

IPCC Sixth Assessment Cycle: Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)

An Introduction to the Report

First Lead Author Meeting
Nadi, Fiji
2-6 October 2017

IPCC SPECIAL REPORTS

- Concerns **issues that merit explicit consideration** outside the Main Assessment Reports
- Are designed to address policy-relevant issues that may require **input from a wide range of disciplines** (more than one WG)
- The outline builds on scientific questions that emerged from the **government proposals for special reports**

SPECIAL REPORTS IN IPCC AR6

**Global Warming of 1.5°C
(SR15)**



IPCC, 2018

**Climate Change and Land
(SRCCL)**



IPCC, 2019

**Oceans and Cryosphere
in a Changing Climate
(SROCC)**



IPCC, 2019

OCEAN & CRYOSPHERE IN A GLOBAL CONTEXT

- **The Ocean**

- covers **>70% of earth's surface**
- plays a key role in **climate regulation**, weather system and global carbon cycle
- carries **~50% of global primary and oxygen production**
- supports immense **biodiversity**
- provides important **social and economic goods and services** (tourism, fisheries, transport (90%), etc)



OCEAN & CRYOSPHERE IN A GLOBAL CONTEXT

- **The Cryosphere (“Frozen World“)**
 - is **~2% of the world’s water** storage, with **~11% of the world’s land surface** and **7% of ocean surface** are covered with multiyear snow and ice
 - includes Antarctic and Greenland **ice sheets, sea ice, snow covers, mountain glaciers** and **ground ice**
 - plays a key role in **river runoff, sea level rise, ocean-atmosphere exchange, permafrost methane storage, etc.**



PURPOSE OF SROCC

- *Provide* a focussed **cross-cutting assessment** of:
 - The **role of oceans and cryosphere in the climate system** - observed and projected **changes in oceans and cryosphere, ocean cryosphere interactions**
 - **Risks, vulnerability, impacts and implications** of climate-related ocean and cryosphere change for natural and human systems, e.g. **sea level rise**
 - **Resilience pathways** and **adaptation options**
- *Present* new and updated information for decision-makers to inform the design and implementation of appropriate policies and actions.

SROCC OUTLINE

- 1. Framing and Context of the Report**
 - 2. High Mountain Areas**
 - 3. Polar Regions**
 - 4. Sea level rise and implications for low lying islands, coasts and communities**
 - 5. Changing ocean, marine ecosystems, and dependent communities**
 - 6. Extremes, abrupt changes and managing risks**
- + Cross-chapter box: Low lying islands and coasts**

LINKS TO AR6 WGII

AR6 WGII Outline:

- SECTION 1: Risks, adaptation and sustainability for systems impacted by climate change
- SECTION 2: Regions
- SECTION 3: Sustainable development pathways: integrating adaptation and mitigation
- CROSS-CHAPTER PAPERS

**IPCC Sixth Assessment
Report (AR6)**

WGII Contribution:

Impacts, Adaptation, and
Vulnerability

IPCC, 2021

SECTION 2: Regions (Chapters 9-15)

each considering regional oceans

9. Africa [~50 pages]

10. Asia [~50 pages]

11. Australasia [~30 pages]

12. Central and South America [~50 pages]

13. Europe [~40 pages]

14. North America [~40 pages]

15. Small Islands [~30 pages]



CROSS-CHAPTER PAPERS (built by chapter authors (with material for TS/SPM as appropriate)

integrating sectors, regions and updating from special reports

- **Biodiversity hotspots (land, coasts and oceans)**
- **Cities and settlements by the sea**
- **Deserts, semi-arid areas, and desertification**
- **Mediterranean region**
- **Mountains**
- **Polar regions**
- **Tropical forests**



SECTION 3: Sustainable development pathways: integrating adaptation and mitigation (chapters 16-18)



- 16. Key risks across sectors and regions
- 17. Decision-making options for managing risk
- 18. Climate resilient development pathways



THANK YOU FOR YOUR ATTENTION!

For more information:

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<http://www.ipcc.ch/report/srocc/>

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INTERGOVERNMENTAL PANEL ON climate change



BACKGROUND SROCC

- **IPCC invited proposals** for Special Reports to be prepared and concluded during AR6 cycle in July 2015
 - 31 proposals were submitted
 - 7 of these focused on aspects of ocean and cryosphere
- **IPCC Panel agreed** (April 2016) to consider a special report on Climate Change and Oceans and Cryosphere to guide adaptation activities and decision-making
- To be developed under **joint scientific leadership of WGI and WGII**