

Ocean-based Negative Emission Technologies



Deliverable Title	D7.5 Report II of the interaction with the SRG and within WPs that have stakeholder sub-groups
Lead	GEOMAR
Related Work Package	WP 7
Related Task	Task 7.1 and 7.2
Author(s)	Judith Meyer, David Keller and contributions from WP1, WP2, WP3, WP6 and WP7
Prieto Dissemination Level	Public
Due Submission Date	31.12.2022
Actual Submission	29.12.2022
Project Number	869357
Start Date of Project	01. July 2020
Duration	60 months
Abstract: This report provides an overview of OceanNETs engagement with relevant stakeholders and the OceanNETs stakeholder reference group between 01.01.2021 – 31.12.2022.	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 869357.

Document History

Date	Version	Description	Name/Affiliation
21.12.2022	1.0	First submitted version	Judith Meyer/GEOMAR

Disclaimer: This document reflects only the author's view and the European Commission and their executive agency are not responsible for any use that may be made of the information it contains

List of abbreviations, acronyms and definitions

NETs – Negative Emission Technologies
SRG – Stakeholder Reference Group
NGO – Non-Governmental Organisation

List of figures

Figure 1: OceanNETs event page
Figure 2: OceanNETs newsletter for stakeholders
Fig. 3: Team CDRmare & OceanNETs in Brussels (right). Science-policy Brief (left).

List of tables

Table 1: Website Impressions (yearly means)
Table 2: Members of the OceanNETs stakeholder reference group
Table 3: Stakeholder activities within WPs that have stakeholder sub-groups

1. Introduction

1.1 Context

OceanNETs is a European Union project funded by the Commission's Horizon 2020 program under the topic of Negative emissions and land-use based mitigation assessment (LC-CLA-02-2019), coordinated by GEOMAR | Helmholtz Center for Ocean Research Kiel (GEOMAR), Germany.

OceanNETs responds to the societal need to rapidly provide a scientifically rigorous and comprehensive assessment of negative emission technologies (NETs). The project focuses on analyzing and quantifying the environmental, social, and political feasibility and impacts of ocean-based NETs. OceanNETs will close fundamental knowledge gaps on specific ocean-based NETs and provide more in-depth investigations of NETs that have already been suggested to have a high CDR potential, levels of sustainability, or potential co-benefits. It will identify to what extent, and how, ocean-based NETs can play a role in keeping climate change within the limits set by the Paris Agreement.

1.2 Purpose and scope of the deliverable and relation to other deliverables

An important objective of OceanNETs is to initiate, conduct and sustain an on-going dialogue and cooperation with all relevant stakeholders interested in the field of carbon dioxide removal. OceanNETs aims to facilitate mutually beneficial engagement and interaction between the project's consortium and stakeholders. Key stakeholders are critical for successful engagement (see also deliverable 9.1 on exploitation and dissemination of results) and an ongoing stakeholder dialogue we will enhance the project acceptance. The stakeholders in our project are those interested in increasing their knowledge and understanding of ocean-based negative emission technologies (NETs), those that would like to engage in a dialogue with the consortium and those who are potentially affected by or concerned about ocean-based NETs or will be end-users of the projects results. OceanNETs stakeholders are from a variety of sectors including policy, industry, academia, non-governmental organisations (NGOs), civil society and also the research community itself is regarded as an important stakeholder group.

This report on the interaction with stakeholders is a living document (D7.4 was the 1st version) that will be updated as new opportunities for interaction are identified and exploited. The document will be updated before every periodic report.

2. Stakeholder Engagement

2.1 Website, Social Media & Newsletter

Our aim was to engage stakeholders from the very beginning of the project in order to use stakeholder knowledge for an optimal implementation of our research case studies, scenario modelling, participatory approaches, and analysis and assessment.

We initially created our public website (www.oceannets.eu) and social media accounts ([www.twitter.com/OceanNETs_EU](https://twitter.com/OceanNETs_EU); www.linkedin.com/company/oceannets-project)

to provide information on ocean-based NETs for the public and stakeholders and to generally promote the project.

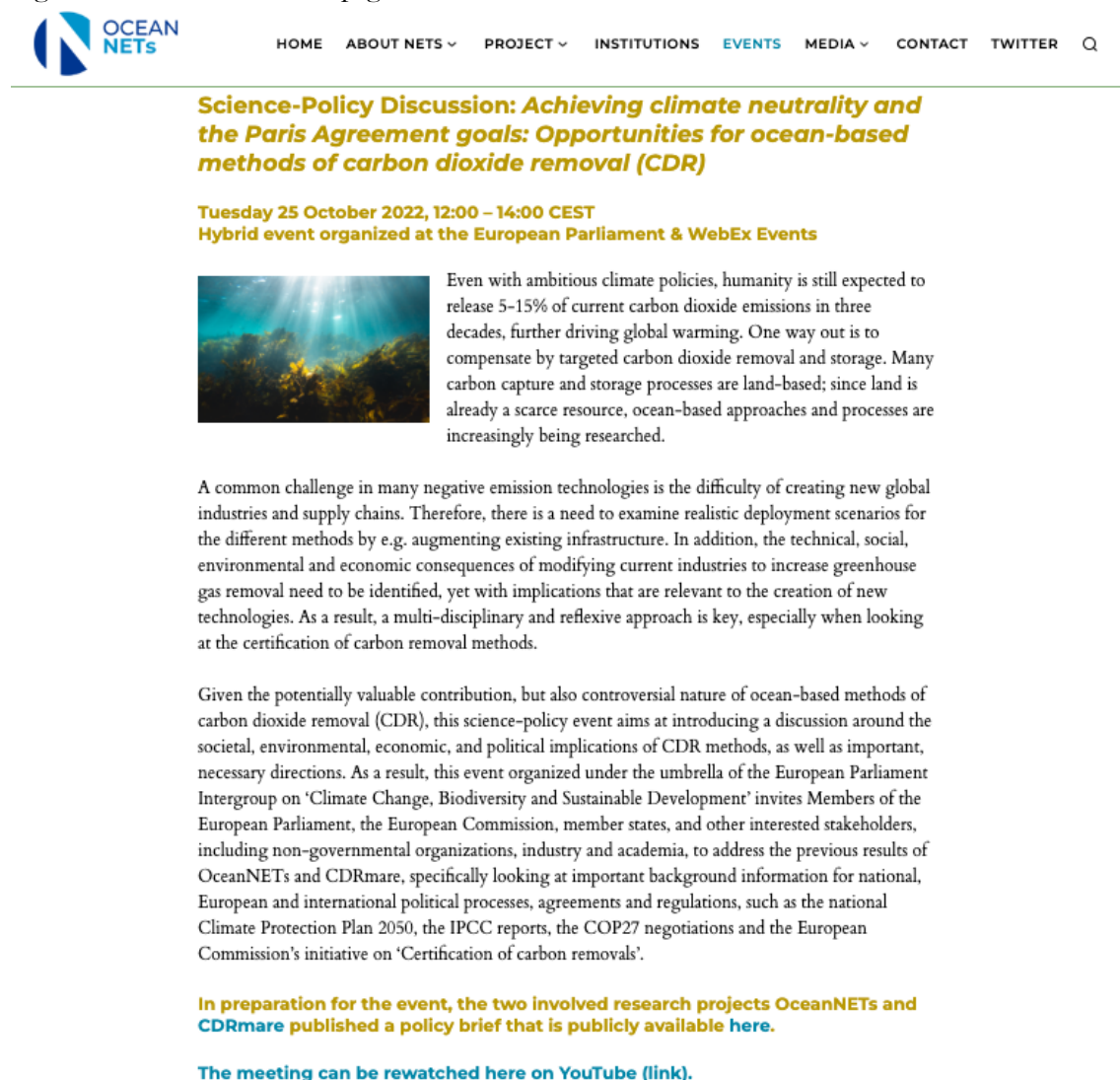
Website

Throughout the past year, the OceanNETs website has been kept up-to-date continuously. New publications, new deliverables and new achieved milestones can be found on the site as well as the main events OceanNETs participates in (see Fig. 1). The latter are also featured on the homepage of the website for quick access. Stakeholders that access the website are introduced to the Stakeholder Reference Group and encouraged to sign up and become a part of the OceanNETs stakeholder community.

Table 1: Website Impressions (yearly means)

Website	Visitors	Actions	Pageviews
OceanNETs	310	590	536

Figure 1: OceanNETs event page



Science-Policy Discussion: Achieving climate neutrality and the Paris Agreement goals: Opportunities for ocean-based methods of carbon dioxide removal (CDR)

Tuesday 25 October 2022, 12:00 – 14:00 CEST
Hybrid event organized at the European Parliament & WebEx Events

Even with ambitious climate policies, humanity is still expected to release 5–15% of current carbon dioxide emissions in three decades, further driving global warming. One way out is to compensate by targeted carbon dioxide removal and storage. Many carbon capture and storage processes are land-based; since land is already a scarce resource, ocean-based approaches and processes are increasingly being researched.

A common challenge in many negative emission technologies is the difficulty of creating new global industries and supply chains. Therefore, there is a need to examine realistic deployment scenarios for the different methods by e.g. augmenting existing infrastructure. In addition, the technical, social, environmental and economic consequences of modifying current industries to increase greenhouse gas removal need to be identified, yet with implications that are relevant to the creation of new technologies. As a result, a multi-disciplinary and reflexive approach is key, especially when looking at the certification of carbon removal methods.

Given the potentially valuable contribution, but also controversial nature of ocean-based methods of carbon dioxide removal (CDR), this science-policy event aims at introducing a discussion around the societal, environmental, economic, and political implications of CDR methods, as well as important, necessary directions. As a result, this event organized under the umbrella of the European Parliament Intergroup on 'Climate Change, Biodiversity and Sustainable Development' invites Members of the European Parliament, the European Commission, member states, and other interested stakeholders, including non-governmental organizations, industry and academia, to address the previous results of OceanNETs and CDRmare, specifically looking at important background information for national, European and international political processes, agreements and regulations, such as the national Climate Protection Plan 2050, the IPCC reports, the COP27 negotiations and the European Commission's initiative on 'Certification of carbon removals'.

In preparation for the event, the two involved research projects OceanNETs and CDRmare published a policy brief that is publicly available [here](#).

The meeting can be rewatched [here on YouTube \(link\)](#).

Social Media

OceanNETs is using two key social networks, Twitter and LinkedIn, first of all, to build its community and ultimately to communicate all the outputs and results. Both communities have been growing steadily.

Since M18 when D7.4 was published, OceanNETs twitter has gained 127 followers, coming to a total of 318. Our tweets had a total of 3922 impressions, leading to 449 engagements. OceanNETs has been mentioned 83 times and the OceanNETs twitter page has been visited 10587 times.


LinkedIn is mainly used to search new relevant stakeholders and invite these stakeholders to relevant OceanNETs events and webinars. It is particularly useful because of the capability to search for people with the specific job type in the specific geographic area that makes them part of a specific stakeholder group. Through connecting with these individuals, they can be invited to events and see relevant updates through the company page. At the moment of writing, OceanNETs LinkedIn account has 103 followers.

Newsletter


The OceanNETs newsletter is frequently being sent out to our stakeholders (cf. Fig. 2). It includes all the relevant activities of the consortium, such as experiments, workshops, meetings, webinars, conference participations, new deliverables, new publications and relevant conferences and workshops on negative emission technologies and carbon dioxide removal.

Figure 2: OceanNETs newsletter for stakeholders

Visit the [webversion here](#).



June/July 2022



Consortium Members Activities

The second OceanNETs mesocosm experiment has successfully started in May 2022 and is still ongoing. It takes place in the Raunefjord near Bergen, Norway and is led by **WP5 (Ulf Riebesell and Jens Hartmann)**, with scientists from seven nations participating. For more information, see the [press release](#) and the [expedition blog](#).

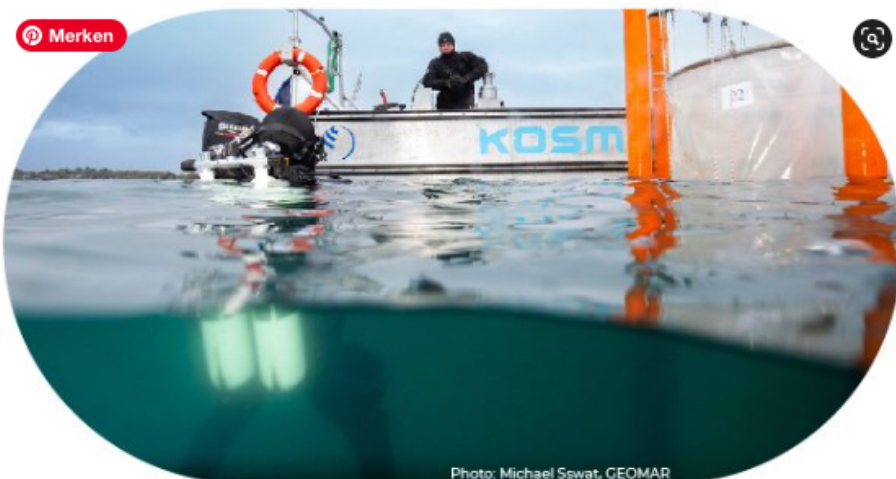


Photo: Michael Szwat, GEOMAR

Linked to the mesocosm study, **WP6 (Javier Lezaun, Sara Nawaz, Jose Maria Valenzuela) and WP3 (Siri Veland)** co-hosted a **Stakeholder Seminar** on 28 June to introduce the OceanNETs research project to a wide range of actors in the Bergen region, and in Norway more broadly.

Marius Paschen (WP1) will present the working paper “**Accounting for terrestrial and marine carbon sink enhancement**” (Wilfried Rickels, Marius Paschen, und Felix Meier, Kiel Working Paper No. 2204) at the **European Association of Environmental and Resource Economists Annual Conference** (<https://bitly.co/Cwe7>) 2022 in Rimini, Italy. Session: Climate Policy: Carbon Pricing, 1 July 2022, 02:00 PM - 03:45 PM

Jose Maria Valenzuela (WP6) will be presenting on the Scenarios and Life Cycle Assessments at the **Annual Conference of the Society for the Advancement of Socio-Economics** in Amsterdam (<https://bitly.co/Cwem>, 9-11 July 2022). Title: “**Possible Worlds: Next Emergencies, Global Capabilities, and Potential Inequalities**”

OceanNETs contributions to **The 2nd International Conference on Negative CO₂ Emissions**, Gothenburg, Sweden, June 14-17, 2022:

- **Wilfried Rickels (WP1)**: Integrating negative emissions into emissions trading markets (Keynote)
- **Wilfried Rickels (WP1), Alexander Proelß (WP2)**, Oliver Geden, Julian Burhenne and Mathias Fridahl: Integrating Carbon Dioxide Removal into European Emissions Trading (Presentation)

- James Campbell, **Spyros Foteinis (WP6)**, Veronica Furey, Olivia Hawrot, Cara Maesano, Daniel Pike, Silvan Aeschlimann, Paul Reginato, Ed Boyden, Loren Looger, Daniel Goodwin, and **Phil Renforth (WP6)**: Geochemical Negative Emissions Technologies: Review and Roadmap. (Poster presentation)
- **Spyros Foteinis (WP6)**, John Andresen, Francesco Campo, Stefano Caserini, and **Phil Renforth (WP6)**: Life cycle assessment of ocean liming for carbon dioxide removal from the atmosphere. (Poster presentation)

David Keller gave a presentation at the **2022 UN Ocean Conference Side Event: Ocean Negative Carbon Emission and Sustainable Development**, 30 June 1pm UTC: <https://bit.ly.co/CwhR>

Nicolás Smith-Sánchez (WP5) presented his preliminary data on the responses of zooplankton to OAE and its potential effects on production from the Gran Canaria mesocosm experiment at the **Enhanced Weathering conference** in Amsterdam (<https://bit.ly.co/CwgN>, 4 May 2022). Title: **Ecosystem impacts of Ocean Alkalinization in an oligotrophic marine plankton community: A mesocosm study**

WP3 successfully conducted their **online mini-public on marine CDR approaches in Norway** on 11-12 June, which will lead to D3.4 *Report on public perception in deliberative workshops, laboratory experiments, and interviews*

David Keller co-chaired a session at the **Scenario Forum 2022** (<https://bit.ly.co/Cwe3>) in Vienna on 21 June 2022. Session title: Blue Scenarios: Ocean and Fisheries in Earth System Models

New OceanNETs Deliverables

- **D1.1** updated version: Working paper on the numerical modelling framework to compare different accounting schemes. <https://bit.ly.co/BXsL>
- **D2.3**: Summary report on Workshop 1 on governance for ocean-based negative emissions technologies. <https://bit.ly.co/Cwa7>
- **D3.3** updated version: Working paper on NETs perception and prioritization as a result of the deliberative workshops with laypeople. <https://bit.ly.co/CwJM>
- **D4.2**: Report on modifications of ocean carbon cycle feedbacks under ocean alkalinization. <https://bit.ly.co/CwJi>
- **D5.3** updated version: Report on parameterizing seasonal response patterns in primary- and net community production to ocean alkalinization. <https://bit.ly.co/CwJR>
- **D6.1** updated version: Stylized case-study descriptions for use in stakeholder/public engagement activities, and generally throughout the consortium. <https://bit.ly.co/BXsU>
- **D6.2** updated version: Realistic deployment scenarios/pathways that can be used to constrain Earth System models. <https://bit.ly.co/BXsY>
- **D7.1** updated version: Summary report on deliberative workshop with stakeholders on mesocosm research in the Canary Island., <https://bit.ly.co/BXsc>

Relevant Publications

- **Hartmann, J., Suitner, N., Lim, C., Schneider, J., Marín-Samper, L., Arístegui, J., Renforth, P., Taucher, J., and Riebesell, U.:** Stability of alkalinity in Ocean Alkalinity Enhancement (OAE) approaches – consequences for durability of CO₂ storage, Biogeosciences Discuss. [preprint], <https://doi.org/10.5194/bg-2022-126>, in review, 2022.
- Campbell, J.S., **Foteinis, S.**, Furey, V., Hawrot, O., Pike, D., Aeschlimann, S., (...) and **Renforth, P.:** Geochemical Negative Emissions Technologies: Part I. Review. Frontiers in Climate, 4, 2022, <https://doi.org/10.3389/fclim.2022.879133>.
- IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926 – **D. Keller and A. Oschlies were contributing authors to Ch. 12 on the topic of ocean-based CDR**

Upcoming Conferences and Workshops on NETs

Marine Carbon Dioxide Removal: Essential Science and Problem Solving for Measurement, Reporting, and Verification Workshop, September 27-30, 2022 (The University of Rhode Island): <https://bityl.co/CwbJ>

The central goal of this workshop is to build the OCB community's capacity to conduct research to support the Measurement, Reporting and Verification (MRV) of marine CDR by identifying priorities, pathways and best practices in this relatively new area.

2nd Annual Conference on Carbon Removal Law and Policy (online), September 27, 2022: <https://bityl.co/CwiY>

This year's conference theme: The role of domestic law in regulating and facilitating carbon dioxide removal. The conference is currently accepting proposals for panels, as well as individual presentations.

The deadline for submission of proposals is **July 15th, 2022**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 869357.



Imprint:

OceanNETs at GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel // Wischhofstr. 1-3 // 24148 Kiel
If you would like to unsubscribe, please contact Judith Meyer: jumeyer@geomar.de

2.2 Events

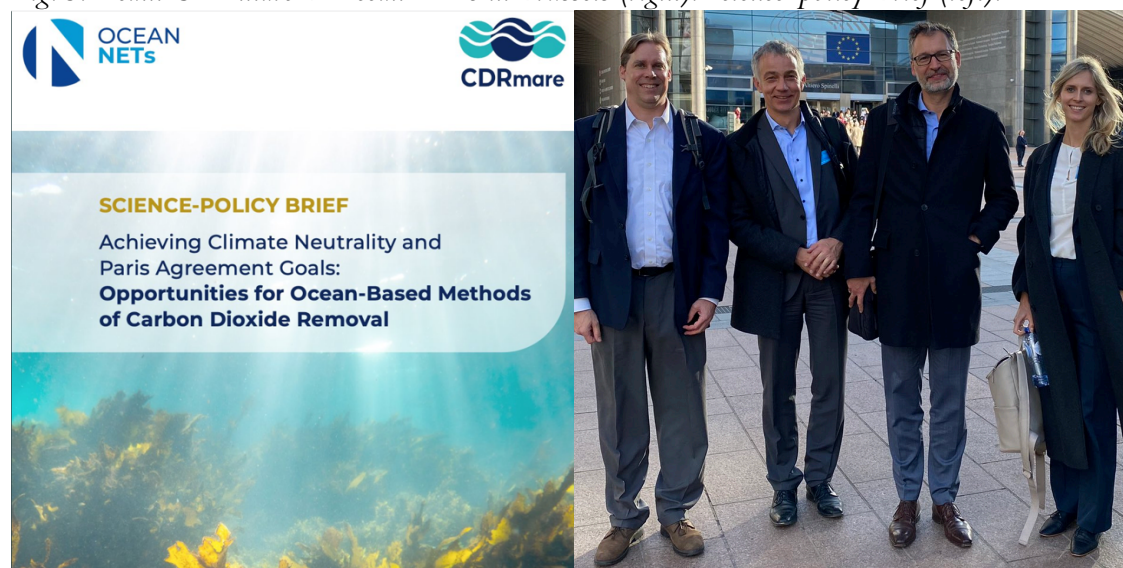
Events are where the OceanNETs project can maximize impact on its stakeholders. WP7 promotes and supports the organization and the dissemination of every meeting, workshop, webinars and conference that OceanNETs is attending.

OceanNETs organized one major stakeholder event:

A hybrid Policy Event in Brussels entitled: **Achieving climate neutrality and the Paris Agreement goals: Opportunities for ocean-based methods of carbon dioxide removal (CDR)**. The event took place on Tuesday 25 October 2022, at the European Parliament and via WebEx Events. The event was co-hosted by the German research mission CDRmare and by MEP Maria da Graça Carvalho and MEP Catherine Chabaud (Co-Chairs of the ‘Ocean Governance’ Working Group of the European Parliament Intergroup on ‘Climate Change, Biodiversity and Sustainable Development’). In total, 33 persons attended the event in person at the parliament and 165 persons online, including members of the European Parliament, European Commission and other stakeholders (NGOs, industry, and academia) followed the discussion on the potential of negative emission technologies gained from previous project results. Special focus was given to information on national, European and international policy processes, agreements and regulations, such as the National Climate Protection Plan 2050, and the European Commission’s initiative on »Certification of carbon removals«. The final agenda of the event, the event recording, the registration report and the PDF presentations of the speakers can be found here: <https://bit.ly.co/GQ3n>.

In preparation for the event, OceanNETs and CDRmare developed a science-policy brief: *David Keller, Sandra Ketelhake, Judith Meyer, Barbara Neumann, Andreas Oeschlies, Alexander Proelß and Wilfried Rickels (2022): Achieving Climate Neutrality and Paris Agreement Goals: Opportunities for Ocean-Based Methods of Carbon Dioxide Removal*. The document can be accessed here: <https://oceanrep.geomar.de/id/eprint/57135/>. A press release featuring the event and policy brief was issued at GEOMAR Helmholtz Center for Ocean Research Kiel, the coordinating institute of the OceanNETs project: <https://bit.ly.co/GQ3s>.

Fig. 3: Team CDRmare & OceanNETs in Brussels (right). Science-policy Brief (left).



2.3 Stakeholder Reference Group

At the moment of writing, our SRG includes 15 active members from NGOs, NPOs, consulting businesses, industry and scientists that are part of international earth system programmes (see table 2).

Table 2: Members of the OceanNETs stakeholder reference group

Contact Person	Institution/Project
NGOs	
Brad Ack, Catherine Jardot	Ocean-Climate Trust/ Ocean Vision
Marc von Keitz	Grantham Foundation for the Protection of the Environment
NPOs	
Daniel Pike	The Climate Map
Consulting businesses	
Maurizio Cocchi	ETA Florence Renewable Energy
Fiona Trappe	Seas The Opportunity
Lydia Kapsenberg	CEA Consulting
Philanthropic Fundraising Services	
Antonius Gager	Additional Ventures
Industry / Start-ups	
Ryan Orbuch	Stripe
Steve Willis, Jerry Joynson	Herculean Climate Solutions
Swiss Williamson	Skyology
Nathan Walworth	Project Vesta
Matthieu Helwig	Carbon Time
Earth system science projects, programmes, scientists	
Fabian Reith	Atlas on the global potential of CDR
Matthew Long	National Center for Atmospheric Research, USA

Filip Meysman

University of Antwerp

Most of our interaction with the SRG is based on personal communication, such as email conversations and personal meetings via video conferences (e.g., Zoom, Webex). The SRG is invited to give presentations at the OceanNETs knowledge exchange seminar that takes place once a month and consists of a 40min presentation and 20min Q&A session. They are also frequently invited to participate in the knowledge exchange seminars to get insights into newest project results.

Members of the SRG were also invited to the 2nd annual project meeting, that took place from Wednesday, 7 September – Friday, 9 September 2023. They were able to participate virtually and in-person. Brad Ack (Ocean Visions) and Grace Andrews (Project Vesta) were able to attend the meeting in person. They presented themselves as well as the work currently conducted at their institutions/projects relevant to OceanNETs and their expectations regarding their engagement with the project. The two presentations were entitled: “Ocean Visions: Accelerating Solutions to the Ocean-Climate Crisis” and “Project Vesta: Preliminary Findings from Small-Scale Field Studies of Coastal Enhanced Weathering with Olivine”, respectively.

2.4 Dialogue with stakeholders outside the SRG

Individual OceanNETs WPs have also engaged directly with stakeholders as part of their research. These wider stakeholder dialogue activities and targeted interaction with specific groups of stakeholders made sure to include relevant project information and results for the specific interests of these stakeholder groups. These individual stakeholder activities have been monitored and documented (see table 3).

Table 3: Stakeholder activities within WPs that have stakeholder sub-groups

Participants	Purpose of the engagement	Type of meeting	Summary of discussions	Outputs
OceanNETs and ONCE	Discuss the issue of securing mitigation and adaptation solutions to climate change, specifically focusing on ocean CDR development and evaluation.	Side event at the UN Ocean Conference in Lisbon	Ocean-based actions cover both mitigation and adaptation and range across four clusters (Decisive, Low Regret, Unproven, Risky) and ocean-based climate actions should be scaled-up by: 1) prioritizing Decisive and Low Regret; 2) improving knowledge on the Unproven measures; 3) cautiously weighing the Risky ones.	We are continuing the dialogue with ONCE and other organizing partners of the event to stimulate discussions that could lead to future collaborations and joint research projects as well as stimulate further information exchange to a range of scientific and societal audiences.
WP3, WP7 and local stakeholders in Bergen	Introduce the OceanNETs research project to a wide range of actors in the Bergen region, and in Norway more broadly. Inform local stakeholders about the purpose of the mesocosm study on ocean alkalinity enhancement in Bergen, and discuss their views on potential options for marine carbon dioxide removal.	Stakeholder Seminar in conjunction with the mesocosm studies carried out in Bergen, Norway	Although many local actors appreciated the opportunity to learn more about the research OceanNETs is conducting in Bergen, the mesocosm studies themselves seemed to have limited salience to the stakeholders we approached. This is why, in the group discussion, we aimed to emphasize the trajectory of OAE development, rather than immediate implications of the experimental studies.	See interim report 7.2 for recommendations. Further engagement with local actors beyond the conclusion of the mesocosm study is essential and thus planned for the future.
WP2 and US stakeholders	Five weeks fieldwork on the US East Coast to identify regional and global governance challenges and opportunities for ocean-based NETs.	Interviews at Woods Hole Oceanographic Institute & Marine Biological Laboratory and participant observation at two conferences (Seagriculture 2020, blue carbon/seaweed farming; OCB, measurement & verification for mCDR)	The frequent refrain that “more knowledge is needed” services different interests, from scientists to regulators to investors to NGOs. Paradoxically, this seems a way of maintaining the momentum behind CDR/NETs and, at the same time, trying to clear up fears/risks/uncertainties that arise in part from the prospect of “rogue” operators. Scale: The word is thrown about constantly, but it’s not obvious: 1) that it is possible (e.g. seaweed sinking); 2) that it is desirable (e.g. LCAs for OAE); 3) that it is achievable (e.g. permitting). At the same time, malleability of this word and the ideals it inspires make it useful for identifying each of these points (and others) as problems to research and solve for.	Knowledge exchange and networking facilitated. The results of this stakeholder work will feed into D2.2.
WP2 and stakeholders from policy	Present identified governance challenges for ocean-based NETs and, together with workshop participants, explore how ocean-based NETs should be governed to best integrate international climate targets as well as global goals for ocean and biodiversity conservation, in addition to socio-economic ambitions towards sustainable development.	Workshop “Governance of ocean-based negative emission technologies”	Distributed across two breakout groups, participants were invited to jointly identify and discuss what governance of ocean-based NETs ought to entail to adhere to the targets set by the Paris Agreement, but further stay on path for additional global policy goals, such as SDG 14 “Life Below Water” set by the 2030 Agenda of the United Nations from an ocean point of view and relating to marine governance issues.	Knowledge exchange and networking facilitated. The results of the workshop will feed into DA follow-up workshop to develop future governance scenarios of ocean-based NETs is planned for 2023.

WP3 and local stakeholders in Norway	To discuss ocean CDR with the interested public. A mini-public is a form of public engagement where participants deliberate the different options. They discuss with experts and in subgroups to form an opinion and thus provide insights into their policy preferences.	Deliberative survey in the form of an online mini public	Prior awareness about negative emissions was low among participants and it seems difficult for them to engage with the concept of removing CO ₂ from the atmosphere and compensating historical emissions in this way. This is also not taken up even though Norwegian participants perceive a national responsibility to pioneer climate change solutions as the national wealth is founded on the exploitation of fossil fuel reserves.	See deliverable 3.4 for outputs and recommendations. The next step in WP3s analysis of public perceptions of marine CDR will be a comparative cross-country survey.
WP1, OceanNETs partners, industry experts and NGOs	Assumptions on key regulatory, resourcing and technical choices, as well as outcomes in terms of scale and cost referring to different supply chain configurations were explored.	Workshop on Ship-based Deployment Scenarios for Ocean Liming	Participants discussed potential configurations of ocean liming deployment scenarios and the associated cost and scale levels. A simulation tool was used as a means to structure the discussions. Cost and scale scenarios for the period 2030-2050 were covered.	See deliverable 1.3 for outputs and recommendations.
WP9 and Ocean Visions; Nikhil Neelakantan	Update on Ocean Visions roadmaps	Several one-on-on virtual meetings	Discussion on the current work of OceanNETs and how to help with knowledge sharing, communication and dissemination of results.	Updated information on oceancdr.net and gave input for Ocean Visions roadmaps. Networking facilitated on both sides.
WP9 and Carbon Time	Presentation of the projects, invitation to join SRG	Virtual meeting	Introductions on both sides. Discussion of how to help with networking, knowledge sharing, and communication and dissemination.	Networking facilitated on both sides. OceanNETs will keep stakeholder informed of results. Plans to periodically meet again.
WP9 and ONCE	Discussion to partner with ONCE program and to be listed as one of the partners in the ONCE UN Decade program application.	Virtual meeting	Introductions on both sides. Discussion of how to help with networking, knowledge sharing, and communication and dissemination.	OceanNETs will be in close contact with this project as results from both are relevant for the other. GEOMAR partner will advise on modelling.
WP9 and Nicolas Sdez (AYRO)	To explore opportunities for collaboration.	Virtual meeting	Introductions on both sides. Discussion of how projects can help each other with networking, knowledge sharing, and communication and dissemination.	Knowledge exchange and networking facilitated on both sides.
WP9, Industrial Minerals Association and German Lime Association	Exchange between all participants in order to identify similarities, differences and benefits of all projects; information exchange on alkalization topics.	Virtual meeting	Introductions on both sides. Discussion of project results and research planed in the future.	Knowledge exchange and networking facilitated on both sides.