



Innovation Challenge 5: Interventions to change the course of climate impacts

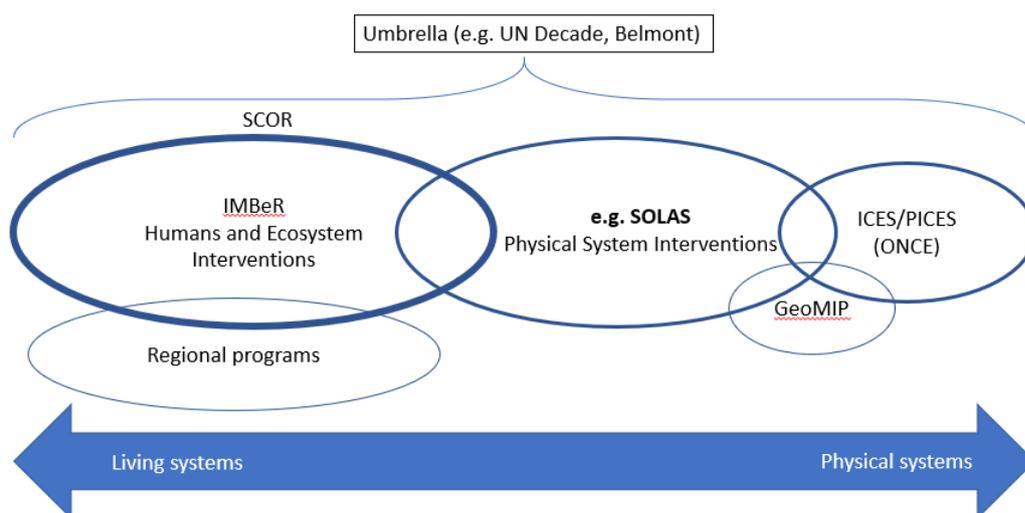
The Challenge: *How can human intervention reduce the impacts of climate change on ocean life and human well-being?*

Climate effects on ocean systems are already occurring (e.g. coral bleaching, range change, declining productivity), and a wide range of impacts will continue to occur with greater frequency, duration and intensity under climate change (e.g. marine heatwaves). Achieving the Paris Target will be difficult. Planned interventions will be required to preserve the benefits from oceans. To best select and prepare these, the implications and consequences of a range of perceivable interventions need to be assessed, and best practice approaches developed. Generic approaches and informed choices are needed since many regions will suffer the same problems and losses.

Adaptation-focused interventions (rather than mitigation focused) are defined here as local and regional interventions that seek to ameliorate the impacts resulting from accumulation of greenhouse gases into the atmosphere or ocean. Due to the residence time of gases in the atmosphere, climate change impacts will occur over the coming decades even with dramatic reduction in greenhouse gas emissions. Adaptation actions will be needed to avoid the worst outcomes for the environment and the people that depend on the ocean.

Our focus will be on species, habitats and the people and communities that depend on the ocean.

IC - Interventions to change the course of climate change in the ocean



Nov 11, 2020

Objectives

1. Best practice for testing interventions in simulation models (e.g. what models are appropriate for testing interventions such that unanticipated consequences can be detected, and so on).
2. Development of methods to scale interventions from pilot experiments to “full scale” operational scale

3. *Development of decision rules for initiating interventions (e.g. defining thresholds) - political, societal, environmental.*
4. *Understanding and enhancing intervention governance frameworks (global, regional, national and local)*

A rapidly changing ocean means some intervention is necessary

Successful intervention will require interdisciplinary approaches

The Challenge cannot be addressed in isolation: connections and delivery

This IC links to the current IMBeR Strategy and Grand Challenges

- GC1 – when will intervention be needed?
- GC 2 – outcomes and testing of interventions
- GC3 – social acceptability and governance of Interventions

IMBeR is an international network that facilitates interdisciplinary marine research guided by three interconnected Grand Challenges 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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