# **IPCC Sixth Assessment Cycle:**

# Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)

### **WGII Co-chairs:**

Hans Pörtner, Alfred Wegner Institute, Bremen Debra Roberts, University of KwaZulu-Natal, Durban



### 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
   (Physical Science Basis) and WGII (Impacts, Adaptation,
   and Vulnerability)

### 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 production
- supports immense biodiversity
- provides important social and economic goods and services (tourism, fisheries, transport, etc)





## OCEAN & CRYOSPHERE IN A GLOBAL CONTEXT

### The Cryosphere

- includes Antarctic and Greenland ice sheets, sea ice, snow covers, mountain glaciers and ground ice
- 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
- plays a key role in river runoff, sea level rise, ocean-atmosphere exchange, permafrost methane storage, etc.
- holds water equivalent to ~66 m of sea level rise





### **SCOPING**

- Outline developed at Scoping Meeting in Monaco (December 2016)
- 62 experts were invited to discuss all aspects of the scope, outline, and contents of the report
- Outline agreed and adopted by IPCC Panel in April 2017





### **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





# **LEAD AUTHOR MEETINGS**











2<sup>nd</sup> LAM

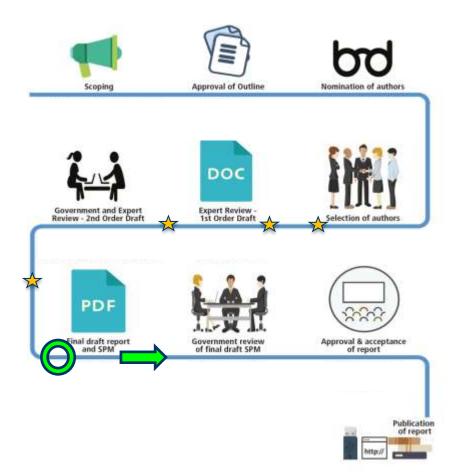
Feb 2018



### WHERE ARE WE Now?

### Timeline IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)







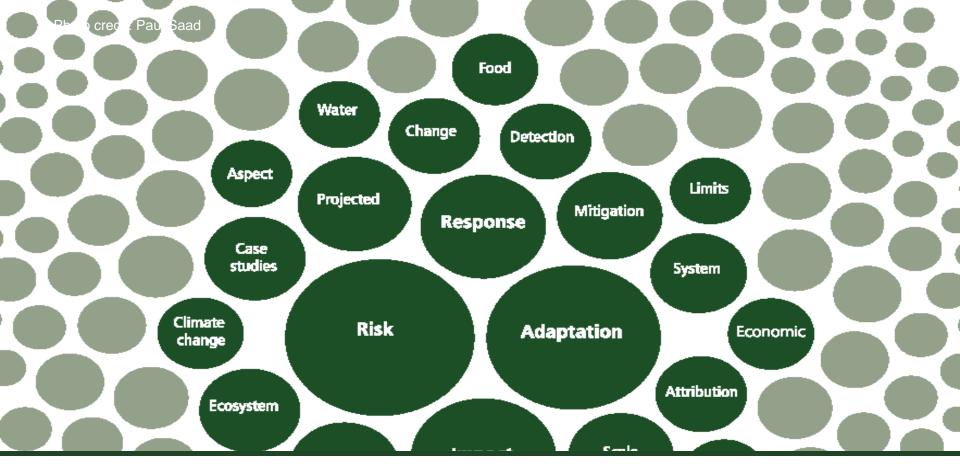
= Lead Author Meetings (LAMs)











# AR6 Climate Change 2021: Impacts, Adaptation and Vulnerability

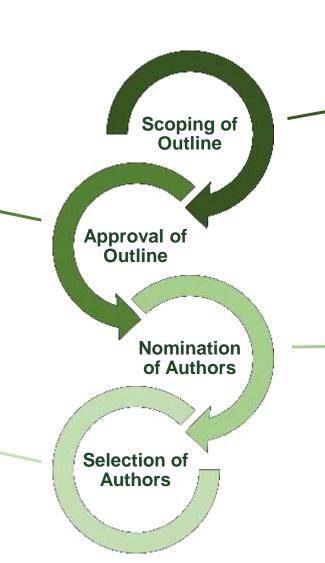
The Working Group II contribution to the Sixth Assessment Report

# **Preparatory Phase of WGII AR6**

September 2017
The IPCC Panel approved the outline in Montreal, Canada

### January 2018

Bureau selected 263 authors for the WGII contribution to AR6 in Geneva, Switzerland



### **May 2017**

The outline was developed by 59 nominated experts in Addis Ababa, Ethiopia

### October 2017

Government and observer organisations nominated 1037 experts as authors





### **WGII AR6 Outline**

Chapter 1: Point of departure and key concepts

SECTION 1: Risks, adaptation and sustainability for systems impacted by climate

change

Chapter 2: Terrestrial and freshwater ecosystems and their services

Chapter 3: Ocean and coastal ecosystems and their services

Chapter 4: Water

Chapter 5: Food, fibre, and other ecosystem products
Chapter 6: Cities, settlements and key infrastructure

Chapter 7: Health, wellbeing and the changing structure of communities

Chapter 8: Poverty, livelihoods and sustainable development

**SECTION 2: Regions** 

Chapter 9: Africa Chapter 10: Asia

Chapter 11: Australasia

**Chapter 12:** Central and South America

Chapter 13: Europe

Chapter 14: North America Chapter 15: Small Islands

SECTION 3: Sustainable development pathways: integrating adaptation and mitigation

Chapter 16: Key risks across sectors and regions

Chapter 17: Decision-making options for managing risk

Chapter 18: Climate resilient development pathways



# **Cross-Chapter Papers**

- 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

- Expanded treatment of particular systems or regions
- Integrative across chapters
- Allow updates since the Special Reports
- Follow broad scheme and structure of chapters
- Same audience as chapters
- Need to develop high level policy-relevant messages



2021

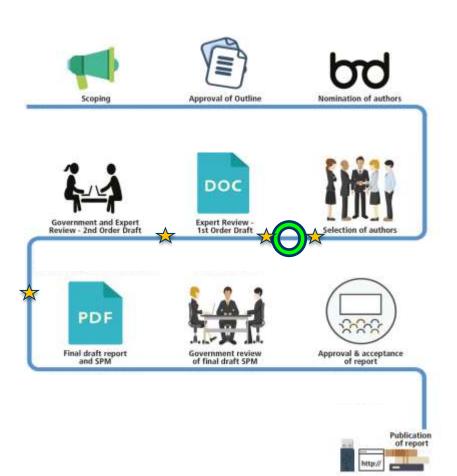
# WHERE ARE WE Now?

2020

#### **Timeline IPCC WGII AR6**

JAN	21 – 25 Jan 2019 First Lead Author Meeting (Durban, South Africa)
APR	26 April 2019 Internal Draft submitted to TSU 29 April – 9 May 2019
MAY	10 May – 21 June 2019 Internal Draft Review
JUN	TSU send compiled review comments to CLAs (date tbc)
JUL	15 – 19 July 2019 Second Lead Author Meeting (Kathmandu, Nepal)
ост	4 October 2019 First Order Draft submitted to TSU 7 – 18 October 2019
ОСТ	TSU compile First Order Draft  18 October – 13 December 2019  Expert Review of First Order Draft
DEC	20 December 2019 TSU send compiled review comments to CLAs (date tbc)
JAN	27 January – 1 February 2020 Third Lead Author Meeting (Faro, Portugal)
JUN	1 July 2020
JUL	cut-off date for submitted papers 10 July 2020 Second Order Draft submitted to TSU 13 July – 6 August 2020
AUG	TSU compile Second Order Draft 7 August – 2 October 2020 Expert and Government Review of Second Order Draft
ОСТ	9 October 2020 TSU send compiled review comments to CLAs (date tbc)
NOV	2 – 7 November 2020 Fourth Lead Author Meeting (location tbc)
MAY	1 May 2021 cut-off date for accepted papers 14 May 2021 Final Draft submitted to TSU 17 – 27 May 2021
JUN	TSU compile Final Draft  28 May – 23 July  Final Government Distribution of the Final Draft and Government  Review of the Summary for Policymakers
ост	4 – 8 October 2021  12th Session of Working Group II and 55th Session of the IPCC: Approval of the Summary for Policymakers, acceptance of the

underlying Report (date tbc)





= Lead Author Meetings (LAMs)









# **THANK YOU**

### **Contact:**

tsu@ipcc-wg2.awi.de
Working Group II Technical Support Unit
Intergovernmental Panel on Climate Change
c/o Alfred Wegener Institute

### **Further info:**

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

Instagram IPCC\_Climate\_Change Twitter @IPCC\_CH Facebook @IPCC News