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**SIXTH ASSESSMENT REPORT (AR6) PRODUCTS**

**Outline of the Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty**

(Submitted by the Secretary of the IPCC)

**IPCC Secretariat**

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## **SIXTH ASSESSMENT REPORT (AR6) PRODUCTS**

**Outline of the Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty**

(Prepared by Ms Thelma Krug, Chair of the Scientific Steering Committee)

### **1. Introduction**

In paragraph 21 of its Decision 1/CP.21, the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) invited the Intergovernmental Panel on Climate Change (IPCC) “to provide a special report in 2018 on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways”.

In paragraph 2 of its Decision IPCC/XLIII-6 on the Sixth Assessment Report (AR6) – Special Reports – the IPCC decide “In the context of the Paris Agreement, to accept the invitation from the UNFCCC to provide a special report in 2018 on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, and decides to prepare a special report on this topic in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty”.

In paragraph 1 of its Decision IPCC/XLIII-7 on the Sixth Assessment Report (AR6) Products – Strategic Planning –, the IPCC decides “to consider the outline of the Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways at the 44<sup>th</sup> Session of the IPCC in October 2016. The Draft Special Report on this topic will be considered by the Panel for approval at its Plenary session in September 2018”.

Thereafter, the Chair of the IPCC established a Steering Committee, chaired by Ms Thelma Krug, IPCC Vice-Chair, to undertake the scoping of the Special Report under the joint scientific leadership of Working Groups I, II and III with support from Working Group I (WGI) Technical Support Unit (TSU).

### **2. Scoping Meeting**

A scoping meeting for the IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty was held in Geneva, Switzerland, from 15-18 August 2016.

Participants were invited to discuss all aspects of the scope, outline, and contents of the report. The proposed outline for the Special Report was developed over the course of the scoping meeting. After intensive discussions within an iterative process between break-out-groups and plenary sessions, unanimous agreement of the participants was reached on the structure presented in Annex 1.

There was agreement that the title should capture the full Special Report mandate and be preceded by a shorter reference to facilitate communication. The final Plenary session did not converge on an agreed short title. Four short titles were proposed. The annotated report outline, the full title and the range of short titles from the scoping meeting are presented in Annex 1.

At its 52<sup>nd</sup> Session the IPCC Bureau noted the outcomes of the scoping meeting and recommended that the title of the Special Report be "Global warming of 1.5°C - The IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty".

### **3. Proposed content and structure of the Special Report**

The proposed chapters and suggested number of pages, as well as the outline of chapter are presented in Annex 1.

### **4. Time Schedule**

A call for nominations of Coordinating Lead Authors (CLAs), Lead Authors (LAs) and Review Editors (REs) will be issued after the 44<sup>th</sup> Session of the IPCC in October 2016. Approval and acceptance of the Special Report is planned for the 48<sup>th</sup> Session of the IPCC in September 2018. In order to achieve this, the timetable for the Special Report is as follows:

31 October - 27 November 2016	Call for author nominations
29 January 2017	Selection of authors
6-12 March 2017	1 <sup>st</sup> Lead Author Meeting
5-11 June 2017	2 <sup>nd</sup> Lead Author Meeting
31 July - 24 September 2017	First Order Draft Expert Review
23-29 October 2017	3 <sup>rd</sup> Lead Author Meeting
1 January - 25 February 2018	Second Order Draft Expert and Government Review
9-15 April 2018	4 <sup>th</sup> Lead Author Meeting
4 June - 29 July 2018	Final Government Review of Summary for Policymakers (SPM)
24-30 September 2018	IPCC acceptance/adoption/approval

### **5. Provisional budget estimate**

Activity	DC/EIT Support <sup>1</sup>	Additional Expenditure	Sub-total	Link to IPCC-XLIV/Doc. 2
LA 1	180,000 45 journeys	30,600	210,600	Annex 6
LA 2	180,000 45 journeys	30,600	210,600	Annex 6
LA 3	180,000 45 journeys	30,600	210,600	Annex 6
LA4	180,000 45 journeys	30,600	210,600	Annex 7
IPCC-48 <sup>2</sup>	24,000 6 journeys	3,600	27,600	Annex 7
<b>Total</b>			<b>870,000</b>	

The IPCC Secretariat has developed budget implications based on the proposed outline with six chapters, assuming chapter teams with a maximum of 15 authors and a maximum of 50% from developing countries (DC) and countries with economies in transition (EIT).

<sup>1</sup> Budget Document IPCC-XLIV/Doc. 2 used maximum of 45 DC/EIT authors and REs

<sup>2</sup> This is a part of the overall budget for IPCC-48 for DC/EIT authors who will travel to the approval session of the SR 1.5°C

**Budget 2017:** assuming 3 Lead Author Meeting with 45 journeys of DC and EIT Lead Authors and Review Editors for 3 LAMs at 4,000.- CHF per journey, plus 30,600.- CHF for other meeting costs. A sub-total of 631,800 CHF will be needed from the IPCC Trust Fund in 2017.

**Budget 2018:** assuming 1 Lead Author Meeting with 45 journeys each of DC and EIT Lead Authors and Review Editors at 4,000.- CHF per journey plus 30,600.- CHF for other meeting costs. A sub-total of 210,600.- CHF will be needed from the IPCC Trust fund

The overall budget for IPCC-48 includes funds for a preparatory meeting with 6 DC and EIT CLAs and their participation in the IPCC Plenary to approve the Summary for Policymakers, plus 15% additional costs, 62,100.- CHF.

Costs for translation and purchasing of the Special Report, shipping costs, and outreach are included in the budget line on “publications/translations” for 2018 and 2019.

**Proposed outline of the special report in 2018 on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, and decides to prepare a Special report on this topic in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty**

Title:

[Global warming of 1.5°C]  
[The 1.5°C challenge]  
[Toward a 1.5°C world]  
[Global warming of 1.5°C above pre-industrial levels]

[The IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty]

## List of Contents

Front Matter (2 pages)  
Summary for Policy Makers (15-20 pages)  
Chapter 1: Framing and context (15 pages)  
Chapter 2: Mitigation pathways compatible with 1.5°C in the context of sustainable development (40 pages)  
Chapter 3: Impacts of 1.5°C global warming on natural and human systems (60 pages)  
Chapter 4: Strengthening the global response to the threat of climate change (40 pages)  
Chapter 5: Approaches to implementing a strengthened global response to the threat of climate change (20 pages)  
Chapter 6: Sustainable development, poverty eradication and reducing inequalities (40 pages)  
Up to 10 boxes - integrated case studies/regional and cross-cutting themes (20 pages)  
FAQs (10 pages)

## Front matter

- IPCC context
  - Building on AR5
  - Assessing literature since AR5
  - Reports to come in this cycle
- Context of UNFCCC invitation
- Specificity of this report within the cycle (integration, systems- and solutions-based approach, near-term)
- Laying the foundations for the Special Report in the context of strengthening the global response to climate change, sustainable development and poverty eradication

## Chapter 1:

### Framing and Context

- Understanding 1.5°C; reference levels, probability, transience, overshoot, stabilization
- 1.5°C in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, with consideration for ethics and equity
- Key concepts central to understanding the report

- Building on AR5: new information, integrative approaches, response options: opportunities and challenges
- Assessment and methodologies across spatial and time scales and treatment of uncertainty
- Storyline of the report

## Chapter 2:

Mitigation pathways compatible with 1.5°C in the context of sustainable development

- Methods of assessment and assumptions in the literature
- Constraints on and uncertainties in global greenhouse gas emissions and other climate drivers for limiting warming to 1.5°C
- Characteristics of mitigation and development pathways compatible with 1.5°C, compared to 2°C and higher as relevant, including short and long term, sectorial, regional, demand/supply-side; technological and socio-economic implications etc.
- Technological, environmental, institutional and socio-economic opportunities and challenges related to 1.5°C pathways

## Chapter 3:

Impacts of 1.5°C global warming on natural and human systems

- Methods of assessment
- Observed and attributable global and regional climate changes and impacts and the adaptation experience
- Key global and regional climate changes, vulnerabilities, impacts, and risks at 1.5°C, including adaptation potential and limits
- Avoided impacts and reduced risks at 1.5°C compared to 2°C and higher as relevant
- Timeframe, slow vs. fast onset, irreversibility and tipping points
- Implications of different mitigation pathways for reaching 1.5°C, including potential overshoot, for impacts, adaptation and vulnerability

## Chapter 4:

Strengthening the global response to the threat of climate change

- Assessing current and emerging adaptation and mitigation options and associated opportunities and challenges
- The pace of the development and deployment of mitigation and adaptation options compared to pathways consistent with sustainable development and 1.5°C
- The potential and capacity for development and deployment of adaptation and mitigation responses to accelerate transitions and strengthen the global response to the threat of climate change within and across relevant scales and systems
- Challenges to and opportunities from strengthened response options (e.g. current & future lock in, adaptive mitigation, consumption and production, negative emissions, food production, socio-economic); synergies and trade-offs among adaptation & mitigation options

## Chapter 5:

Approaches to implementing a strengthened global response to the threat of climate change

- Existing policies, institutions and actions
- Options for implementing far-reaching and rapid change; implications, challenges, enabling environment; levels; and integration of action
- Case studies for implementation at all scales and in different circumstances, and lessons learned

## Chapter 6:

### Sustainable development, poverty eradication, and reducing inequalities

- Linkages between achieving SDGs and 1.5°C
- Equity and ethical dimensions
- Opportunities, challenges, risks, and trade-offs
- Positive and negative impacts of adaptation and mitigation measures including response measures and strategies, economic diversification, livelihoods, food security, cities, ecosystems, technologies
- Knowledge and experience from local to global, including case studies and integrated planning as relevant to aforementioned bullets
- Climate-resilient development pathways