



Ocean-based Negative Emission Technologies



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Abstract: This report provides an overview on the cooperation activities with relevant EU projects and other initiatives on negative emission technologies in the second reporting period of the OceanNETs project (01.01.2022 – 31.12.2022).	



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Document History

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List of abbreviations, acronyms and definitions

Carbon Dioxide Removal (CDR)
Negative Emission Technologies (NETs)

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

This report on cooperation activities with relevant EU projects and other initiatives is a living document (D9.4 was the 1st version) that will be updated as new opportunities for engagement are identified and exploited. The document will be updated before every periodic report.

Establishing a dialogue or clustering with other ongoing projects on negative emission technologies (NETs) or in related, relevant fields is important for obtaining information that is beyond the scope of OceanNETs. This is / will be done on a strategic and operational level, i.e., efforts have been / will be made to go beyond the simple exchange of information, and as the project progresses, we ultimately aim to hold joint meetings and develop products together with other projects, especially EU-funded ones (e.g., databases, synthesis papers, assessment reports, joint participation in meetings upon request of the European Commission to promote the outputs of the projects).

2. Cooperation Activities

2.1 Cooperation with other EU projects on NETs

OceanNETs continues to exchange information with our "sister" project NEGEM and to a lesser extent with LANDMARC, due to the fact that the latter project exclusive focus on land-based NETs. Contact has also been maintained with EU ERC project GENIE. OceanNETs also continues to exchange information with the Horizon 2020 COMFORT project. See D9.4 for a description of earlier cooperation activities where these contacts were established. For example, there have been cross-project invitations to seminars, i.e., OceanNETs has invited other project partners to selected project knowledge sharing seminars. The projects have also occasionally notified each other of relevant reports or publications.

In addition to this, OceanNETs has also established a relationship with the EU Horizon Europe RESCUE project (Response of the Earth System to overshoot, Climate neUtrality and negative Emissions) that started in September, 2022. This project was funded in a call that was a follow-up to the call that funded OceanNETs. Indeed, cooperation with OceanNETs was specifically mentioned in the RESCUE call. Several OceanNETs partners are involved in the RESCUE project, thereby ensuring that OceanNETs expertise is provided to RESCUE. Furthermore, there has already been an exchange of information on stakeholders (to avoid double contacting of stakeholders) between the two projects. Some OceanNETs partners have also participated in the 1st RESCUE workshop that was designed to scope CDR options for inclusion in Integrated Assessment Modelling activities in RESCUE. Data from OceanNETs is also being shared to help parameterize RESCUE models.

As mentioned in D9.4, the OceanNETs project coordinator also sits on the NEGEM project advisory board and the NEGEM project coordinator sits on the OceanNETs advisory board. During this reporting period, OceanNETs has invited one of the leaders of the EU-ERC-funded GENIE project, Jan Minx, and the leader of the EU Horizon Europe RESCUE project, Raffaele Bernardello, to join our scientific advisory board.

2.2 Cooperation with non-EU projects

As mentioned in D9.4, OceanNETs has undertaken cooperation activities with projects in the German *CDRmare* mission (<https://cdrmare.de/en/>). There have been several presentations from OceanNETs partners to the members of these projects, either via the *CDRmare* seminar series or in individual project meetings. To avoid duplication and imposing an undue burden on stakeholders, non-confidential information on stakeholders has also been shared between projects and coordination of some stakeholder interactions (see policy event below) has been undertaken.

OceanNETs and *CDRmare* held a joint science policy briefing on ocean-based CDR at the EU parliament on Oct. 5, 2022. The title of this event was, “*Achieving climate neutrality and the Paris Agreement goals: Opportunities for ocean-based methods of carbon dioxide removal (CDR)*”. The related policy brief is available at: <https://oceanrep.geomar.de/id/eprint/57135/> and a recording of the event can be viewed at: <https://www.youtube.com/watch?v=UxVpea6slSY>

OceanNETs has begun cooperation activities with the ONCE program (Ocean Negative Carbon Emissions), <https://www.global-once.org/#/home>. ONCE aims to be an international network of projects and experts to coordinate research effort in different aspects on ocean-based solutions for climate mitigation. OceanNETs has been presented at several ONCE events. The most prominent of these was a jointly organized side event

at the UN Ocean Conference that was held in Lisbon in June 2022 (<https://www.global-ounce.org/#/detail?title=ACTIVITIES&name=Conference&code=Conference>).

Two OceanNETs partners, D. Keller and J. Lezaun, are participating an initiative, coordinated by the Aspen Institute, to write a code of conduct on ocean-based CDR. This effort builds upon an earlier effort (<https://www.aspeninstitute.org/publications/ocean-carbon-dioxide-removal/>). The contributions from OceanNETs partners draws upon the experience of developing protocols for responsible research and innovation for OceanNETs, as well as the expertise on ocean-based CDR that can be provided by the partners.

Several OceanNETs partners are also contributing as chapter leads or co-authors to an initiative to develop a *Guide to best practices on OAE*. This effort is an international collaboration funded by ClimateWorks and coordinated by Andreas Oschlies (OceanNETs core themes coordinator) and lead by the OACIS (Ocean Acidification and other ocean Changes – Impacts and Solutions) initiative of the Prince Albert II of Monaco Foundation.

The OceanNETs coordinator (D. Keller) participated in and presented at a UNESCO Integrated Ocean Carbon Research (IOC-R) working group meeting, where one of the themes (sub-working groups) has begun to focus on ocean-based CDR.