



European Marine Board Expert Working Group

Coastal resilience

Terms of Reference

June 2020

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1. Background and Rationale

Coastal zones are particularly vulnerable to threats from increasing human pressures e.g. urbanisation, tourism, agriculture, fisheries & aquaculture, dredging, waste disposal, coastal engineering, and increases in greenhouse gas emissions with subsequent effects on sea level rise, water temperature, and ocean acidification. All these factors are contributing to habitat decline, which comes at a time when coastal zones are already being used at, or near, their maximum carrying capacity to meet the needs of an ever-increasing human population. Eurostat data revealed that in 2011, more than 40.8% of the EU population lived in coastal regions (regions with a sea border or where more than half of the population lives within 50 kilometres of the sea) which covered 40% of the EU territory. High coastal human population density and excessive exploitation of natural resources puts enormous pressure on our coastal ecosystems, leading to biodiversity loss, habitat destruction, pollution, as well as conflicts between potential uses, and spatial planning problems.

Coastal zones include many important ecosystems e.g. kelp and seagrass beds, coral and oyster reefs, mangroves, and sponge grounds. These provide critical ecosystem services, including blue carbon storage, storm and sea level rise protection, fisheries and aquaculture production and fish spawning grounds. In order to secure these ecosystem services for the future, a combination of actions are needed to promote resilience to stressors including nature-based solutions i.e.

conservation efforts that reduce or mitigate human impacts and physical stressors, and habitat restoration. Other adaptation measures include coastal protection and adoption of adaptive management practices. This working group will focus on the resilience of coasts from a holistic perspective including natural sciences (ecological, hydrological, chemical, physical, geological, etc.), ecosystem service provision, and links to socio-economic and governance systems. An in-depth analysis of the economic valuation of the benefits of coastal ecosystem services is not foreseen. For this, we refer to [EMB Future Science Brief n° 5: Valuing Marine Ecosystem Services](#).

The UN has declared 2020-2030 the UN Decade of Ocean Science for Sustainable Development and the UN Decade on Ecosystem Restoration, which both will provide significant opportunity to scale-up ecosystem conservation and restoration. During these Decades there is a need for scientists, policy makers, industry and society to work together to find the best solutions to sustain the ecosystem services provided by the wider ocean and coastal habitats. In March 2020, The European Commission presented its new Biodiversity Strategy, which includes commitments to address the main causes of biodiversity loss in the EU, underpinned by measurable objectives that address the main causes of biodiversity loss. Additionally, through the European Green Deal the *“The Commission will consider drafting a nature restoration plan and will look at how to provide funding to help Member States to reach this aim”*. Therefore, it is timely to provide adequate scientific input to this “nature restoration plan”.

Potential issues & questions to consider for this Working Group (to be discussed and updated by the working group members):

- Coastal habitats (e.g. coral reefs, mangroves, tropical wetlands, seagrass, rocky shores, estuaries, salt marshes, sand dunes, coastal forests and woodlands, deeper shelf habitats, as well as pelagic ecosystems) have their own specific vulnerabilities. What are the priority areas in Europe and in Overseas Countries and Territories that should be conserved and/or restored based on for example their potential to provide the most benefits from ecosystem services or the risks imposed on them from ocean warming and acidification? This exercise should consider the carbon sequestration (i.e. blue carbon) potential of the different habitats such as salt marsh, seagrass, mangroves and macroalgae beds (e.g. kelp) that are possible locations for restoration schemes and protection methods.
- Temporal dimensions and variability are crucial to coastal zone dynamics and natural function. Therefore, there is a need to routinely monitor our coasts and collect, collate and analyse vital physical, chemical, biological, ecological, and socio-economic data.
- How can we define and develop “functional” ecosystems and how can we measure and promote their resilience under continual change and multiple stressors in and across coastal ecosystems? What are the best ways to deal with multiple stressors? What are the trade-offs between removing or reducing stressors and developing coastal ecosystems that are adaptive to these stressors?
- Which regime shifts and tipping points in coastal ecosystems should be considered? How should we deal with invasive species under changing climate conditions?
- Conservation plans alone (MPA/SAC) cannot safeguard against new environmental stresses caused by climate change. As marine ecosystems change continuously over time, which climate and sea level rise scenarios should restoration and adaptation projects consider (e.g. temperature increase, change in seasonality, change in tidal elevation, change in storm frequency)? Which of these consequences impact restoration and adaptation efforts as well as ecosystem service provision? How should these be accounted for?
- How can we promote the inclusion of coastal conservation and restoration measures as ocean-based solutions in Nationally Determined Contributions of the Paris Agreement?

These are 'low regret' measures that can be scaled up as adaptation measures to climate change, however their effectiveness depends on warming levels.

- The resources to invest in conservation or restoration are limited. How can we evaluate which options are the best to invest in? Are there types of ecosystems for which conservation and restoration lead to better results (in terms of ecosystem services) than others? What are the benefits and disservices that might arise from ecosystem restoration and how can we evaluate the trade-offs between them? What are options for co-existence of nature with human use, e.g. ocean multi-use to contribute to a more sustainable and efficient use of ocean resources with both economic and environmental benefits?
- Difficulty of attaining a balance between the societal and economic needs against the desire to preserve and protect natural heritage and the backdrop of external drivers like climate change and often contradictory EU and national policy and legislation – growth vs conservation etc.
- How can we bring together communities working on coastal resilience? They all have different approaches and do not currently work together.

Rationale for Working Group

The EMB Autumn Plenary 2018 identified a potential new EMB activity relating to coastal resilience. Despite conservation efforts, ecosystems continue to degrade due to human development, resource exploitation and climate change. The United Nations have already recognised the importance of restoration in the coming decade (2021-2030). This proposal was discussed at the EMB Spring Plenary 2019, Autumn Plenary 2019 and the EMB Spring Plenary 2020.

2. Working Group Objectives

- Provide an overview of the current state of the art in methods and tools for coastal resilience, knowledge gaps, and problem definition for future challenges;
- Help close the gap between conservation and restoration research and policy in the European marine environment and contiguous regions (and discuss the contradictions between economic and environmental policy drivers);
- Evaluate existing frameworks for transboundary cooperative planning; and identify and propose future developments for conservation and restoration measures.
- Inform EU policy on the need for legislation that will ensure/promote science-based decision making in coastal conservation, restoration, habitat and biodiversity management;
- Build capacity and literacy in coastal ecosystem conservation, restoration, and resilience among stakeholders including scientists, policymakers, the private sector and the wider public.

3. Deliverables

The Working Group will deliver a Position Paper addressing the above objectives by Spring 2022.

A peer review process with a minimum of two external reviewers will be organized by the EMB Secretariat. In accordance with the EMB procedures, the publication will require approval by the EMB Member Organizations prior to finalization and publication.

The impact of the publication will be achieved via a targeted dissemination strategy (see point 4). Working Group members will be required to make suggestions on how to reach end-user contacts and to contribute to the dissemination. Promotion of the publication may include dedicated presentations at stakeholder events. Working Group members will also be asked to notify the

Secretariat of any dissemination activities or observed uptake or impact of the messages in the publication, for up to two years following publication, for future impact reporting.

4. Target Audience and Expected Impact

The Working Groups are the primary foresight and priority-setting tools of the European Marine Board. The expected outcome is that the recommendations of the resulting policy document influence future research strategies and programmes at both national and European level. Therefore, the EMB policy document target audience is in the first instance those who determine and set research agendas, including research funding organisations, programme managers and science policy advisors/developers both at the national and European level.

To some extent, and depending on the subject, the expected outcome is also intended to strengthen the particular research domain by stimulating networking and developing common positions between expert scientists, potentially leading to new collaborative projects. The recommendations and perspectives delivered through EMB policy documents can also influence and drive broader marine and maritime policies, beyond the research realm.

5. Working Group Composition and Operation

Working Group Chair and co-Chair

A lead Chair and co-Chair will be selected to represent the Working Group and take responsibility for its deliverables.

Profile

The Working Group (WG) Chairs should be experienced marine scientists, marine social scientists or marine technologists in the field of coastal conservation, restoration or adaptation. It is important that the Chair and co-Chair have a big picture approach to ensure a focus and balanced view on the full spectrum of coastal management and restoration programs and their impact on the Blue economy.

Selection process

The Working Group (WG) Chair and co-Chair will be selected based on a call for WG member nominations issued by the EMB Secretariat to EMB Member Organizations. A WG Chair can be directly proposed by member organization(s) or working group member(s), on the basis of her/his recognized expertise and leading role in the field, at European or international levels. The EMB Secretariat facilitates the Chair and co-Chair selection, liaising with the EMB Executive Committee and member organizations, as required. The EMB Secretariat will interview a selection of the proposed WG members to find a suitable Chair and co-Chair.

The EMB Secretariat will work together with the Chair/co-Chair to select the WG members and ensure an appropriate balance of expertise and experience within the working group.

Roles and responsibilities of WG Chair

The WG Chair and co-Chair are responsible for ensuring the scientific quality of the Working Group outputs and its timely delivery according to the WG Terms of Reference and as agreed at the kick-off meeting. The WG Chairs provide scientific leadership and motivation and drive the WG activities with the support of a dedicated European Marine Board Science Officer who acts in the capacity of WG facilitator.

The WG Chairs (lead Chair primarily and co-Chair when the lead Chair is not available):

- Chair WG meetings,
- Coordinate the scientific contributions to the document draft according to the objectives defined at the kick-off meeting,
- Maintain an overview of the content and quality of the various inputs and requests additional expertise if necessary,
- Ensure timely delivery of the WG document, and
- Enhance the document's strategic impact by promoting WG activities and the output.

The meeting Chairs will be crucial to effectively moderate discussions and deliver meeting outputs.

Working Group Members

The Working Group will be made up of preferably 12 experts comprising European scientists and technologists who are participating in leading networks and/or research groups across different research domains, such as natural scientists, social & behavioral scientists, humanities, coastal engineers. During the process of selection of experts, connections with International and European initiatives will be ensured through membership of the WG. The group will be led by a Chair and co-Chair and facilitated by the EMB Secretariat.

Profile and selection process

WG Members may be drawn *inter alia* from EMB member organizations, national research institutes and universities as well as relevant European projects and initiatives, industry and non-profit organizations. A call for nominations will be issued by the EMB Secretariat to EMB Member Organizations. WG Members are selected from the resulting pool of experts by the WG Chair(s), supported by the EMB Secretariat. Decisions on the composition of the Working Group are guided by achieving the correct balance of expertise required to comprehensively address the topic at hand as well as ensuring a wide geographic and gender distribution. Non-selection of some nominated candidates is therefore normal, and bears no relation to the scientific excellence of those candidates not selected.

Roles and responsibilities of WG Members

WG Members are responsible for ensuring the scientific quality of their inputs and their timely delivery according to the WG Terms of Reference.

WG Members:

- Prepare for and attend the WG meetings,
- Submit written contributions in a timely manner as agreed at the kick-off meeting,
- Guide and adhere to the high-level strategic objectives of the publication,
- Promote the resulting brief at national level and European levels, and
- Feedback information on dissemination activities and opportunities, impact and uptake to the EMB Secretariat.

Engaging the wider community

During the course of the WG, members may invite a selection of stakeholders or observers from the wider community including science, industry, policy makers and funders to participate in working group discussions and/or contribute text.

EMB Facilitation of the Working Group

The EMB Executive Director is the *ex officio* WG manager. She nominates one or two Secretariat officers to support and facilitate the Working Group.

The EMB Secretariat will coordinate this activity with the Chair and co-Chair. A dedicated EMB Science Officer will act in the capacity of facilitator and other EMB Secretariat staff may be involved depending on the specific topic for each Working Group activity.

For this WG the facilitator is: Britt Alexander

General Data Protection Regulation (GDPR) policy for EMB WGs

Personal data for EMB working group members and those involved in other EMB core activities is used for internal communication with the activity as well as external communication of the EMB activity via publications, the EMB website and EMB social media outlets.

For any new EMB activities, consent is sought at the kick-off of the activity to cover all relevant use and storage of personal data. It is anticipated that the subjects would also be added to the EMB mailing list, and thus their data would continue to be stored and used beyond the end of the activity, unless consent is later withdrawn. A template consent form can be found in Annex 1. After a period of 2 years, unless requested otherwise, we will keep it in our database for future roles.

Reviewers are also contacted within the context of EMB activities. The template email they receive already clearly outlines their right to act that their input remains anonymous, in which case the reviewer would simply be listed as “Anonymous”. The reviewer will be informed of how and where their personal data will be stored. The consent of the reviewer will also be specifically sought for their personal data to be used outside of any activities directly relating to their role as reviewer, using the template text included in this document.

The EMB [privacy policy contains](#) information about our compliance with GDPR (data protection law). In this document you can find how to send us a request to let you access your data that we have collected, request us to delete your data, correct any inaccuracies or restrict our processing of your data. You have the right to lodge a complaint about the way we handle your data with [Belgian Data Protection Authority](#) or you can contact us at info@marineboard.eu for more information or concerns.

6. Mode of Operation

The establishment of a Working Group is for a limited duration and the group will be disbanded when it has fulfilled its mandate. The EMB Secretariat facilitates the WG operationally, but WG members and Chairs are not financially supported by the EMB (unless an extraordinary financial contribution is secured by one or more EMB Member Organizations). It is foreseen that participation of WG members is funded by their own institutions or the member organization that proposed them.

The work programme for the Working Group will consist of:

- Meetings to discuss the scope of the working group and written contributions. This will include at least one physical meeting (usually the kick-off meeting), and 2 or more remote meetings via video conference. In light of the COVID-19 crisis the first meeting might not be a physical meeting, but it is foreseen that the WG would meet at least once in person;
- Writing assignments;
- Regular email interactions;
- Facilitation of the WG by the European Marine Board Secretariat;
- External peer review by at least 2 reviewers on EU and international level;
- Coordination of the report writing to publication standards by the WG Chair/co-Chair; and
- Final editing of the report in preparation of the publication by the EMB Secretariat and the WG Chair and co-Chair.

Support from the European Marine Board:

- The EMB will arrange meetings and provide organizational support for WG meetings;
- The EMB will cover the costs of all catering associated with WG meetings, including a WG dinner. Travel costs for WG participants are not covered by the EMB secretariat, but normally covered by the nominating EMB Member Organization or by the participant's own institution (if these are different);
- The EMB will cover the costs of publication and dissemination (to relevant stakeholders);
- Members of the EMB Secretariat will attend each meeting, write and disseminate meeting minutes, and will maintain regular dialogue with the WG Chair and co-Chair to ensure timely delivery of the publication.

7. Indicative Timetable

The Working Group activities are foreseen to start in Autumn 2020 with WG activities continuing for approximately 14-18 months from launch, including 2-3 meetings (Kick-Off meeting followed by several tele-meetings) and including 3 months for internal and external review, design and remote approval. Publication of the final document is foreseen in Spring 2022, to be able to feed into the UN Decade on Ecosystem Restoration and the UN Decade of Ocean Science for Sustainable Development that starts on 1 January 2021.

Indicative timetable (2020-2021)	2020								2021								2022						
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
Submission ToR for Board approval	■	■																					
Nominations and expert selection		■	■	■																			
Appointment of WG co-Chairs				■	■																		
WG member list confirmed, invitations and planning for kick-off meeting					■	■																	
Kick-off meeting <ul style="list-style-type: none"> ▪ discussion of ToR ▪ objectives and scope of the WG ▪ table of contents and work plan ▪ confirm expertise, allocate writing assignments communication plan, foresight tools and brainstorming on recommendations							■	■															
Drafting of content (with remote meetings between EMB SEC, Chair and co-authors as necessary)								■	■	■													
Meeting 2 & 3 <ul style="list-style-type: none"> ▪ review of the draft ▪ finalize the structure of the document identify illustration & image needs										■	■	■	■	■	■								
Finalize (text and illustrations)																■	■	■					
Approval of publication by WG members																	■	■	■				
External review and revisions																		■	■	■			
Design and Remote Approval by EMB delegates																			■	■	■		
Publication and press release, followed by dissemination and uptake/impact tracking																					■	■	■

EMB Working Groups & Publications

Decision making procedures

Horizon Scanning



① Brainstorming

Topics of strategic importance for marine sciences are discussed by EMB members at plenary meetings (Board)



② Topic selection

Board selects topics to be further elaborated in a short scoping document



③ Topic approval

Board discusses topic content and approves the set-up of a new EMB Working Group (WG)

Establishment of EMB Working Group



⑥ Expert selection

EMB Secretariat & ExCom select WG Chair (and co-Chair); the Chair and co-Chair select the WG members from the nominations



⑤ Call for Nominations

EMB members propose experts from within their network to participate in the EMB Working Group



④ Terms of Reference

The content, purpose, and format of the WG are described in the ToR and submitted for Board

EMB Working Group Operations



⑦ WG meetings

The selected experts meet in person at least once to discuss the work plan/content of the working group



⑧ Publication development

WG members work remotely to provide input to the publication. EMB Secretariat & WG Chair(s) collate info into a draft document



⑨ Design

Finalized draft is circulated to all members of WG for comments & designed by EMB Secretariat

EMB Publication



⑫ Impact tracking

Impact of the document is tracked for up to 2-years



⑪ Launch & dissemination

The publication is launched at a dedicated event, promoted to targeted stakeholders online and hard copies are distributed



⑩ Review process

The draft publication is sent for internal review to all EMB member organisations and to at least 2-3 external reviewers

Annex 1: Consent form for Core Activities

EMB holds personal data for anyone involved in core EMB activities, including Working Groups.

The following personal data may be held by the EMB Secretariat:

- Name
- Title
- Job title
- Areas of expertise and research interests
- Previously held roles
- Institute
- Country
- Institutional email address
- Institutional postal address
- Institutional telephone number
- Photographs
- Video

This information is stored in a secure spreadsheet and folder locations, and only EMB Secretariat staff have access to this.

EMB may:

- Contact you regarding the EMB activity that you are directly involved with
- Contact you regarding other EMB activities
- Add you to the EMB stakeholder mailing list
- Make your name, institution and country publically available on the EMB website, in EMB communications, e.g. presentations regarding the activity you are involved in, and in EMB publications
- Take your photograph during EMB activities and use these pictures in publications, on the EMB website and on EMB social media outlets
- Take video footage during EMB activities and use these pictures in publications, on the EMB website and on EMB social media outlets

The data held may be reviewed and revised by the subject, and consent for any or all of the above may be withdrawn at any time.

Please tick this box to confirm that you understand the above, and that you give EMB permission to obtain, use and store your personal data as outlined above.

Name:

Date: