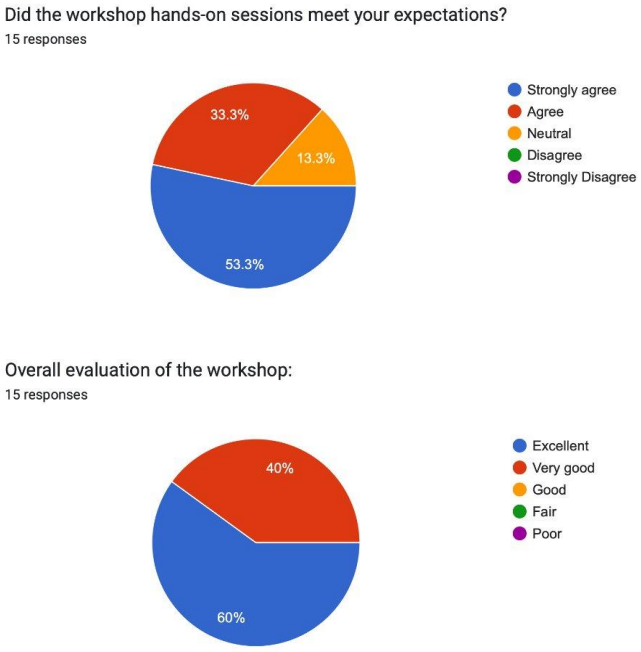

Figure 27: Statistics form the evaluation survey

The 2nd Data Grants Holders Workshop will be organized shortly after the Second Call for Marine Biodiversity Data Contributions to DTO-Bio Flow is closed and the project selection is completed. The 2nd workshop will follow the same structure as the 1st one, taking into account the comments of the 1st workshop participants in order to enhance its content and maximize its impact. The workshop will take place in June 2025 in Paris.

4.2 Third-party events

DTO-BioFlow actively engages in third-party events to enhance visibility, collaboration, and knowledge exchange within the broader marine biodiversity and data science communities. Participation in external conferences, workshops, and stakeholder meetings provides valuable opportunities to communicate project developments, establish strategic connections, and align DTO-BioFlow outputs with ongoing European and international initiatives. These events serve as key platforms to present DTO-BioFlow's methodologies, data flows, and use cases, while also gathering insights from other relevant projects and stakeholders. Engagement in third-party events ensures that DTO-BioFlow remains connected to policy discussions, technological advancements, and community needs, supporting the project's overall impact and sustainability.

Below is a detailed overview of the third-party events in which DTO-BioFlow has participated, as well as upcoming opportunities for further engagement. To date, DTO-BioFlow has taken part in 14 third-party events, contributing to discussions on marine biodiversity data, digital twin technologies, and collaborative research initiatives. As the project progresses, additional participations are planned to ensure the final KPI of 40 events is reached, maximizing DTO-BioFlow's outreach, impact, and integration within the broader scientific and policy communities.

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Table X: Overview of attended third party events

#	Event	Date	Location
1	Discover the DTO-BioFlow project at the"Marine Biodiversity Networking Fridays"	24/11/2023	online event
2	EMODnet Open Conference	29/11/2023	Brussels, Belgium
3	Euromarine Open Science Day	13/02/2024	Bologna, Italy
4	Mission Restore our Ocean and Waters	04/03/2024	Brussels, Belgium
5	Empowering Biodiversity Research III	25-25/03/2024	Leiden, Netherlands
6	ISC High Performance 2024	05/12/2024	Hamburg, Germany
7	Ecopath 40 Years Conference	03/06/2024	Oostende, Belgium
8	Digital Ocean Forum	12/06/2024	Brussels, Belgium
9	World Biodiversity Forum	17/06/2024	Davos, Switzerland
10	SPNHC and TDWG Joint Conference	02/09/2024	Okinawa, Japan
11	ICES Annual Conference	9-12/09/2024	Gateshead, UK
12	UN SDG Science Summit 2024	26/09/2024	New York (New York), USA
13	High Performance Computing, Networking, Storage, and Analysis (SC24)	17-22/11/2024	Atlanta (Georgia), USA
14	BlueMission BANOS Arena 3	25/11/2024	Amsterdam, the Netherlands

Table X: Overview of third party events to be attended

#	Event	Date	Location
1	3-7 March European Ocean Days 2025	3-7/03/2025	Brussels, Belgium
2	3rd Annual Mission Ocean and Waters Forum	4/03/2024	Brussels, Belgium
3	European Maritime Day	22-23/05/2025	Cork, Ireland
4	One Ocean Science Congress	6-9/06/2025	Nice, France
5	UN Ocean Conference	9-13/06/2025	Nice, France
6	Oceans 2025	9-13/06/2025	Brest, France
7	European Marine Biology Symposium	6-9/07/2025	Bodø, Norway
8	International Conference on Marine Protected Areas in Marine Spatial Planning - MPA Europe	9-12/07/2025	Bodø, Norway

5.Exploitation plans for RP2

The DTO-BioFlow Exploitation and Sustainability Plan (D1.11) will outline how the established data flows, demonstrators, and digital tools will continue to function beyond the project's duration, ensuring long-term impact and integration within EMODnet Biology and the DTO infrastructure. This plan builds upon the initial

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framework set in D1.5, focusing on defining concrete pathways for structured data flows (WP3), use cases and applications (WP4), digital tools and services (WP5), and policy outputs (WP6).

To ensure effective exploitation, Trust-IT (WP6) and VLIZ (WP1), in collaboration with WP and Task Leads, will develop individual and joint exploitation plans tailored to current and potential new users. These plans will define a clear value proposition for different user segments, addressing key factors such as intellectual property rights (IPR) management, sustainability mechanisms, and technical or operational requirements for the continued integration and accessibility of DTO-BioFlow outputs. Additionally, the plan will establish performance indicators to assess progress towards the target of increasing biodiversity data flows into the DTO by 2030.
A key component of the exploitation strategy will be the use of Key Exploitable Result templates across WP3 and WP4 demonstrators, ensuring structured documentation of user stories and real-world applications of DTO-BioFlow's outputs (as part of Campaign #3). Furthermore, the plan will include recommendations for Horizon Europe policy discussions, contributing insights to the Horizon Brief policy document (Campaign #4). DTO-BioFlow's data products will primarily be made available via EMODnet Biology, with new datasets integrated into EurOBIS, ensuring seamless data flow to OBIS and GBIF at the global level. These integrations will enhance biodiversity data accessibility and usability, reinforcing DTO-BioFlow's role in improving marine biodiversity monitoring and ecosystem assessments.

The final conference will serve as a key moment to present exploitation opportunities, engage with target stakeholders, and discuss long-term sustainability mechanisms. WP6 will be responsible for disseminating the final DTO-BioFlow Exploitation and Sustainability Plan (D1.11) to relevant stakeholders, with publicly available information shared via the project website to ensure transparency and accessibility.

6. Next steps

No significant changes are required to the Communication, Dissemination and Exploitation Plan envisaged in D6.1. While most KPIs have been achieved in this first phase, some remain to be achieved and, as noted, above there are reasons for these which will be addressed as work advances across all WPs in the coming months. At Month 18, DTO-BioFlow is now a recognised entity in the wider marine biodiversity and digital twin landscape.

As DTO-BioFlow progresses from M19 through M42, communication efforts will focus on expanding outreach, increasing visibility of project results, and supporting stakeholder engagement. This phase will emphasize user uptake and integration of DTO-BioFlow resources into broader research and policy frameworks. The plan will unfold across several key areas, aligning with the project's objectives and work package synergies.

- Complete the Second Open Call evaluation and onboard the selected projects, ensuring they receive the necessary technical and administrative support to integrate their datasets into the DTO.
- Preliminary dissemination of Use Cases will begin, with communication efforts dedicated to raising awareness and engaging stakeholders early in the process. This will include:
    - Dedicated webpages and materials providing an overview of the Use Cases, their objectives, and expected outputs.

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  - Social media posts and video content introducing the Use Cases and their relevance to DTO applications.
  - Presentations at third-party events and dedicated sessions to showcase the Use Cases within relevant communities.
- Enhance collaboration with WP2, WP3, and WP4 to align onboarding materials with ongoing technical developments.
- Continue promotion through stakeholder engagement activities, social media campaigns, and direct outreach efforts, ensuring that the onboarding resources reach the intended audience.
- Develop impact stories and case studies demonstrating how DTO-BioFlow's data flows, methodologies, and tools contribute to biodiversity monitoring and decision-making.
- Initiate the preliminary dissemination of the Use Cases, including early-stage findings, key insights, and expected outcomes, to engage stakeholders and build awareness before the full implementation phase. This will include dedicated presentations, promotional materials, and outreach via project networks and conferences.
- Finalize the DTO-BioFlow Playbook, incorporating best practices, workflows, and lessons learned from the Open Calls and Use Case implementations.

M30–M42: Final Impact Communication and Sustainability Promotion

Final communication campaigns will focus on demonstrating impact, highlighting results from the Open Calls, Use Case developments, and DTO integration to cement the legacy of DTO-BioFlow.

The DTO-BioFlow Playbook will be actively promoted, ensuring its accessibility and usability for data providers and stakeholders.

A high-impact media push, including a DTO-BioFlow Legacy Video, will accompany the final phases of the project, leveraging press releases, interviews, and targeted engagement with key networks.

The final conference will serve as a major communication milestone, consolidating all outreach efforts and reinforcing DTO-BioFlow's contributions to the DTO and broader biodiversity data initiatives.

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