OceanICU
Understanding Ocean Carbon

Deliverable D8.1

WP8 Implementation Plan

June 19, 2023/v.2

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About this document

Title	D8.1 WP8 Implementation Plan
Work Package	WP 8, Connecting OceanICU to Society
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1. Abstract

Work Package 8 (WP8) co-lead by WMU, SSBE and MI and with contributions from NORCE, AWI, IOCCP) (M06-57), will integrate a broad range of stakeholders into OceanICU to ensure project goals and delivery are codesigned with end users. Our focus will be on developing a lasting engagement with a small number of key groups to develop key project goals around climate policy advice and industrial processes and a broader engagement with a wide range of end users to ensure that project outcomes are communicated in a useful way.
This Implementation Plan contains main objectives, deliverables and milestones to be achieved by WP8 by the end of the project as well as synergies with other WPs of the Project. It also contains the activities conducted so far.

2. Introduction

2.1. General description

WP8 will integrate a broad range of stakeholders into OceanICU to ensure project goals and delivery are codesigned with end users. Our focus is on developing a lasting engagement with a small number of key groups to develop key project goals around climate policy advice and industrial processes and a broader engagement with a wide range of end users to ensure that project outcomes are communicated in a useful way.

WP8 objectives are:

1. Identify opportunities for ocean carbon policies and ocean carbon management in consultation with ocean, biodiversity and climate governance actors (e.g scientists, practitioners and diplomats associated with the IPCC), Intergovernmental Panel for Biodiversity and Ecosystem services, (IPBES), UNFCCC and World Ocean Assessment (WOA), industrial partners and non-governmental organisations (NGOs).

2. Identify the trajectory of human activities that could affect and/or could be affected by the Ocean C cycle.
3. Inform WPs 5-7 forecasts by making them relevant to current conditions, societal needs, and considering how society might potentially change in response to these outcomes
4. Co-Document key knowledge gaps and useful C-cycle metrics with and across sector stakeholders (eg Fishing, Mining, Trawling, Dredging & Drilling sectors) that support carbon neutral sector activities.

5. Tailor project outputs (e.g forecasts in Wp5-7; Decision support tool (DST) in Work Package 7 (WP7) to sector needs and support uptake.
6. Engage Youth to strengthen awareness of ocean climate & ocean carbon beyond project lifetime.

Specific Tasks are as follows

Task 8.1. High-level Decision Makers in the Ocean Carbon Climate Nexus (Lead: WMU; Contributors: MI, NORCE, AWI, IOCCP) (M06-57). We will identify the gaps, synergies and opportunities among current policies (e.g. biodiversity, climate, fisheries, ocean carbon, conservation, and at the nexus where these meet) using some or all of the following e.g. desk- based policy analyses, text mining, interviews with decision makers and/or their advisors, science diplomats, and influencers (e.g., eNGOs, thought leaders from industry). Decision making bodies, eNGOs and actors from industry will be included from the beginning to frame societally relevant questions and scenarios that can more realistically be used to inform decision making such as negotiations (UNFCCC, BBNJ, CBD, MEPC etc). We will harvest stakeholder visions of ocean carbon futures. We will address uncertainties in decision making processes such as power plays among interest groups and siloed decision-making bodies so that their impact on outcomes can be considered, and used to inform negotiations). Outputs from the coastal OSSE will directly contribute to the production of the "pCO2 network design study", being led by International Ocean Carbon Coordination Project (IOCCP). This will enable integration of new information produced by OceanICU on how to optimally sample the coastal ocean to directly reach the IOC member states and GOOS. OceanICU PIs will apply for positions within IPBES, IPCC, WOA and other climate relevant areas. OceanICU principal investigators will attend conference of the parties (COP) and deliver the OceanICU message, aiming to influence the UNFCCC and Subsidiary Body for Scientific and Technological Advice (SBSTA) to Integrate Ocean Carbon into planning (see section 2 for details). A Policy brief summarising key results from OceanICU will be prepared and used in informing key decision makers.

Task 8.2 Industrial Processes and Fishing and eNGO needs and understanding. (Lead: MI; Contributors: WMU, SSBE, GEOMAR, DTU, PML, Strathclyde, IMAR, Mercator) (M06-M57). We will establish current understanding, perceptions, and needs among relevant industries (e.g. mining, trawling, drilling, dredging and fishing) and eNGO groups. The key emerging threats and trajectories will be further elaborated in additional stakeholder workshops to define scenarios of interest and societal relevance for use in the decision-support tool (DST: WP7). These workshops will inform

a multi-sectoral, multi-pressure oceanic carbon risk assessment using an adapted ODEMM approach (Pedreschi et al 2019, 2023; Knights et al 2015) coupled with mental modelling to enable identification, and importantly, prioritisation of societally-relevant carbon-related impacts and threats, and their impacts on associated ecosystem services. These outputs, coupled with expert knowledge, will inform the research trajectories of WPs 3-6.

Task 8.3 Wider Society (Lead: SSBE; Contributors: MI, WMU, GEOMAR, DTU, NORCE) (M06-M57). We work directly with experts in the ocean carbon and wider ocean-climate domain, together with existing open- source marine and environmental marine data services e.g., EMODnet and Copernicus Marine to identify key formats for OceanICU Outputs in support of user needs (and D1.2 DMP & Exploitation Plan). SSBE will identify societally relevant OceanICU data and outputs e.g., forecast layers, together with wider Ocean carbon data e.g., from International Ocean Carbon Coordination Project (IOCCP) and ocean-climate layers e.g., from the Intergovernmental Panel on Climate Change (IPCC Interactive Atlas). These will be recommended to the EC for integration as open access, non-specialist data visualisations via EC's European Atlas of the Seas (Larkin et al 2022; https://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/). This will directly support engaging end-users in the co-creation loops for the re- iterative version development of WP7 DSTool, as well as support the OceanICU education objective beyond project lifetime. A Policy brief summarising key results from OceanICU will be prepared and used in informing key decision makers.

We will run an educational and outreach programme. DTU will demonstrate a scalable and sustainable mechanism to integrate Ocean Research in the Science, Technology, Engineering and Mathematics (STEM) Curricula & Sustainable Development Goals (SDG) Education, as part of every Research and Innovation (R&I) programme. In collaboration with International Baccalaureate Organization (IBO) International Baccalaureate High-Schools, teachers-researcher Mutual Professional Development "focus groups" will co- design lesson plans & teaching resources to be disseminated to 4.000+ schools via the European Atlas of the Seas Teachers' Corner, the Network of European Blue Schools and other educational / ocean literacy networks. Focus groups will be organised to achieve teacher mobilisation and educational resource development, uptake and use in classrooms (T&S funding/logistics for 3-4 small 'focus groups' in different EU sea-basins) & workshops back-to-back with high impact events like European Maritime Day 2024, 5 or 6, and other events (e.g., European events for teachers through European SchoolNet). The criteria for success will be the number of teaching aids developed and directly used by teachers in semester teaching, during OceanICU lifetime. Task 8.3 will

engage directly with Youth (16-30 years old) on ocean carbon, organising an online youth event and a youth competition (e.g., producing original short film, podcast etc) to engage and raise awareness about ocean-carbon, leveraging existing networks e.g., Youth4Ocean Forum, COP Youth Ambassadors, Atlantic Youth Ambassadors, etc.

2.2. Deliverables and milestones

Table 1: List of deliverables

Number	Title	Lead	Delivery month	Contributions
D8.1	WP Implementation Plan based on discussions at first GA including draft of how to achieve KPI delivery	WMU	M8	MI, SSBE
D8.2	Report on WP8 stakeholder interactions meetings	MI	M 16	WMU
D8.3	RoadMap of gaps, synergies & opportunities for OceanICU delivering impact on current policies, incl. input from end-user meeting	WMU	M34	MI, SSBE
D8.4	Industry opportunities & entry points for co-design of WP7 DSTs and WP3-6 research	MI	M44	WP5, WP7
D8.5	Co-Design & output uptake success stories across target groups	SSBE	M56	MI, WMU
D8.6	Policy Brief	NORCE	M54	MI, WMU, SSBE

Table 2: List of milestones

Milestone No.	Milestone tiltle	Due date (months)	Means of Verification
32, 35, 38, 41, 44	Annual Meetings with the stakeholder communities for task 8.1	24, 30, 43, 56	Meeting reports or minutes of meetings
33, 36, 39, 42, 45	Annual Meetings with the stakeholder communities for task 8.2	12, 18, 30, 43, 56	Meeting reports or minutes of meetings
34, 37, 40, 43, 46	Annual Meetings with the stakeholder communities for task 8.3	12, 18, 30, 43, 56	Meeting reports or minutes of meetings

3. WP8 implementation

3.1. Task 8.1: connecting OceanICU to Society - Decision Makers, eNGOs, Conservation managers

Task 8.1 will engage primarily with decision-making fora (e.g. UNFCCC, BBNJ, CBD, MEPC etc), international organisations (eg. ISA, UNEP, IOC-UNESCO, IMF), eNGO's, thought leaders from industry, science advisors and science diplomats, and engage with the Subsidiary Body for Scientific and Technological Advice.

Task 8.1 starts at M6 and finishes M57 of the Project.

3.1.1 Objectives

The objectives of Task 8.1 are to:

- Identify the gaps, synergies and opportunities among current policies (e.g. biodiversity, climate, fisheries, ocean carbon, conservation, and at the nexus where these meet) to protect and enhance the biological carbon pump (BCP). Identify questions, visions of ocean carbon futures, and scenarios realistic for decision making and negotiations.

- Address uncertainties in decision making processes such as power plays among interest groups and siloed decision making bodies so that their impact on outcomes can be considered, and used to inform negotiations.
- Bring OceanICU's results and recommendations to IPCC, WOA and/or similar other climate and biodiversity relevant reporting formats.

Deliver the OceanICU message at international negotiation fora and for decision makers (e.g. could include UNFCCC, CBD, BBNJ and also SBSTA), with a view to help integrate Ocean Carbon into planning. Examples may include protecting the BCP, bringing fish carbon credits to the carbon market, integrating fish carbon services into the accounting of nationally determined contributions (NDCs) and emissions offsets, guidelines for bringing fish carbon targets into ecosystem based MPA design etc.

3.1.2 Approach

To reach these objectives, we will:

- Carry out desk-based policy analyses, interviews with decision makers and or their advisors, science diplomats and or their influencers e.g. eNGOs, leaders from industry, to identify emerging trajectories and opportunities for ocean carbon governance and management. Identify key stakeholders (may include decision makers, NGOs, finance experts for carbon trade and policy, BBNJ area based management experts, RFMO decision makers, ISA, Fisheries commissions, CBD, IUCN etc) through policy analyses, including interviews.
- Decision making bodies, eNGOs and actors from industry will be included as advisors from the beginning to frame visions of ocean carbon futures, societally relevant questions, and scenarios that can more realistically be used to inform decision making such as negotiations (UNFCCC, BBNJ, CBD, MEPC etc).
- Use output from OSSE and coordinate with other OceanICU working groups to produce "pCO2 network design study"
- Scope scientific and policy gaps that need to be overcome to develop an international accounting system of ocean carbon services.
- Convene expert panels with decision makers. OceanICU WP8 and other project PIs will attend UNFCC-COP and possibly CBD-COP to bring into negotiations OceanICU results and provide recommendations.

- Perform analyses to support area-based management addressing global scale policy and management questions, effects of human activities, marine protected area (MPA) locations, etc to evaluate opportunities for conservation areas that consider carbon sequestration and potentially other ecosystem services.
- Valuate carbon services produced by the biological carbon pump in relation to administrative and management boundaries globally. This can be initially addressed using existing models (e.g. PICES-APECOSM model) and may be refined later with OceanICU modelling products.
- Qualitatively and/or quantitatively assess the implications of power plays amongst interest groups on biological carbon pump and other ocean services.

3.1.3 Planned activities

We are planning to conduct the following activities:

- We will run interview campaigns, aiming to coincide with negotiation meetings (potentially COP 29-30, BBNJ events (date TBD), CBD COP16 (2024), COP17 (date TBD), IPBES (date TBD) meetings.
- We will bring the OceanICU results and recommendations to negotiation meetings (potentially COP 29-30- typically Q4 of each year), BBNJ meetings, CBD COP16, COP17- dates TBD by CBD), IPBES meetings (dates TBD by IPBES)

- We will convene one or more stakeholder panels with experts working with carbon financial markets and/or with area-based management

3.1.4 Timeline for Implementation

- Dates for Milestones and Deliverables are indicated in the Gantt chart caption.
- M8.1 2023 Parliamentary hearing in the Danish Parliament “Climate benefits of good fisheries management” Meeting chaired by Pernille Schnoor, WMU (May 2023)- in Danish
- M8.1 2023 Monaco Ocean Week High level event- Blue Economy Round Table on ocean carbon- Presentation by MS Wisz “Blue Economy Round Table- Overfishing”
- Participation in UNFCCC-COP29 in Q4 2024 (Tentative)

- Stakeholder activities (e.g. may include side events at ocean-, biodiversity-, and climate- conferences) and interviews (31 January, 2024-30 June 2025, provisional date)
- Convene stakeholder panels with experts working with area-based management, financial markets etc to identify scenarios/options for protection of biological carbon pump and its services
- List of dates for activities for task 8.1
    - June 30, 2025: Manuscript Financial value of BCP and how different human activities may affect the service based on global C models available by June 2024.
    - December 31, 2025 "pCO2 network coastal monitoring design study"
    - September 30, 2027 Area based management analyses of scenarios derived from OCEAN ICU stakeholder interactions and interviews, and from OceanICU models (if available), alternatively from published models of carbon flux.
    - In the emergence of currently unforeseen decision making fora such as high level stakeholder opportunities relevant to the OCEANICU goals (quite realistic as this is a highly dynamic topic), Task 8.1 will aim to adapt the engagement plan to address these needs, where practical.

Table 3: Deadlines are the last day of the quarter

WP8 Task 8.1	2022	2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Meeting reports				M8		M8				M8			
Deliverables			D8.1									D8.3	

WP8 Task 8.1	2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Meeting reports		M8				M8		
Deliverables								

3.1.5 Opportunities for synergies with other initiatives

The partners will identify relevant events during the lifetime of the project and projects with which connections can be developed. To this end, a spreadsheet has been started on the TEAMS platform where project collaborators are encouraged to share knowledge of upcoming events of interest.

The partners will identify relevant educational and Ocean Literacy events during the lifetime of the project and projects with which connections can be developed (e.g., EU4Ocean).

The WP already has close connections with ongoing projects MISSION ATLANTIC, GES4SEAS, MarinePlan, MEESO, OurFISH, and SeaWise, and will continue to develop relevant collaborations.

3.2. Task 8.2: Industrial Processes and Fishing and eNGO needs and understanding

Task 8.2 will primarily engage representative organisations from the fishing and mining industries, and environmental and conservation agencies interested in fisheries, mining, marine conservation, and climate change. Task 8.2 runs from M6-M57.

3.2.1 Objectives

Task 8.2 will:

- Establish current understanding, perceptions, and needs in relation to oceanic carbon among relevant industrial (e.g. mining, trawling, drilling, dredging and fishing) and eNGO groups.
- Identify key emerging threats and trajectories to industry and/or expected changes which may change interactions with the oceanic carbon cycle,and use these to define scenarios of interest and societal relevance for use in the decision-support tool (DST: WP7).
- Produce a multi-sectoral, multi-pressure oceanic carbon risk assessment to enable identification and prioritisation of societally-relevant carbon-related impacts and threats, and their impacts on associated ecosystem services.

The knowledge generated will be used to inform the research trajectories and outputs of WPs 3-6, and tailor the DST (WP7).

To reach these objectives, the partners will;

- Identify and recruit stakeholders relevant to the project, with a focus on the fishing and mining industries. Geographical scope will be

determined by the case studies in WP5, coupled with international/ ABNJ interests.

- Carry out a series of stakeholder workshops to identify understanding, needs, emerging threats, industrial changes, as outlined in 3.2.1.
- Carry out a carbon-focused ODEMM assessment informed by the above workshops to inform priorities and potential interactions between sectors and pressures.
- Maintain communication with relevant OceanICU WP leads and participants to ensure knowledge transfer and relevance of OceanICU outputs.
- Work closely with WP8 co-leads to maximise collaboration, ensure coherence and complementarity, reduce stakeholder fatigue, and eliminate redundancy among tasks.

3.2.2 Planned activities

Establish Stakeholder Panels

Identify relevant stakeholders by canvassing Ocean-ICU participants for suggested organisations and contacts. A spreadsheet to this end has been set up on Teams here.

Additional recruitment through participation in events, and promotion on Twitter where we have developed and shared a sign-up sheet (https://ec.europa.eu/eusurvey/runner/oceanICUStakeholders). This sheet is also linked through the OceanICU website.
WP8 leads will work together to assign stakeholders to panels relevant for each workshop (e.g. fisheries-focused, mining-focused, policy-focused, etc.), paying special attention to individual organisations that may be relevant to more than one panel to ensure coordination, efficiency and avoid stakeholder fatigue.

Stakeholder Workshops

MI will lead on planning and organising stakeholder workshops for the panels relevant to this task. We will ensure to coordinate with other WP8 tasks to avoid overlap, and will endeavour to avoid overlap with other relevant initiatives. Multiple workshops workshops (a mixture of in person and online) per region (depending on WP5 case studies) are envisioned. We will endeavour to 'piggy-back' on existing relevant meetings where appropriate to minimise costs to participants.

Workshops will use a range of interactive tools, to include mental modelling, to help identify stakeholder understanding of oceanic carbon, and how it impacts them/how they impact it. All WP leads will be contacted in advance of each workshop to identify if they have any questions they wish to raise with

the stakeholders, or any particular feedback, direction or prioritisation they need.

Example questions for the workshops include:

- What is your understanding of ocean carbon?
- Does your industry interact with the carbon cycle? If so, how?
- How do you think it will change in the future (10 years, 50 years, 100 years)?
- Are you aware of any policies/targets in relation to carbon that may affect your industry?
- What knowledge (and in what format) do you need to better understand, manage, evaluate, mediate your relationship with ocean carbon?
- Are current structures enough to facilitate participation in policy development? If not, what fora/mechanisms could be used/are needed?
- What tools do you need to better equip you to deal with issues surrounding ocean carbon?

The initial components of the Carbon ODEMM will be presented and ground-truthed with workshop participants.

Additional workshops will focus on the results of the ODEMM, and further refining the DST needs, and for refining both short and long term scenarios (e.g. Ocean Carbon Futures with WMU, when practical) for testing with the DST. It will also present an overview and status of the analyses carried out in WP5, along with relevant feedback. The outputs of the stakeholder-specified scenarios will also be presented.

Additional topics may centre around: industry perspectives on policy (supporting Task 8.1) and the development of story maps based on identified scenarios (with Task 8.3)

Task 8.2 aims to remain responsive and adaptive to needs of the project and consortium as the project develops. This means the approach above is not set in stone and may change depending on needs. Depending on engagement, interaction and feedback, it may be more appropriate to use interviews, sub-groups and/or questionnaires to gather the required information. We will maintain this flexibility and responsiveness throughout the project through ongoing reflection and review of needs and degree of success.

Ocean Carbon Risk Assessment

MI will lead on developing a current status multi-sectoral, multi-pressure carbon risk assessment using an adapted ODEMM approach (Pedreschi et al 2019, 2023; Knights et al 2015) to identify carbon related impacts/threats, and importantly, their prioritisation. This framework will be used to investigate

linkages to ecosystem services and highlight potential cumulative interactions. Initial outputs, as well as analyses will be ground-truthed with stakeholder panels to ensure relevance and applicability. Differences between stakeholder groups will be noted and highlighted. Taking a semi-quantitative approach enables the inclusion of all relevant sectors and pressures, including those with low knowledge and/or data availability. In this way, the analyses also serve as a gaps analysis, highlighting areas of potential high risk, but low knowledge quality.

3.3. Task 8.3 Wider Society

Task 8.3 will engage primarily with young people aged 16-30 years old. Targeted groups thus include students in secondary school, higher education students, young professionals (including early-career researchers and professionals in all sectors of the economy and non-profit sector) as well as young people who are passionate about the ocean.

Lead: SSBE; Contributors: MI, WMU, GEOMAR, DTU, NORCE) (M06-M57).

3.3.1 Objectives

The objectives of Task 8.3 are to

- Engage Youth across Europe to develop their interest and understanding of ocean carbon and the crucial role the ocean carbon cycle plays in regulating global climate;
- Ensure that the outputs of the Ocean ICU project and new knowledge about ocean carbon becomes available in informal and formal education in the form of new resources and tools that meet the needs of teachers and educators;
- Demonstrate an approach to connecting science to wider society that can be replicated at a larger scale in the future.

3.3.2 Approach

To reach these objectives, the partners will

- Work directly with experts in the ocean carbon and wider ocean-climate domain together with existing open source marine and environmental marine data services e.g., EMODnet and Copernicus Marine Service;
- Identify societally relevant OceanICU data from different sources such as the International Ocean Carbon Coordination Project (IOCCP) and the Intergovernmental Panel on Climate Change (IPCC) Interactive Atlas;

- Work with education professionals to achieve teacher mobilisation and educational resource development, uptake and use of these resources in classrooms

3.3.3 Planned activities

Data visualisation for wider society

Identified societally relevant OceanICU data and outputs will be recommended to the European Commission (EC) for integration as open access, non-specialist data visualisations via EC's European Atlas of the Seas (www.european-atlas-of-the-seas.eu). This will support dissemination towards the audiences of the European Atlas of the Seas which include schools, aquariums, museums, policymakers, blue economy professionals, media and citizens. New developed maps can be used by the focus groups (see below) for the design of lesson plans and teaching resources.

Teachers-researcher Mutual Professional Development "focus groups"

DTU will demonstrate a scalable and sustainable mechanism to integrate Ocean Research in the STEM Curricula & SDG Education, as part of every R&I programme. In collaboration with IBO International Baccalaureate High-Schools, teachers-researcher Mutual Professional Development "focus groups" will co-design lesson plans and teaching resources to be disseminated via the European Atlas of the Seas Teachers' Corner as well as educational and ocean literacy networks. SSBE will bring the wider ocean literacy context and links to existing initiatives and tools to the development of the scalable and sustainable mechanism and will disseminate the results to the existing networks to support scalability.

Focus groups will be created through a five-step procedure.

1) DTU will map where all partners are located and proximity to IBO schools, and overlap between IBO curriculum and Ocean ICU objectives.

2) Where partners are close to IBO schools, partners will be contacted by DTU (starting at the Kick off meeting) and introduced to the options for participating in WP 8 focus groups, and how DTU will facilitate the work.

3) Upon acceptance by Ocean ICU partner researchers (preferably early career researchers), DTU will engage the local IBO schools and develop a joint development plan for researcher/teacher groups. The aim is to cover a minimum of two sea basins.

4) Throughout the development process DTU will coordinate meetings, facilitate progress and act as quality check either online or through physical presence in focus group meetings. Similarly, DTU will follow certain WPs

closely and participate in field campaigns if necessary (e.g. wp 4), to ensure that the data collection activities are documented in a way which supports further exploitation in the teaching materials, including through video/pictures etc.

5) Upon completion DTU will facilitate uptake of materials through continuous dialogues with the IBO teacher network and with the support of the other partners promote these lessons plans and teaching resources via social media and direct contact with a wide diversity of stakeholders including, for example, the Network of European Blue Schools, Ocean Literacy networks, associations such as the European Marine Science Educators Association (EMSEA), STEM networks such as Scientix and educational journals/ publications such as the Science in School journal. Workshops aiming at teaching networks beyond IBO will be organised back-to-back with high impact events such as European Maritime Day in 2024-2026 and other European wide events organised by educational networks (e.g., European SchoolNet).

6) DTU will aim to publish a journal article on the potential of marine research institutions to replicate this approach to connecting science to wider society based on previous work and recent evaluations of researcher and high school teacher experiences (i.e. focus groups) and educational impact on high school students, exposed to 'scientific-teaching materials'.

"Focus groups" will be organised in a minimum of two different European Union sea-basins.

Online youth event and youth competition

The partners will organise an online event. In addition, a youth competition will engage young people and raise awareness about ocean carbon, leveraging existing networks (e.g., EU4Ocean Youth4Ocean Forum, COP Youth Ambassadors, Atlantic Youth Ambassadors). Participants will be invited to submit original communication material (e.g., producing an original short film or podcast).

3.4. Critical risks for implementation

Table 4: Critical risks of WP8 linked to deliverables

Deliverables	Responsible	Critical risk for Implementation	Mitigation
D8.1 Implementation Plan	WMU	None	
D8.2 – Report on WP8 stakeholder interactions meetings	MI	Low stakeholder engagement/uptake.	Provide multiple avenues for engagement (e.g. canvas consortium, sign up sheets through website, events and social media).
D8.3 – RoadMap of gaps, synergies & opportunities for OceanICU delivering impact	WMU	Low- depends on stakeholder engagement/uptake, and the availability of scientific results from other WPs. Existing or published results from outside the project will be used for dissemination to the degree that this is possible, if necessary.	Provide multiple avenues for engagement (e.g. canvas consortium, sign up sheets through website, events and social media).
D8.4 – Industry opportunities & entry points for co-design	MI	Low engagement/ low interest	Active recruitment of stakeholders (see above). Tailoring approaches to user needs/ interest.
D8.5 – Co-Design & output uptake success stories across target groups	SSBE	Low engagement/ low interest	Active recruitment of stakeholders (see above). Tailoring approaches to user needs/ interest.
D8.6 – Policy Brief	NORCE	Low, depends on arrival of scientific results from other WPs-	can draw upon some published sources

3.5. Expected results

These results proposed in this section will feed a master document summarizing Key Exploitable Results and KPIs, which will serve to measure the progress, but also the outcomes and potential impact of OceanICU's research within the project's life and after its end.

Table 5: Expected results from WP8

#Identifier	Result	Partner responsible	Expected time
R8.1	Policy relevant synthesis of ocean ICU results based on interview campaigns	WMU	30 September 2025
R8.2	Output of taking OceanICU results and recommendations to negotiation meetings (potentially COP 29-30- typically Q4 of each year), BBNJ meetings, CBD COP16, COP17- dates TBD by CBD), IPBES meetings (dates TBD by IPBES)	WMU	ongoing, and by 31 October 2027
R8.3	Recommendations from one or more stakeholder panels convened with experts working with carbon financial markets and with area-based management	WMU	30 September 2025

Milestones are annual meetings held with stakeholder communities planned initially for October 31, 2023; April 30, 2024; April 30, 2025; July 31, 2026; and July 31, 2027. Initial stakeholder meetings are likely to be deferred due to issues in recruitment but are still planned in advance of Deliverable 8.2 (due Feb 2024).

Deliverables are the following:
D8.1: Implementation plan due June 30, 2023.
D8.2: Report on WP8 stakeholder interactions meetings due February 2024.

D8.3: RoadMap of gaps, synergies & opportunities for OceanICU delivering impact due August 30 2025.
D8.4: Industry opportunities & entry points for co-design due June 2026.
D8.5: Co-Design & output uptake success stories across target groups due June 2027.
D8.6: Policy Brief due April 2027.

3.6. Gantt Chart

		2022	2023				2024				2025				2026				2027		
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
WP8	**Connecting Ocean ICU to Society via D8**	D8.1					D8.2	D8.3				D8.4				D8.5				D8.6	
T8.1	High-level Decision Makers				M8.1		M8.4				M8.7				M8.10				M8.13		
T8.2	Industrial Processes and Fishing				M8.2		M8.5				M8.8				M8.11				M8.14		
T8.3	Wider Society				M8.3		M8.6				M8.9				M8.12				M8.15		
LEGEND: Green Milestones Represents Transfer of information **OUT**, Red represents information **IN**, Blue = seagoing Action																					

Figure 1 - Gantt Chart extract for WP8 with timing of different WPs, deliverables (D), milestones (M).

4. WP8 management

4.1. WP8 management structure and routines

Actively and openly in Executive Board meetings, General Assemblies and other OceanICU meetings as required, and remain responsive to requests from all other WPs. WP8 leads will endeavour to produce all requested reports on time, providing sufficient time for feedback and internal review.

Table 6 – Structure of WP8 and deliverables

Deliverables and structure of the WP 8			
Deliverable Number	Title	Lead	Routines and synergy
D8.1	WP Implementation Plan based on discussions at first GA including draft of how to achieve KPI delivery	WMU	Online meetings/interactions, participation in joint events and WS, Regular contacts through emails, phones, joint virtual project room – coordination of overlapping actions
D8.2	Report on WP8 stakeholder interactions meetings based on M8.1-8.3	MI	Stakeholder meetings run by MI & WMU in tasks 8.1 & 8.2. Task leads will coordinate actions, and both substantially contribute to the Deliverable
D8.3	RoadMap of gaps, synergies & opportunities for OceanICU delivering impact on current policies, incl. input from end-user meeting	WMU	All leaders participate as requested/required by the WMU
D8.4	Industry opportunities & entry points for co-design of WP7 DSTs and WP3-6 research based on Milestones 8.7-8.9	MI	Close engagement with both WP5 and WP8 in developing and planning industry stakeholder engagement sessions. Updates will be provided at regular WP8 meetings and open coordination as well as

Deliverables and structure of the WP 8			
Deliverable Number	Title	Lead	Routines and synergy
			communication will be maintained through email and teams meetings on a regular basis
D8.5	Co-Design & output uptake success stories across target groups	SSBE	As requested/required by the leader of the task – report to interested and relevant contributors
D8.6	Policy brief	NORCE	This will take the results of the project and integrate it with other relevant information to produce a authoritative overview of the current status of the ocean c cycle, how humans are altering it industrially and what strategies exist to minimise this impact.

4.2. Key performance indicators (KPIs)

These will feed a master document summarizing Key Exploitable Results and KPIs, which will serve to measure the progress, but also the outcomes and potential impact of OceanICU's research within the project's life and after its end.

Table 7 – KPIs to measure the performance of WP8.

Activities	KPI	Status – to date
	Task 8.1	
Participation in OceanICU relevant Workshops	x Number of Workshops by the end of the project number of participants	9th Atlantic Stakeholder Platform Conference, 1-2 December 2022 Monaco Ocean Week- 22 March 2023 ICES workshop "WK Fishcarbon" MSW and FAB- 25-28 April 2023
Media coverage and news articles, public presentations	Number of articles and tv/other coverage	Monaco Ocean Week- 22 March 2023 with MSW presenting "Climate benefits of good fisheries management, blue economy round table results WMU, Mary Wisz news media interview on March 2023 on High Seas treaty https://insideclimatenews.org/news/14032023/high-seas-treaty-climate-change/
Parliamentary interactions and contacts	Number of interactions - opportunistic	On 21 April 2023 at DK Parliament Public Briefing "Climate benefits of good fisheries management" with Dr. Pernille Schnoor as moderator, on behalf of WMU and OceanICU
Participation in decision making fora and related events, where practical	Number of events- opportunistic	Dates TBD

Activities	KPI	Status – to date
e.g. CBD, COP, UNFCCC, etc		
Task 8.2		
Recruitments of relevant stakeholder	Number of recruited stakeholders	Stakeholder recruitment initiated (survey, and internal suggestions)
Completion of ODEMM Assessment	Report/ Paper	Not yet started
List of prioritised scenarios for DST	List of scenarios communicated to WP7	Not yet started
Task 8.3		
Data visualisation for wider society	Number of proposed new map layers in the European Atlas of the Seas	Identification of data sources of interest started
Teachers-researcher Mutual Professional Development "focus groups"	Number of participants in the focus groups	Not yet started
Designing lesson plans and teaching resources	Number of co-designed lesson plans and teaching resources	Not yet started

Activities	KPI	Status – to date
Delivering teaching aids	Number of teaching aids directly used by teachers in semester teaching, during OceanICU lifetime.	Not yet started
Organising youth event	Number of participants in the youth event	Not yet started
Organising and encouraging participation in the youth competition	Number of entries in the youth competition.	Not yet started

5. Interactions with other WPs

WP8 is relevant to all ALL WPs and will engage directly with all WPs through the regular WP leaders meetings.
For Task 8.1, estimation of changes in the biological carbon pump will be developed in coordination with WP4 & 5 (model development), and WP7 (stakeholder consultation and co-development of DSTs) through the creation of climate and resource management scenarios to be used in modelling exercises. These scenarios will be informed by WP8 interactions with stakeholders and through the lens of fishing and mining area-based national and international agreements.

Task 8.2 will be mostly closely connected to WP5 (Impacts of Fishing and Industrial Extraction processes on the Ocean C cycle) and WP7 (Decision Support Tools). However, direct input and needs will be solicited from all WPs prior to engagement with stakeholders, and summaries will be shared following interactions, highlighting areas of relevance for each WP.

Task 8.3 will be mostly connected to WP1 (Management and project website) and WP7 (Decision Support Tools).

Table 8 – Outline of interactions with the other WPs

WP 8	WP1	WP 6&7	WP 4&5
Task 8.1.	Programme Management	Stakeholder consultation and co-development of DSTs	Estimation of changes in the biological carbon pump Model development
Task 8.2		Effects of fishing on mesopelagic food web in collaboration Decision Support Tools	Impacts of Fishing and Industrial Extraction processes on the Ocean C cycle
Task 8.3	Management and project website	Decision Support Tools	

6. References

- Knights, A.M., Piet, G.J., Jongbloed, R.H., Tamis, J.E., White, L., Akoglu, E., Boicenco, L., Churilova, T., Kryvenko, O., Fleming-Lehtinen, V. and Leppanen, J.M., 2015. An exposure-effect approach for evaluating ecosystem-wide risks from human activities. *ICES Journal of Marine Science*, *72*(3), pp.1105-1115.
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