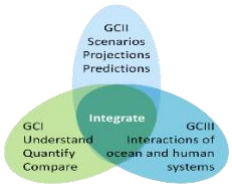



IMBeR
Integrated Marine Biosphere Research

# Improving and achieving sustainable ocean governance

***The Challenge**: To improve linkages between science, policy and society to mitigate and adapt to global change, and transition towards sustainable ocean governance.*

## Challenges for ocean governance

Ocean governance develops and organises the way in which humans use the ocean and its resources. Ocean governance is fragmented and areas both within and outside national jurisdictions are under pressure from overexploitation, pollution, climate change, and species and habitat degradation. Trade-offs between different uses require cooperation between nations, sectors and governance institutions. To achieve good governance and address the different services and pressures on ocean systems, a change in current approaches to ocean governance is required. Good ocean governance needs careful coordination of research efforts and interdisciplinary science approaches – a focus for IMBeR.

## Moving ocean governance from promise to equitable practice

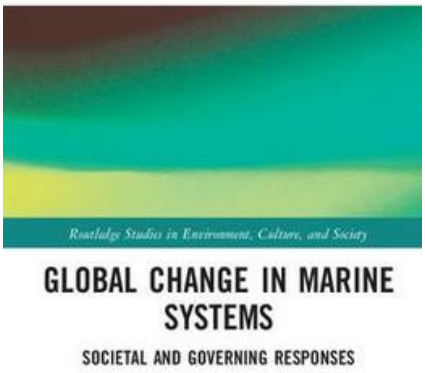
Opportunities to transform ocean governance need to be identified, while carefully navigating potential environmental, social and economic risks, and considering the livelihoods and well-being of coastal and maritime communities. An important first step is to **clarify the multiple layers, principles, and concepts** of ocean governance and find integrated and effective governance systems that would simultaneously lead towards sustainable ocean and equitable societal outcomes.

Multiple and growing demands on ocean resources and services need to be balanced. The interfaces between science, policy and

**IMBeR case study: I-ADAPT**

A systems approach was used in the I-ADApT framework to evaluate, compare and contrast adaptation responses in linked natural and human subsystems to global change. Crucial aspects for ocean governance based on a range of case studies are: the timing of the adaptation response; monitoring and enforcement, power relations, and addressing poverty and equity.

This comparison of marine social-ecological resource crises enables decision makers to identify potential solutions and contribute to better governance.



society are key to guiding trade-off decisions. Transparency in trade-offs amongst the multitude marine resource uses is paramount to achieving equitable, efficient, and effective ocean governance. This includes understanding the role of **economic, social, cultural and political norms and values** on marine governance systems, and current resource use practices. This is fundamental to **finding behavioural incentives** to improve outcomes. Understanding the ocean's influence on society and individual actors, and conversely their influence on the ocean, also referred to as ocean literacy, will also provide clarity to science-policy-society practices. Building capacity to work and **narrow the gap between science and policy, and science and society** needs **improved communication** and understanding.

**Case study 2: Thailand**

Legal reform of fishery and coastal resources in Thailand took place in 2015. Major governance transformation of the consultation system and participation processes improved resources planning and decision making. A case study on the east coast of Thailand suggested that improved co-ordination among governing actors, improved communication and knowledge exchange with coastal users, science-based decision making, and meaningful participation improve ocean and coastal governance.

Ocean literacy includes detailed understanding of **feedbacks between human and ocean systems** and the adaptation, transformation and stewardship required to achieve healthy societies and healthy oceans. Cumulative impacts also need to be well-understood and accounted for in ocean governance. Global and regional ocean models are key to understanding feedbacks in socio-ecological systems to be used in ocean governance, for example, Ecosystem-Based Management. Meaningful interpretation of pertinent human behaviour, decision making, and governance at different scales should be central in integrated marine models to aid decision making.

## Linking the governance challenge

Close collaboration with IMBeR Grand Challenges 1 and 2, and IMBeR working groups and regional programmes, through integrating salient human behaviour and decision making into global, regional and local models, will address the challenge. Capacity building in social-ecological modelling and network analysis is needed to advance understanding of the role of social sciences in ocean variability and predictability. Clarifying the multiple layers, principles, and concepts of ocean governance, considering norms and practice and emphasising ocean literacy will also add value to the IMBeR challenges. This will provide an understanding of the governance system and potential for ocean system outcomes.

*IMBeR is an international network that facilitates interdisciplinary marine research, within three interconnected Grand Challenges, in order to achieve sustainable ocean governance for the benefit of society. Sign up to IMBeR via http://www.imber.info/ to benefit from networking, mentoring and collaborative opportunities with world-class natural and social scientists, practitioners and researchers.*

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