

REPORTING FORM 2025

GC III

Operating Period as an IMBeR Member:

- *Start Year: 2024*
- *End Year: 2025*

List of Authors: D. Armitage (contributions from M. Trimble, M. Ballasteros)

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

Ensuring just transitions in small-scale fisheries: learnings from across the globe

GC III co-leads Mica Trimble and Derek Armitage convened a special session on just transitions in fisheries governance at the Program for Ecosystem Change (PECS) conference, Montreal (August 12-15, 2024). The panel session and discussion involved 5 presentations from fisheries cases around the globe. Summary blog of session: <https://pecs-science.org/ensuring-just-transitions-in-small-scale-fisheries-learnings-from-across-the-globe/>

World Oceans Assessment III

Several members of GC III and other IMBeR working group members are contributing to the United Nations World Oceans Assessment (WOA) chapter on small-scale and artisanal fisheries. This is the first time the chapter on small-scale fisheries has been included in the WOA

Grand Challenge and Science Synthesis Initiative

The GC III team is coordinating a science and process synthesis of IMBeR activities over the past 5-10 years. The synthesis is led by three PDFs (Deborah Prado, Mia Strand and Ella-Kari Muhl, all of whom have been affiliated with IMECAN). The objective is to examine the key empirical contributions and the procedural, organizational and technical lessons learned from a 10-year, large-scale global ocean research project with reference to 1) state and variability of marine ecosystems; 2) future ocean-human systems scenarios; and 3) enabling governance conditions. Key activities associated with this initiative have included: a) a self-assessment and evaluation within the IMBeR science community (past and present) of key contributions, lessons learned and challenges; b) the co-development of key assessment and evaluative questions/criteria within SSC, and c) interviews of SSC, IPO, challenge and innovation leaders, regional program leads, etc. To date, over 20 IMBeR researchers have been interviewed. The following presentations have been made on the process and outcomes so far:

- Armitage et al. 2025. Looking forward: Insights from IMBeR experiences and outcomes. Presented at Futures Oceans 3, Shanghai, May 12-16. (presented by D. Armitage on behalf of D. Prado et al.)
- Prado et al. 2025. Ocean sustainability in the context of global change: Lessons learned from a large-scale ocean research project. One Ocean Science Conference. June 2-6, Nice, France.

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

Add text...

2. Selected highlights

2.a. Selected scientific highlights since last report (1-5)

Last report was submitted to SCOR, August 2024

Add text...

2.b. Publications since last report

Please add all publications since last report to the table below (see notes for details on “Class” and “Activity” fields).

Publication with DOI	Class 1, 2, 3	Activity*
Muhl, E.-K., D. Armitage, K. Anderson, C. Boyko, S. Busilacchi, J. Butler, C. Cvitanovic, L. A. Faulkner, J. A. Hall, G. Martynuik, K. Paul-Burke, T. Swerdfager, H. Thorpe, and I. E. van Putten. 2023. Transitioning toward “deep” knowledge co-production in coastal and marine systems: examining the interplay among governance, power, and knowledge. Ecology and Society 28(4):17. https://doi.org/10.5751/ES-14443-280417	3	
Dias, A.C.E., Armitage, D., Nayak, P.N. et al. From vulnerability to viability: A situational analysis of small-scale fisheries in Asia and Africa. Marine Policy. 152: 105731.	3	
Muhl et al. <i>in review</i> . Transition pathways from vulnerability	2	IMBeR support

[Add more rows if needed]

****Notes on publications****

Publications since 2016 | Publications prior to 2016

Class 1 publications are specifically generated through/by/from/during **IMBeR activities** - for example, arising from IMBIZOs and IMBeR conferences such as the IMBeR open science meeting and the IMBeR West Pacific symposia and from the activities of the working groups, regional programmes and the SPIS scoping teams.

Class 2 publications are on topics relevant to the IMBeR Science Plan that benefitted from some interaction with IMBeR or **IMBeR activities**, for example by IMBeR symposium attendees, past and present SSC members, working group, regional programme and endorsed project members, or national contacts.

Class 3 publications are on topics relevant to the IMBeR Science Plan but for which there is no direct link to or benefit from an IMBeR activity. These might include publications by SSC members, working group, regional programme or endorsed project members or members of the IMBeR international community that were written as part of the normal scientific activity of the authors and would have occurred irrespective of IMBeR's existence. You can report Class 3 publications, but they will no longer be logged in the IMBeR database.

[See “[What is an IMBeR publication?](#)” for further information]

Why list ‘Class’ and ‘Activity’? This helps us to declare authentically which publications IMBeR has helped to generate, and it makes it easier for us to demonstrate the value of the Regional Programmes, the Working Groups, and IMBeR in general, and it helps us to justify support for IMBeR activities when we can list tangible outputs.

2.c. Events, Meetings, and Workshops

List all international and national events, meetings and workshops. Describe the level of participation: e.g. chairing session/workshop, organising meeting. Include Endorsed Projects committee meetings and workshops.

GC III Session 'Blue Transformations: Governance for the ocean-climate-biodiversity nexus'. Future Oceans 3, May 13, 2025, Shanghai. (Convenor Derek Armitage). Session involved three presentations from global experts exploring different aspects of the governance transformations required to address the ocean-climate-biodiversity nexus.

Stakeholder engagement in complex ocean multilevel governance settings. Parallel Session 4, Future Oceans 3, May 14, 2025, Shanghai. (Convenor Marta Ballasteros). This session stimulated debate within the international community on how engagement with stakeholders transforms scientific and policy processes.

GCII and GC III Parallel Session Presentations, Future Oceans 3, May 14, 2025, Shanghai. (Convenor Derek Armitage and Rowan Trebilco). Session presentations addressed a wide range of governance and solutions oriented themes, including scenario examples.

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

Add text...

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)

Add text...

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

A paper based on the IMBeR GC synthesis is in preparation:

D. Prado, M. Strand, E-K Muhl and D. Armitage , A. Newton, A. Hobday; C. Robinson; C. Cvitanovic; D. Liu; E. Hoffman; E. Murphy; F. Zuo; F. Mueter; G. Hong; I. van Putten; J. Melbourne-Thomas; J. Claydon; L. Kaikkonen; M. Trimble; N. Bednaršek; R. Hood; R. Trebilco; S. Dupont; S. Brodie; K. Evans. In prep. Ocean sustainability in the context of global change: Lessons learned from a large-scale ocean research project.

8. Changes to Organisational Structure

Add text...

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. Notable achievements over the IMBeR decade (2016-2025)

10.1...

10.2...

10.3...

10.4...

10.5...

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10.x...

11. A list of Synthesis Products

Add text...

11. Reflections

Add text...

12. Recommendation for future work

Add text...

13. Anything not covered above

Add text...

14. Appendices

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

Add text...