MEETING DOCUMENT

**Expert group Climate Change Adaptation**

**(EG-C 9)**

19 May 2021

Online meeting

**Agenda Item: 6. Single integrated management plan (SIMP)**

**Subject: Climate Change Vulnerability and Adaptation**

**Document No.:** EG-C 9/6

**Date:** 07 May 2021

**Submitted by: CWSS**

The Leeuwarden Declaration 2018 includes the task to develop a single integrated management plan for the Wadden Sea World Heritage (SIMP) as requested by the WH Committee in 2014. The content of the SIMP, based on the preliminary structure endorsed by the WSB 30 ([*WSB30 5.1-2 SIMP status report.pdf*](https://www.waddensea-worldheritage.org/system/files/WSB30%205.1-2%20simp%20status%20report.pdf)), aims to provide a clear overarching description of the nature conservation management systems at the national and trilateral levels. The SIMP also aims to address key topics presenting concrete threats to the OUV and takes into consideration the influence of climate change adaptation.

In addition to publishing the concise stand-alone SIMP document, relevant background information gathered in the process of developing the SIMP will be published in an online microsite under the CWSS website. The current version of the SIMP document submitted to WSB 32 for endorsement can be found in [*WSB32 5.1.2 SIMP status report*](https://www.waddensea-worldheritage.org/system/files/WSB-32-5-1-2-Progress%20report%20of%20the%20SIMP.pdf).

The role of EG-C in relation to the overall SIMP is two-fold:

1. Lead the development of a concise section on Climate Change Vulnerability and Adaptation (Annex, table 1)
2. Lead the development of the key topic Coastal Flood Defence and Protection (Annex, table 2)

This document contains a draft “Climate change vulnerability and adaptation” section as presented at EG-C 8 and further developed by CWSS to review and discuss, in particular the proposals for management activities.

**Proposal:** Review and agree on “Climate change vulnerability and adaptation” section and submit to TG-WH to integrate in the SIMP

4. Climate Change Vulnerability and Adaptation - Draft

4.1. Climate stressors in the Wadden Sea

Three key climate stressors impacting the Wadden Sea OUV in a time frame of 50 and 100 years were identified by applying the Climate Vulnerability Index (CVI) rapid assessment method: 1) temperature trend (air and/or water), 2) extreme temperature events and 3) sea level rise. In a “business as usual” scenario, the OUV vulnerability was assessed high, meaning there is potential for major loss or substantial alteration of the majority of the key values that convey the OUV. Enhanced sea level rise may seriously affect structure, functions and the characteristic biodiversity of the Wadden Sea ecosystem. As substantiated in trilateral reports on sea level rise in the Wadden Sea (CPSL Third Report, CPSL First Report), strong sea level rise may lead to a significant reduction in tidal flats and salt marshes as well as in safety of the inhabitants of the region. Furthermore, climate change may severely impact the present distribution and abundance of species. Also, additional climate stressors (i.a. precipitation trend, storm surge, ocean acidification) may have an impact on the OUV.

4.2. Adaptation and mitigation agreements

Adaptation measures in the Wadden Sea are guided by the “Trilateral Climate Change Adaptation Strategy” (CCAS), which was adopted by the responsible ministers in awareness of these implications at the 12th Trilateral Governmental Conference on the Protection of the Wadden Sea in Tønder, Denmark in 2014. The aim of this strategy is to enhance and promote policies and measures necessary for increasing the resilience of the Wadden Sea. A trilateral expert group evaluates the possible impacts of climate change and looks at possible strategies for adaptation in the Wadden Sea region. In order to successfully counteract or minimise these impacts to the extent possible and to restricting measures to what is necessary, seven strategic objectives and guiding principles are considered, such as the use of natural dynamics and flexibility, interconnectivity of habitats as well as site-specific approaches, trilateral cooperation with long-term planning, and the participatory approach. The seven principles are being applied in a wide range of projects and policies in the trilateral Wadden Sea Area. The implementation of the strategy focuses on trilateral cooperation, not only in the application of responses, but also in the areas of policies and management, monitoring and evaluation, and communication and education. Particular attention is paid to sea level rise and increasing temperatures – both underlined by the CVI process-, and also to precipitation patterns as these are predicted to have the greatest impact on people and nature in the Wadden Sea.

Responses to adapt to sea level rise build upon local and regional established scientific and technical support. These might have significant influence on the OUV as they will most likely lead to an increase of activities for coastal defence and protection measures, such as dike strengthening and sand nourishments. Limited responses for adaptation are currently known and ready to implement to adapt to increasing air and water temperatures or extreme temperature events thus improved knowledge is needed to develop additional management options.

Imperative for combating climate change impacts are local and global climate mitigation measures, such as CO2-reduction as outlined in the Paris Agreement on Climate Change of 2016. Mitigation measures in the Wadden Sea are politically supported by the ministers’ declaration in 2010 “…to work towards developing the Wadden Sea Region into a CO2-neutral area by 2030 or before, putting the focus on the special threats for coastal zones by global warming and sea level rise”. Thereby, agreed to “support the global and national efforts to mitigate causes of climate change at the regional level, by calling especially upon local and regional competent authorities and stakeholders”. CO2-reduction policies and plans at the national and regional levels include the transition to renewable energy and thus the implementation of infrastructure to cover the demand.

Potential conflicts as well as related opportunities to climate change adaptation and mitigation measures related to coastal flood defence and protection measures and renewable energy are addressed in Section 5.

4.3. Proposals for management activities

[Note to EG-C: some proposals for management activities related to climate change adaptation and mitigation have emerged in the site managers workshops, as well as from the CVI analyses.

Preliminary proposals are listed below. EG-C members are invited to add and/or enrich/make more concrete proposals for management activities to include in the SIMP.]

Preliminary proposals for management activities:

* Stimulate and maintain trilateral knowledge exchange and interdisciplinary discussions about i.a.: best practices for adapting to climate change, projects for restoration of threatened habitats as an adaptation measure, methods to limit the damage or prevent negative impact of climate change on the OUV, improve knowledge about the potential effects of climate change on economic, social and cultural areas and test responses.
* Develop operational guidelines or an action plan for the CCAS and make it more publicly known.
* Continue monitoring the trilateral CCAS and embed the results in long-term trilateral climate change policies.
* Improve OUV key values and climate change communication in relation to economic, social and cultural values.

[Note to EG-C: A comment that just said “sustainable tourism” was not addressed yet in this document. An idea may be to leverage the link to the Strategy for Sustainable Tourism. Can the person who made the comment, elaborate on their idea?]

**References** (to be aligned with the overall SIMP format)

Osipova, Elena, Peter Shadie, Celia Zwahlen, Matea Osti, Yichuan Shi, Cyril Kormos, Bastian Bertzky, Mizuki Murai, Remco Van Merm, and Tim Badman. 2017. IUCN World Heritage Outlook 2: A Conservation Assessment of All Natural World Heritage Sites. Gland, Switzerland: IUCN. https://portals.iucn.org/library/sites/library/files/documents/2017-053-En.pdf.

International Council on Monuments and Sites Conseil International des monuments et des Sites, RESOLUTION 19GA 2017/30 <https://rm.coe.int/resolution-19ga-2017-30-mobilizing-icomos-and-the-cultural-heritage-co/168098e211>

<https://www.waddensea-worldheritage.org/sites/default/files/2017_ccas_monitoring_report.pdf>

IPCC. 2019. IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)].

CWSS. 2014. Trilateral Climate Change Adaptation Strategy. Ministerial Council Declaration of the Twelfth Trilateral Governmental Conference on the Protection of the Wadden Sea. Common Wadden Sea Secretariat, Wilhelmshaven, Germany.

Annex: EG-C related activities in the single integrated management plan (SIMP)

1. **Climate Change Vulnerability and Adaptation**

The input for a section about Climate Change Vulnerability and Adaptation in the SIMP should present information useful for managers showing how is the TWSC addressing climate change and based mainly on the Trilateral Climate Change Adaptation Strategy (CCAS), the respective QSR Thematic Reports, the main results of the Climate Vulnerability Index (CVI) assessment (phase 1 and 2) and potential proposals for management activities. Further recommendations from EG-C are fully welcomed.

*Table 1: Climate change vulnerability and adaptation deliverables for SIMP document and microsite, as well as possible relation to the Quality Status Report (QSR). Final tasks for all is approval by WSB in WSB 33 meeting in August 2021 (deadline: June2021).*

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| **Deliverables** | **Destination** | **Tasks** | **Deadline** |
| **Section on “Climate Change Vulnerability and Adaptation**” to introduce the theme, how TWSC addresses climate change vulnerability and adaptation | SIMP main document | 1. Review Annex 1 of this document  2. Finalisation | 1. This meeting  2. first week of June |
| **Proposals for management activities**, including CVI. | SIMP main document | 1. Review Annex 1 of this document and add activities that can bring the TWSC forward in dealing with climate  2. Finalisation | 1. This meeting  2. first week of June |
| **Additional relevant information?** | SIMP microsite | Suggest/add as appropriate | This meeting (and ongoing, to add/update/remove content is always possible in the microsite) |
| **?** | QSR thematic report | Determine if there is link to SIMP | Before summer break |

1. **Development of the SIMP key topic Coastal Flood Defence and Protection**

*Table 2: SIMP key topic Coastal Flood Defence and Protection deliverables for SIMP document and microsite, as well as possible relation to the Quality Status Report (QSR). Final taks for all is approval by WSB in WSB 33 meeting in August 2021 (deadline: June 2021).*

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| **Deliverables** | **Destination** | **Tasks** | **Deadline** |
| **Textual description of activities with impact on OUV in matrix** Activities & textual description with impact in impact matrix: will be elaborated by external consultant. First draft until April 2021. | SIMP microsite  Impact matrix of all key topics together in SIMP main document | 1. Draft list and activities completed by EG-C  2. Further elaboration by external consultant  3. Review by EG-C and other relevant trilateral groups  4. Finalisation by EG-C | 1. Done (Annex 2)  2. Until April 2021  3. May 2021  4. June2021 |
| **Proposals for management activities**, based on matrix | SIMP main document | 1. Discuss and agree by EG-C (in next EG-/SIMP meeting?)  2. Finalisation | 1./2 May/June |
| **Summary of SIMP key topics, one of them being coastal flood defense and protection** (see energy as example in WSB 32 SIMP document). Inventory, Common ground, and challenges. This is based on coastal flood defense and protection document as elaborated by EG-C in EG-C 6 meeting | SIMP main document or microsite. Decision TBD (TG-WH) | 1. CWSS to extract from EG-C 6 document,  2. EG-C to review and finalise | 1. March 2021  2. first week of June |
| **Common ground** (from coastal flood defense and protection document as elaborated by EG-C in EG-C 6 meeting) | SIMP microsite | 1. CWSS to extract from EG-C 6 document,  2. EG-C to review and finalise | 1. March 2021  2. first week of June |
| **Legal framework** (work presented by Marine Perrin, CWSS) | SIMP microsite | 1. CWSS first draft  document,  2. EG-C to review and finalise | 1. substantial draft this meeting  2. end of March 2021 |
| **Additional relevant information?** | SIMP microsite | Suggest/add as appropriate | Before summer break |
| **Inventory of key topics of the SIMP.** For the other key topics, this is presented in updated QSR thematic reports, (for fisheries, shipping, tourism, energy). | QSR thematic reports | QSR thematic report 2017 is still up-to-date | Done |