



Challenges to implementing responses to ocean and cryosphere change

The temporal scales of climate change impacts and their societal consequences operate **on time horizons which are longer than those of governance arrangements** including planning cycles, public and corporate decision making cycles, and financial instruments

Examples include:

- Sea level rise and low-lying islands and coasts



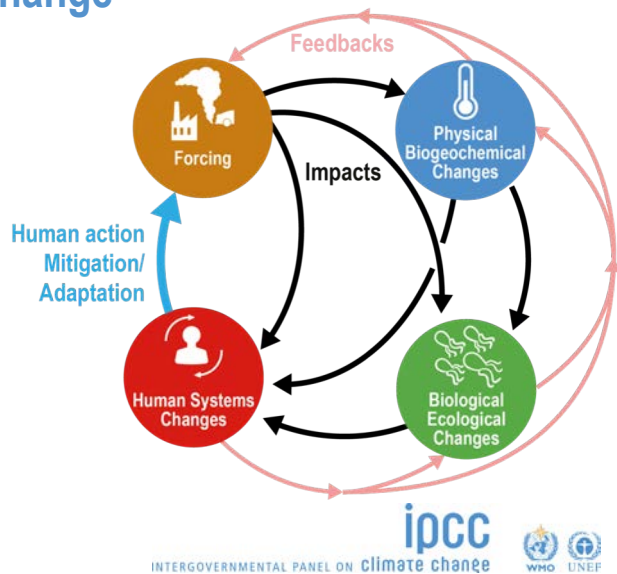
Challenges to implementing responses to ocean and cryosphere change

- **Impacts** from climate-related changes in the ocean and cryosphere increasingly **challenge current governance efforts** to develop and implement adaptation responses from local to global scales
- In some cases **pushing governance systems to their limits**



Challenges to implementing responses to ocean and cryosphere change

Governance arrangements are, in many contexts, **too fragmented across administrative boundaries and sectors** to provide integrated responses to the increasing and cascading risks from climate-related changes



Challenges to implementing responses to ocean and cryosphere change

- Financial, technological, institutional and other **barriers exist** for **implementing responses** to current and projected negative impacts of climate-related changes
- **Adaptive capacity** continues to **differ** between as well as within **communities and societies**
- People with **highest exposure and vulnerability** to current and future hazards from ocean and cryosphere changes are often also those with **lowest adaptive capacity**



Strengthening response options

- **Reducing other pressures** such as pollution and habitat modification will **help species** adjust to changes in their environment
- Policy frameworks for integrated water management, fisheries management and networks of protected areas **offer opportunities for people and species to adapt**
- **Nature-based adaptation** such as ecosystem restoration can be locally most effective when **community supported, science based** and connect with **local knowledge and indigenous knowledge**
- Such approaches bring **multiple benefits** for biodiversity, humans and, in some circumstances, climate mitigation

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Key enablers for implementing effective responses include:

- **Intensifying cooperation and coordination** across scales, jurisdictions, sectors, policy domains and planning horizons
- **Regional and transboundary cooperation**, including treaties and conventions
- **Investments in education and capacity building** including engagement of local communities and Indigenous peoples
- Addressing **social vulnerability and equity**

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SROCC reveals the benefits of ambitious mitigation and effective adaptation for sustainable development

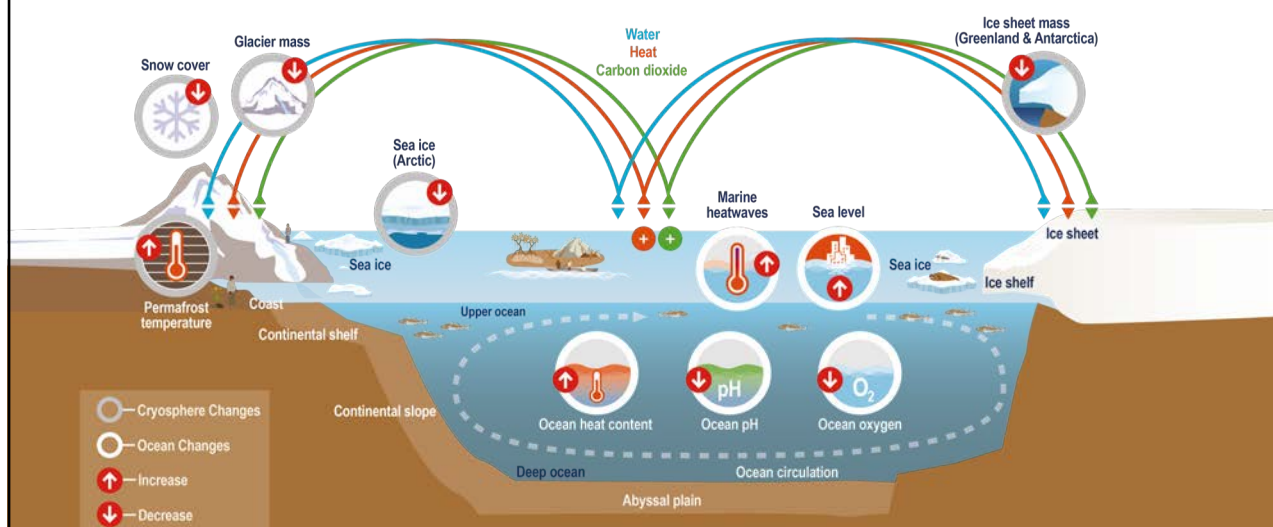
and, conversely, the escalating costs and risks of delayed action

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SROCC Summary

On 80% of the earth surface climate change affects the life sustaining systems - from the top of the mountains to the depth of oceans. These changes will continue for generations to come





SROCC: Knowledge for action

- Highlights the **urgency** of prioritizing timely, ambitious and coordinated action to address widespread and enduring changes in the ocean and cryosphere
- Shows that **protecting and restoring ecosystems** and careful management of natural resources **can reduce risks** and provide multiple societal benefits
- Empowers people, communities and governments to tackle the **unprecedented transitions in all aspects of society**
- Provides evidence of the **benefits** of combining scientific with local and indigenous knowledge
- Focuses, for the first time, on the **importance of education and climate literacy**

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The more decisively and earlier we act, the more able we will be to address unavoidable changes, manage risks, improve our lives and achieve sustainability for ecosystems and people around the world – today and in the future.

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**Our ocean and cryosphere –
They sustain us.
They are under pressure.
Their changes affect all our lives.**

The time for action is now.

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