IPCC AR6 Cycle: Status and Milestones
(with focus on IPCC WGIII)

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AR6 WGIII Schedule

Overall updated IPCC AR6 Cycle Schedule available at link:
http://ipcc.ch/activities/pdf/ar6_schedule.pdf

Year	Month	Working Group III Report	SR1.5	SR Land Use
2016	1			
	2		IPCC Bureau meeting on SRs	IPCC Bureau meeting on SRs
	3			
	4		IPCC decisions on Special Reports	IPCC decision on Special Reports
	4		Call for Scoping Nominations	
	5			
	6		Decision on Scoping Nominations	
	7			
	7			
	8		Scoping Group meeting	
	9			Call for Scoping Nominations
	10	Call for Scoping Nominations	IPCC approval of the SR outline	
	11		Call for CLA/LA/RE Nominations	
	12			Decision on Scoping Nominations
2017	1	Decision on Scoping Nominations	Decision on selection of Authors	
	2			Scoping Group meeting
	3		LAM 1	IPCC approval of the SR outline
	4			Call for CLA/LA/RE Nominations
	5	AR6 Scoping meeting		
	6		LAM 2	
	7			Decision on selection of Authors
	8		FOD Expert Review	
	9	IPCC approval of the AR6 outline		
		Call for CLA/LA/RE Nominations		
	10		LAM 3	
	11			LAM 1
	12			

2018	1		SOD Gov&Exp Review	
	2	Decision on Selection of Authors		LAM 2
	3			
	4		LAM 4	
	5			FOD Expert Review
	6		FGD Gov Review of SPM	
	7			
	8			LAM 3
	9		IPCC acceptance/adoption/ approval	
	10			
	11			SOD Gov&Exp Review
	12			
2019	1			
	2			LAM 4
	3			
	4			
	5	LAM 1		FGD Gov Review of SPM
	6			
	7			
	8			
	9			IPCC acceptance/adoption/ approval
	10	LAM 2		
	11			
	12			

2019	1			
	2			LAM 4
	3			
	4			
	5	LAM 1		FGD Gov Review of SPM
	6			
	7			
	8			
	9			IPCC **acceptance/adoption/ approval**
	10	LAM 2		
	11			
	12			
2020	1	FOD Expert Review		
	2			
	3			
	4	LAM 3		
	5			
	6	SOD Gov&Exp Review		
	7			
	8			
	9			
	10	LAM 4		
	11			
	12			
2021	1			
	2	FGD Gov Review of SPM		
	3			
	4			
	5			
	6			
	7	IPCC **acceptance/adoption/ approval**		
	8			
	9			
	10			
	11			
	12			

IPCC Special Report on
Global Warming of 1.5°C

An 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)

- Framing and context (15 pages)
- Mitigation pathways compatible with 1.5°C in the context of sustainable development (40 pages)
- Impacts of 1.5 °C global warming on natural and human systems (60 pages)
- Strengthening the global response to the threat of climate change (40 pages)
- Sustainable development, poverty eradication and reducing inequalities (40 pages)
- Approaches to implementing a strengthened global response to the threat of climate change (20 pages)

Boxes - integrated case studies/regional and cross-cutting themes (up to 20 pages)
FAQs (10 pages)
Total: up to 225

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
- Assessment and methodologies across spatial and time scales
- 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 consistent with warming of 1.5°C compared to 2°C, considering short lived and other climate drivers and taking into account uncertainty in climate sensitivity
- Characteristics of mitigation and development pathways compatible with 1.5°C compared with 2°C and, where warranted by the literature, comparison with higher levels of warming. This may, include short and long term timeframes, sectorial, regional, demand/supply-side, technological and socio-economic implications
- 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, taking into account adaptation potential and limits to adaptive capacity
- Key sectoral vulnerabilities, impacts, and risks at 1.5°C, taking into account adaptation potential, limits to adaptive capacity and socioeconomic aspects
- Avoided impacts and reduced risks at 1.5°C compared with 2°C and, where warranted by the literature, comparison with higher levels of warming
- Timeframe, slow vs. fast onset, irreversibility and tipping points
- Implications for impacts, adaptation and vulnerability of different mitigation pathways reaching 1.5°C, including potential overshoot

Chapter 4: Strengthening and implementing the global response to the threat of climate change

- Assessing current and emerging adaptation and mitigation options, including negative emission methodologies, and associated opportunities and challenges
- Synergies, trade-offs and integration of adaptation and mitigation options
- The pace of the development and deployment of adaptation and mitigation options compared to pathways consistent with sustainable development and 1.5°C
- The potential and capacity limitations for development and deployment of adaptation and mitigation responses to accelerate transitions within and across scales and systems (e.g. food production, cities)
- Options for implementing far-reaching and rapid change; implications, challenges (e.g. lock in, spillover effects), enabling environments and across scales
- Case studies for implementation of adaptation and mitigation options at different scales and circumstances, and lessons learned

Chapter 5: Sustainable development, poverty eradication, and reducing inequalities

- Linkages between achieving SDGs and 1.5°C
- Distributional impacts arising from response options
- 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

Expert Meeting on Mitigation, Sustainability and Climate Scenarios

For more information on Expert Workshop on Mitigation, Sustainability and Climate Scenarios see link:
http://ipcc.ch/apps/eventmanager/documents/40/200920160712-Doc.7-EM_Mitigation.pdf

SIXTH ASSESSMENT REPORT (AR6) PRODUCTS

Expert Meeting on Mitigation, Sustainability and Stabilization Scenarios

1. Context

Two of the central challenges facing IPCC, and Working Group III (WG III) in particular, in the Sixth Assessment Report (AR6) are:

a) the need to assess the linkages between high-level climate stabilization goals and scenarios on the one hand and the practical steps needed in the short- and medium-term to make the realization of these goals possible; and

b) the need to anchor climate responses firmly in the context of development needs. Practical steps need to be articulated in ways that are meaningful to stakeholders, in government, business and civil society, as they formulate their responses to climate change. The Sustainable Development Goals (SDGs) now provide an internationally agreed framework for exploring climate response-sustainability linkages.

2. What was achieved in the Fifth Assessment Report (AR5) and science gaps

AR5 made some progress in addressing these challenges. The WG III report compared high-level scenarios developed using Integrated Assessment Models (IAMs) with sectoral approaches. It also interpreted high-level scenarios and derived implied indicators of change, especially in the energy supply system and energy demand sectors. However the flow of information was largely one-way. A two-way exchange of information and insights between those with detailed knowledge of specific sectors and technologies with those developing high-level scenarios. Greater transparency about assumptions underlying IAMs will facilitate this dialogue.

SIXTH ASSESSMENT REPORT (AR6) PRODUCTS

Expert Meeting on Mitigation, Sustainability and Stabilization Scenarios

3. Recent initiatives

The science gaps have been recognised by the research community and have begun to be addressed through IPCC meetings and workshops and initiatives from third parties. Relevant IPCC meetings include: the IPCC Expert Meeting on Scenarios, held on 18-20 May 2015 in Laxenburg, Austria; and the IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk analysis Studies, held on 15-18 September 2015 in Sao Jose dos Campos, Brazil. In addition, the

The aim of this Expert Meeting is to build on rather than duplicate these activities, specifically by developing engagement between scenario-builders and modellers and those with a more sectoral, bottom-up perspective.

4. Goals of the Expert Meeting

The expert meeting would have the following aims:

- To develop dialogue between different research communities that can be advanced later through cross-cutting groups linking different chapters of the AR6 reports.

  What forms of data could be used to underpin dialogue between scenario builders and others, including those concerned with mitigation at the sectoral level and those primarily concerned with sustainable development? How can scenarios, models and their input assumptions build plausibly on the insights derived from sectoral or regional perspectives? Conversely, what are the implications do top-down stabilization scenarios hold for the pace of change in specific sectors?

- To stimulate interdisciplinary research activity that will lead to new literature that can be assessed during the AR6 cycle.

SIXTH ASSESSMENT REPORT (AR6) PRODUCTS

Expert Meeting on Mitigation, Sustainability and Stabilization Scenarios

5. Participation

The Expert Meeting would primarily engage research communities and stakeholders concerned with mitigation but would also need to include representatives of WGI and WGII science. Relevant communities include:

- Integrated assessment modellers and scenario builders
- Sectoral experts (energy supply, AFOLU, energy demand sectors)
- Policy scientists
- Risk assessment experts
- Development experts
- Impacts, adaptation and vulnerability experts
- Climate modellers

6. Timing

In order to inform the Scoping Meeting for the AR6, we propose that the meeting take place in late March 2017. In the event that this deadline proves infeasible, a second option is July 2017 in time to inform the 46th Session of the IPCC which will approve the outline of the AR6.

Mitigation Risks of 1.5 ^{0}C versus 2^{0}C? The Pending Agenda of decarbonization

- How much higher are mitigation costs?
- Impacts on sustainable development including poverty eradication
- Technology needs, including negative emissions, and risks not to meet them
- Impacts on food security and biodiversity, e.g. by LU change required by BECCS
- Impacts on carbon cycle by more ambitious mitigation (e.g. forests)
- Overshoot risks (temperature, atmos. GHG conc.), irreversibility

Reframing the Assessment

- **Timing: Closing window of opportunity**
  - Innovation cycle
  - Behavior and institutions

- **Cost-benefit Framing: Looking through ethical lens**
  - Irreversibility
  - Uncertainty
  - Equity (Inter and intra generational)

- **Reframing?**
  - Bottom-up country driven assessments
  - Prevent creating new lock-ins
  - Prepare for disruptive technological change
  - Implementation Focus (Technology cooperation)

IPCC WGIII: www.mitigation2014.org

Thank you