

REPORTING FORM 2024

Please return completed form to imber@ecnu.edu.cn by **20th July**

REPORTING PERIOD: WHAT YOU HAVE DONE since the annual report submitted for the SSC meeting held in Paris in April 2023 ([Link to past annual reports](#))

and **PLANNED ACTIVITIES** over the next year (and beyond if details available)

N.B. The form focuses reporting on the research objectives (2022-2025) of the Grand Challenges (in order to align with how we are addressing IMBeR's commitments defined in the 5-year review process to SCOR and Future Earth).

Thank you.

Innovation Challenge 6: Sustainable management of Blue Carbon ecosystems

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1. Ongoing activities, in line with the IMBeR Grand and Innovation Challenges

(Among other uses, information will be used to update the [IMBeR Annual Report to SCOR](#))

1.a. Grand Challenge I

Understanding and quantifying the state and variability of marine ecosystems - with focus on Research Objectives 1 to 3:

Research Objective 1. *Evaluate and predict the cumulative effect of multiple stressors*

Research Objective 2. *Integration of climate change and climate variability*

Research Objective 3. *Impacts on society – preparation for a changed future*

Add text...

1.b. Grand Challenge II

Improving scenarios, predictions and projections of future ocean-human systems at multiple scales - with focus on Research Objectives 4 to 6:

Research Objective 4. *Development of integrated data systems and approaches for predictions and projections*

Research Objective 5. *Development of predictive models and projections for use at regional scales*

Research Objective 6. *Development of alternative scenarios to bridge the gap between physical climate sciences and humanities*

Add text...

1.c. Grand Challenge III

Improving and achieving sustainable ocean governance - with focus on Research Objectives 7 to 9:

***Research Objective 7.** Develop knowledge on best practices for multilevel governance approaches to ocean climate adaptation and mitigation*

***Research Objective 8.** Develop understanding on key ingredients for transformation towards more sustainable, equitable and inclusive governance approaches to fisheries and aquaculture*

***Research Objective 9.** Support implementation of post-2020 biodiversity targets for marine spatial planning and marine protected areas*

Add text...

1.d. Innovation Challenge 3

To advance understanding of ecological feedbacks in the Earth System

Add text...

1.e. Innovation Challenge 4

To advance and improve the use of social science data for ocean management, decision making and policy development

Add text...

1.f. Innovation Challenge 5

Interventions to change the course of climate impacts

Add text...

1.g. Innovation Challenge 6

Sustainable management of Blue Carbon ecosystems

The preservation, conservation and creation of marine ecosystems such as mangroves, seagrass beds and saltmarshes, which remove and store 'blue' carbon from the atmosphere for decades to centuries, provides an important means of mitigating climate change for countries where such ecosystems cover a significant area. Blue carbon ecosystems also make an important contribution to the social and economic development of coastal communities, whose role in the in-situ preservation and conservation of blue carbon is substantial.

However, there are major uncertainties in quantifying the global extent of blue carbon ecosystems. There is even more uncertainty about less conventional blue carbon habitats, such as intertidal sand- and mudflats and kelp beds. Further major unknowns are the mechanisms and extents of offshore carbon export from these systems, and the degree to which it joins medium- to long-term carbon sinks, in the deep-water dissolved organic carbon pool or burial in shelf, slope or deep-sea sediments.

Add text...

3. International collaboration and links

Add text...

4. Input to management, policy and SOCIETY* over the last year

Add anything that is not covered under "1.c. Grand Challenge III"

**As previous reporting forms requested 'input to management and policy' only, please add any 'input to society' not captured in previous reports*

Add text...

5. Education, outreach and Capacity Development

IC6 group invited early carrier professionals/scientists to join the blue carbon working group. From 30 applicants, we shortlisted 11 people. They are from Kenya, New Zealand, Nigeria, Norway, Sweden, UK, and USA. We are still discussing to narrow it down to 3-5 people as suggested by BCWG members.

Chair and member of IC6 group are actively contributes to outreach activities, in his/her capacity as a member of IMBeR as well as personally. Tiziana Luisetti provided training on blue carbon accounting economics at the Global Dialogue on Sustainable Ocean Development (<https://www.oceanaccounts.org/global-dialogue-sustainable-ocean-development/>) in Bali, July 2024.

6. Planned activities

6.a. Activities and Outreach and how they link to the Challenges (including, but not limited to convening sessions, meetings, summer schools, workshops, etc)

- i. *Online meeting for the Working Group will be conducted twice a year.*
- ii. *Meeting and engagement with the early carrier professional.*
- iii. *Exploring collaboration opportunities with UNESCO's Intergovernmental Oceanographic Commissions.*
- iv. *Exploring the funding opportunities and future direction of the working group.*

6.b. Upcoming papers (Community-Position-Review-etc)

Add text...

7. Funding

7.a. Funding from external sources

7.b. Funding proposals in progress or planned

7.c. Funding requested from IMBeR for 2024-2025

Include a brief budget and justify requests

8. Changes to Organisational Structure

Due to the lack of activity and engagement among group members, an idea was raised to reform the IC6 group and ask members whether the group is still needed in the future. We will organise a meeting soon regarding this matter.

9. Images / Figures

*****It is always good to have some recent photos / figures / infographics to create more exposure for the Regional Programmes, Working Groups, etc. These can range from those suitable for a very scientific audience, to those that would engage the general public. IMBeR would use these, on the website (e.g. <http://www.imber.info/> and <http://www.imber.info/en/news>), in tweets (@imber_ipo), in presentations, etc. In addition, Future Earth (one of our sponsors) regularly asks us to provide high quality images for their glossy reports. These can highlight the activities of IMBeR and their other Global Research Projects (see pdfs of past Future Earth reports here <https://futureearth.org/publications/annual-reports/>)*

*So, please provide any images that you might think are useful. These can be pasted in this document or emailed as an attachment to imber@ecnu.edu.cn.*****

10. Anything not covered above

Add text...

11. How to improve this form

Please give suggestions on how to improve this form and make it better next time.

Add text...

12. Appendices

Add appropriate meeting / workshop reports and include URLs (this helps to track where online content is missing)

Add text...