

To interested consultants.

Date: 09.09.2024

CALL FOR TENDER AP0465 / K185

Carbon sequestration in the Wadden Sea

Recommendations for monitoring and assessment

With this invitation to tender, the Common Wadden Sea Secretariat (CWSS) of the Trilateral Wadden Sea Cooperation (TWSC) is seeking a qualified consultant to review information on past, present and future carbon sequestration projects in the Wadden Sea, and based on an assessment of the methods used and parameters considered in the analysis, to provide recommendations for research and monitoring activities to assess the carbon sequestration potential of the Wadden Sea.

CWSS invites qualified consultants to submit a written proposal to Ms Kristine Meise, Common Wadden Sea Secretariat, (meise@waddensea-secretariat.org) **no later than 18 October 2024 / EOB.**

Please find further information following.

1. Background

Current research suggests that coastal wetlands, especially saltmarshes and seagrass beds, sequester carbon at a much higher rate than forests and other terrestrial habitats. Given the accelerating impact of climate change, there is increasing interest in assessing the carbon sequestration potential of different habitat types and quantifying their contribution to greenhouse gas reduction. The Wadden Sea has significant potential for carbon sequestration, yet the precise contribution of specific habitats to greenhouse gas reduction has not been quantified on a trilateral scale. At the latest Trilateral Governmental Conference in 2022, the Trilateral Governmental Council decided to 'investigate the role of the ecosystem service value of carbon sequestration by typical Wadden Sea habitats like seagrass beds and salt marshes and their contribution to the EU greenhouse gas reduction targets whilst preserving the Outstanding Universal Value' ([CWSS, 2023](#), see also [SIMP](#)).

Extensive knowledge at national or local levels on carbon sequestration in the Wadden Sea presents an opportunity to scale up estimates to the ecosystem level. In June 2024, over 50 experts from the three Wadden Sea countries attended a trilateral workshop titled "Carbon Sequestration in the Wadden Sea: State of Knowledge and Open Questions" to exchange information on carbon sequestration in salt marshes, seagrass meadows, sediments, and mussel beds. The workshop highlighted the need to carefully assess carbon sequestration not only in different habitats, but also in different regions, whilst also highlighting

specific knowledge gaps, especially with regard to the human use of the Wadden Sea and different management regimes.

To advance the understanding of carbon sequestration in the Wadden Sea, information was collated on past, present and future carbon sequestration projects in the Wadden Sea, and will be made available to the consultant. The aim of this study is to review these projects and based on an in-depth assessment of methods used and specific parameters investigated, provide recommendations for trilateral research and monitoring activities that would allow an assessment of the carbon sequestration potential of Wadden Sea habitats, for future consideration by trilateral experts in the field.

This study should be in line with and support the implementation of the trilateral agreements in the [Wilhelmshaven Declaration 2023](#).

2. Scope of work and key tasks

The aim of this study is to work towards a trilateral assessment of carbon sequestration potential in the entire Wadden Sea (considering the different habitat types and exchange between them), and to give recommendations for trilateral monitoring.

Key tasks

1. Review the list of carbon sequestration projects and publications from the Wadden Sea:
 - Expand the list provided by CWSS, if obvious projects are missing.
 - Gather information on methods used to measure carbon sequestration, the anthropogenic and ecological parameters investigated and the availability of data for future analysis and mapping exercises.
2. Assess the advantages and disadvantages of specific methods used to measure carbon in different Wadden Sea habitats (salt marshes, sea grass, mudflats, mussel beds). The assessment shall include information on
 - Usefulness of methods that quantify the impact of anthropogenic and ecological parameters identified under task 1,
 - Comparability of results from different methods (possibilities for harmonisation),
 - Transferability of estimates to other Wadden Sea sites with similar habitat characteristics
 - Suitability for scaling up monitoring activities (e.g. logistics, equipment needs, costs).
3. Identify specific knowledge gaps and data needs to assess the impact of management measures and other anthropogenic activities on carbon sequestration to inform future decision making.
4. Provide recommendations for trilateral research and general monitoring activities to better understand the carbon sequestration potential of the Wadden Sea, based on the assessment conducted under 2 and the gaps identified under 3. Where possible, existing TMAP parameters shall be considered or suggestions for additional monitoring parameters be made.
5. Optional: Depending on the availability of existing datasets and hours remaining under the work contract, consultants will be asked to prepare a map of the Wadden Sea area, illustrating the carbon sequestration potential in the Wadden Sea, as far as possible.

The overall goal is to establish a general cost-effective approach to monitor carbon sequestration, which can then inform practical mitigation and management measures. This approach aims to improve the management of the Wadden Sea, under the holistic view that carbon sequestration is only one of several ecosystem services provided by Wadden Sea habitats and management for increased carbon storage should not have negative effects on other aspects such as biodiversity conservation or coastal protection.

3. Key deliverables

The main delivery of the selected consultant/consortium of consultants will be a final report. The main delivery must be based on the knowledge and expertise of experienced consultants, with feedback to be gathered from Wadden Sea experts, and is expected to contain at least the following elements:

1. Comparison of frequently used methodologies for measuring carbon sequestration in Wadden Sea habitats, explaining possible advantages and disadvantages in the trilateral context.
2. Identification of knowledge gaps and data needs for specific habitat types and different Wadden Sea regions.
3. Recommendations for specific research activities needed per habitat and region to allow a full assessment of the carbon sequestration potential of the Wadden Sea.
4. Recommendations for future trilateral monitoring activities to detect and mitigate future changes in carbon sequestration linked to specific management regimes, various anthropogenic activities or climatic changes /ecosystem level changes in the Wadden Sea.
5. Optional: Map describing the current carbon sequestration potential of different areas in the Wadden Sea area (and possible gaps for covering the entire area).

At least one feedback loop with experts from the Wadden Sea should be included in the offer.

The working language in the Trilateral Wadden Sea Cooperation is English. All meetings, work documents, and the project application are in English.

Throughout the study and the development of the main delivery, close collaboration and consultation with CWSS and the relevant trilateral group is required.

4. Budget

Tenders should detail the methodological approach and budget proposal that best reflects the requested set of deliverables.

Proponents are advised that the budgeted amount for this assignment is expected to be a maximum of 15.000€ (excluding VAT) depending on the project's agreed-upon list of tasks and timeline. If your company cannot fulfil all that this call for tender has laid out within the budget range, CWSS encourages your agency to submit a proposal that does fall within this range and outline which deliverables you would be able to fulfil.

Tender fees should be fully inclusive, including any proposed sub-contracted work.

Tenders should be inclusive of all travel and other expenses and disbursements.

Pending the availability of additional funds, the consultant may be invited to participate in a follow-up workshop with Wadden Sea experts to present the results of this study. However, these costs should not be considered at this point.

5. Time schedule

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| 1. Invitation to submit a Tender: | 09 September 2024 |
| 2. Deadline for delivery of tenders: | 18 October 2024 |
| 3. Decision and selection of a consultant: | 25 October 2024 |
| 4. Duration to undertake the tasks and deliver the expected outputs: | Nov. 2024 – Mar. 2025 |
| 5. First Draft Report: | 15 March 2024 |
| 6. Final Report: | 30 April 2025 |

A first payment is done at the signing of the contract. The remaining is paid upon approval of the intermediate and final products.

6. Proposed tender format

Electronic proposals are to be submitted in a format that allows uniform review and easy access to information for the selection. To assist the evaluation process, the proposal shall contain the following information:

Letter of interest and signature page (max. 1 pages per agency/consultant):

This letter should include general information about the consultant or group of consultants such as: description of all services offered, the total years in business, number of employees, office location(s), etc. include name, home and email for authorized contact concerning proposal.

Budget (1 page)

Approach to project (max. 2 pages)

Short description of services offered describing how you would approach this study, and how you will work with the client (CWSS and the trilateral Expert Group Saltmarshes and Dunes) and with other relevant actors (workshop participants). Explain the proposed methodology that will be used and demonstrate a clear understanding of the project's objectives. Include a work plan and schedule.

Relevant qualifications of the firm (max. 2 page)

Outline experience in carrying out similar assignments (including references of previous projects).

Specific qualifications of individuals (max. 2 pages)

Provide an overview of the qualifications of your project staff, including potential sub-contractors (if applicable). Describe who will perform the various tasks, and their anticipated level of involvement and responsibilities. Include resume from academic CV of individual(s) in appendix (appendix not included in page count).

7. Selection criteria

Award of the contract will be based on the best value service, which may or may not be the tender with the lowest cost. Incoming offers will be compared according to:

- 40% Proven expertise (information on expertise, CV experience of assigned staff in carbon sequestration measures/projects)
- 30% price (value for money)
- 30% consistency and quality of the offer in terms of approach and task management

8. Contact address

Please submit your proposal with the subject line “Carbon sequestration in the Wadden Sea” **no later than 18 October 2024 / EOB to:**

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D 26382 Wilhelmshaven
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