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





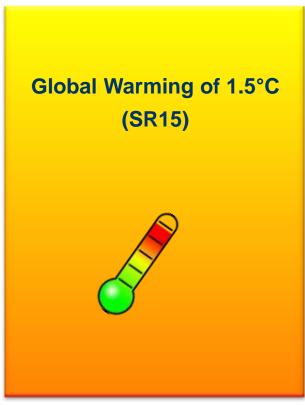
IPCC SPECIAL REPORTS

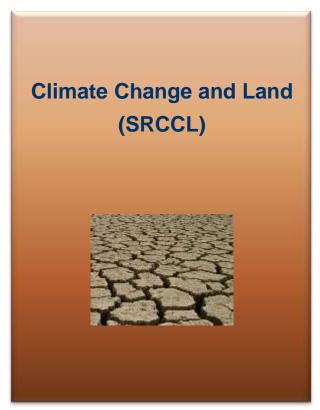
- Concerns issues that merit explicit consideration outside the Main Assessment Reports
- Are designed to address policy-relevant issues that may require input from a wide range of disciplines (more than one WG)
- The outline builds on scientific questions that emerged from the government proposals for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

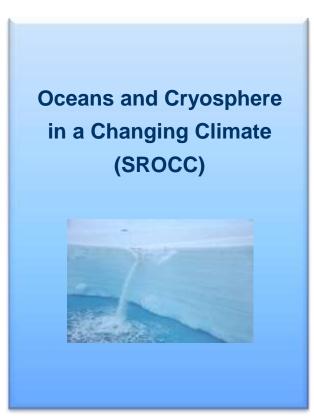




SPECIAL REPORTS IN IPCC AR6







IPCC, 2018 IPCC, 2019 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 climaterelated 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 decisionmakers 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]





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

integrating sectors, regions and updating from special reports

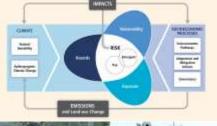
- Biodiversity hotspots (land, coasts and oceans)
- Cities and settlements by the sea
- Deserts, semi-arid areas, and desertification
- Mediterranean region
- Mountains
- Polar regions
- Tropical forests















- 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:

Website: http://ipcc.ch/

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http://ipcc-wg2.awi.de/ http://www.ipcc.ch/report/srocc/

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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



