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DRAFT REPORT OF THE SIXTY-FIRST SESSION OF THE IPCC

Sofia, Bulgaria, 27 July – 2 August 2024

(Submitted by the Secretary of the IPCC)

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1. OPENING OF THE SESSION

Mr Jim Skea, Chair of the Intergovernmental Panel on Climate Change (IPCC), called the 61st Session of the IPCC (IPCC-61) to order.

Mr Abdalah Mokssit, Secretary of the IPCC, moderated the opening ceremony.

H.E. Mr Petar Dimitrov, Minister of Environment and Water of Bulgaria welcomed the delegates and thanked the IPCC for the opportunity to host IPCC-61. He highlighted the important role of science in informing climate policy and noted that working together would help cities develop and implement science-based solutions. He expressed hope that the IPCC findings and updates would be clearly heard at the upcoming 29th Conference of the Parties (COP29) to the United Nations Framework Convention on Climate Change (UNFCCC) in Baku, Azerbaijan, in November 2024.

The Chair welcomed all the delegates and thanked the government of Bulgaria for hosting IPCC-61. The focus of the Session was on the draft outlines of a Special Report on Climate Change and Cities and a Methodology Report on Short-lived Climate Forcers. The Chair also stressed the discussion on the Strategic Planning Schedule (SPS) for this cycle, given its implications for the timeliness of the IPCC products and for the inclusivity of the IPCC processes and assessments. He urged careful consideration of how the document produced by the Ad hoc Group on Lessons Learned (AGLL) from the Sixth Assessment Report (AR6) cycle could help shape the Seventh Assessment Report (AR7) cycle. The Chair called for a constructive, solutions-oriented, and respectful spirit throughout the meeting to reach a consensus.

Mr Abdulla Al Mandous, President of the World Meteorological Organization (WMO), noted the WMO State of the Global Climate 2023 Report, which stated that 2023 was the warmest year on record, with a temperature increase of 1.45°C above pre-industrial levels. Records were broken for ocean heat, sea level rise, Antarctic Sea ice loss and glacier retreat, and drought affecting millions of people. He said the UNFCCC's 28th Conference of the Parties (COP28) tripled the ambition regarding renewable energy goals, prioritised climate and health and enabled the adoption of nature-based solutions for mitigation and adaptation, adding that science must find real-world solutions for every region to achieve these goals.

Mr Vassil Terziev, Mayor of Sofia, linked IPCC-61 to considering the urban landscape as a key forcer of environmental change and the challenges cities pose for climate action. He said numerous issues must be balanced with the interests of multiple stakeholders, and meeting the challenges requires science.

H.E. Ms Nevyana Miteva, Deputy Minister of Foreign Affairs of Bulgaria, highlighted the IPCC's role in providing scientific information for governments' use and key inputs to the international climate change negotiations. She said Bulgaria was progressing toward climate neutrality despite recent droughts, hot weather, and devastating storms. She stressed that the world relies on the results of the IPCC.

Ms Elizabeth Maruma Mrema, Deputy Executive Director of the United Nations Environment Programme (UNEP), via a video message, called IPCC-61 a significant milestone, focusing on the IPCC's SPS for AR7, and expressed UNEP's appreciation of the IPCC Bureau's work in developing it. She underscored the importance of the IPCC's AR7 for UNFCCC's Parties preparing for the Paris Agreement's second Global Stocktake (GST-2). She urged a timely and comprehensive AR7, with adequate data and analysis, saying the insights and decisions taken at IPCC-61 would be vital for GST-2.

Mr Youssef Nassef, Director of the Adaptation Division of the UNFCCC, informed, via a video message, that the UNFCCC Executive Secretary, Mr Simon Stiell was absent because Hurricane Beryl devastated the island of Carriacou in Grenada, an example of climate change wreaking havoc. Thanks to the IPCC's work, the world understands the clarity of the science and the direness of the situation. He called the IPCC's insights, together with the Global Stocktake (GST), invaluable for establishing the conditions for all Parties to marshal real solutions, leaving no one behind, informing policy, processes, and goals, fuelling the conviction to act, and, thus, saving lives. He urged IPCC-61 to successfully conclude the AR7 cycle SPS, noting that the IPCC's work on climate change and cities was also essential for realising the 2030 Adaptation Outcomes for Human Settlements of the Sharm El-Sheikh Adaptation Agenda.

The Chair declared IPCC-61 open. He introduced the Provisional Agenda (IPCC-LXI/Doc.1), noting the Annotated Agenda (IPCC-LXI/Doc. 1, Add. 1) and the Proposal for the Organization of Work (IPCC-LXI/INF. 16). The Provisional Agenda (IPCC-LXI/Doc.1) was adopted.

2. APPROVAL OF THE DRAFT REPORT OF THE SIXTIETH SESSION OF THE IPCC

On 27 July, the Chair introduced the agenda item on the Draft Report of the 60th Session of the IPCC (IPCC-60) (IPCC-LXI/Doc. 11, Rev. 1).

China, India, and Saudi Arabia took the floor.

Views expressed included concerns about using quantitative terms such as "most" and "many" and a suggestion to use the precise language of Decision IPCC-LX-9 taken at IPCC-60 to reflect the sequence of the three Working Groups (WGs) contributions to the AR7 as follows: Working Group I (WGI) - The Physical Science Basis, Working Group II (WGII) Impacts, Adaptation and Vulnerability, and Working Group III (WGIII) Mitigation of Climate Change.

On 2 August, the Secretary introduced a revised draft of the report. The main revisions were related to deleting references to terms such as "many" and "most", together with other minor editorial changes.

Chile and the United States of America (USA) took the floor.

Clarification was sought on whether qualifiers such as "many", "few", and similar have been used in previous IPCC Plenary reports, and the reasons for breaking with past practice were queried. It was also asserted that the original meeting report reflected the discussions that led to consensus and that the edits to the report should not set a precedent for future reports, including the report of IPCC-61, without discussion by the Panel.

The Chair clarified that the changes made to the IPCC-60 report would not provide a precedent for future meeting reports.

Chile, Denmark, France, Germany, India, Ireland, Italy, Norway, Saudi Arabia, Saint Kitts and Nevis, Sweden, Switzerland, and the United Kingdom of Great Britain and Northern Ireland (UK) took the floor.

Views expressed included disappointment with the edits made, noting that the Session reports provide transparency and that deleting the qualifiers prevents balanced reporting that accurately reflects the discussions. It was also underlined that these edits should not set a precedent for future reports. Other views emphasised that using qualifiers was not appropriate in a consensus-built process.

The Chair suggested approving the IPCC-60 report as amended and reflecting the views expressed in the report of IPCC-61.

The Panel approved the report of the IPCC-60 (IPCC-LXI/Doc. 11, Rev. 2).

3. ADMISSION OF OBSERVER ORGANIZATIONS

Ms Jennifer Lew Schneider, Legal Officer of the IPCC Secretariat, presented the document on Admission of Observer Organizations (IPCC-LXI/Doc. 3, Rev. 1). There were currently 217 observers and 12 new requests from the following organisations:

1) Bureau international des poids et mesures (BIPM).
2) Children and Youth International (CYI).
3) Save the Climate.
4) Central American Commission on Environment and Development (CCAD).
5) International Society of City and Regional Planners (ISOCARP).
6) International Organization for Standardization (ISO).
7) Woodwell Climate Research Center (Woodwell).
8) Wellcome Trust (Wellcome).
9) West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL).
10) Human Rights and Environment Improvement Centre (HREIC).
11) The Degrees Initiative (Degrees).
12) Coalition Climat pour la Biodiversité et le Développement (CCBD).

The Legal Officer reported that the first 11 were already accredited to UNEP and/or the UNFCCC and, in accordance with Rule I.5 of the IPCC Policy and Process for Admitting Observer Organizations, they are considered observers upon request, subject to acceptance by the Panel, without submitting further documentation. She briefly summarised the documentation submitted by the 12th applicant and their request for accreditation. The review of the current 217 observer organisations requested by the Bureau at its 66th Session, per Rule II.11 of the IPCC Policy and Process for Admitting Observer Organizations, remains ongoing.

The Russian Federation and South Africa took the floor.

Views expressed suggested an obligation for observer organisations to organise outreach activities to explain the achievements of the IPCC and a query on a list of four pending applications.

The Legal Officer responded that any substantive changes to the Policy on observer organisations could be addressed under the review of the IPCC Principles and Procedures. On the pending applications, she said that the 57th Session of the IPCC specified that further discussion on admitting the Holy See was required during regular review of IPCC Principles and Procedures, and it was presumed that review of the applications, including those from NATO and the Cyprus Institute would be discussed then.

The Panel adopted the Decision (IPCC-LXI-2) on Admission of Observer Organizations granting observer status to the 12 organisations.

4. SEVENTH ASSESSMENT REPORT (AR7) PRODUCTS

4.1 Outline of the Special Report on Climate Change and Cities

On 27 July, Ms Diana Ürge-Vorsatz, IPCC Vice-Chair and Chair of the Scientific Steering Committee (SSC) for the Special Report on Climate Change and Cities, presented the Outline of the Special Report (IPCC-LXI/Doc. 2). The document presented contained a brief introduction, an overview of the schedule for the development of the report, information on budgetary implications for the IPCC Trust Fund, and the outline for the Special Report, as proposed by the Scoping Meeting (Riga, Latvia from 16-19 April 2024). There was also detailed background information on the organisation of the Scoping of the Special Report (IPCC-LXI/INF.1) presented to the Panel.

1300 nominations were received from 92 governments, 31 observer organisations, as well as from Bureau members. Ninety experts from 65 countries attended the meeting in person, along with 13 SSC and 16 Bureau members. Three experts and four Bureau members also participated online. The

process set many IPCC records for inclusivity, resulting in an outline co-created by national governments, urban practitioners, civil society representatives, and local/regional governments. Perspectives of nominees not selected to attend the meeting were also gathered with responses and input from these processes synthesised by the WGII Technical Support Unit (TSU) and included in the background document provided to the scoping meeting participants.

The scoping meeting was innovative in providing all the participants with extensive background materials, a glossary and an AR6 summary that addressed cities. Materials on novel topics emerging from the science in AR6 and city networks and information videos were also available to watch before the meeting. During the four-day scoping meeting, there were interactive sessions and a practitioner review of the emerging outline.

The draft outline included five chapters that resulted from the scoping meeting. The first one was on cities in the context of climate change: framing of the report. The second chapter was on cities in a changing climate: trends, challenges, and opportunities. The third one was on actions and solutions to reduce urban risks and emissions. The fourth one was on how to facilitate and accelerate change, and the fifth one was on solutions by city types and regions.

The lists of topics under each chapter were indicative rather than comprehensive. The fifth chapter also provided guidance on interpreting the earlier chapters' findings for different city types distinguished by multi-dimensional characteristics. There was also an Annex with a glossary at the end.

Mr Bart van den Hurk and Mr Winston Chow, WGII Co-Chairs, emphasised the inclusivity, rigour, and consensus in the scoping process. The draft outline focused on cities holistically, their role, and how they influence climate change in different contexts.

Algeria; Argentina; Belgium; Brazil; Burundi; Chile; China; Denmark; Congo, Republic of the; France; Germany; India; Indonesia; Iraq; Ireland; Italy; Japan; Kenya; Luxembourg; Malawi; Malaysia; Mauritius; Monaco; Netherlands; Nigeria; Norway; Republic of Korea; the Russian Federation; Saint Kitts and Nevis; Saudi Arabia; Singapore; South Africa; Spain; Sweden; Switzerland; Timor-Leste; Türkiye; Ukraine; the UK; and the USA took the floor.

Views expressed included that the outline was a good starting point. There were queries about the status of the annotated outline. Questions about the physical differences between radiation balance and convection conditions, as well as the interaction between increasing temperatures and pollution within and outside cities, were also raised. There were calls for ensuring inclusivity and equity and just transition. Balancing the treatment of mitigation and adaptation was also suggested, as well as looking at solutions to identify synergies and trade-offs simultaneously. Other calls were made for increased participation by non-Bureau member countries, young scientists, and practitioners in the Special Report development. There were also calls to enable a wider array of sociology, psychology, communications science, and economics experts. More case studies on success stories were also proposed. There were also requests for a balanced discussion on retrofitting existing cities, building new ideal climate-resilient cities, and building back cities destroyed by natural disasters or war.

The definition of cities and its variation in different contexts was discussed. Comments suggested differentiation between developed and developing country contexts and among regions, priorities, urban experiences and challenges, infrastructure strength, vulnerability and resilience, capacity, and ability to adapt. It was noted that large numbers of people often live in informal settlements around cities or, alternatively, in suburban areas with low population density and urban sprawl. The need to consider historical contexts, impacts, and different development pathways was also voiced, as well as urban-rural linkages and movement between the two for economic activities. The need to address the socio-economic consequences of response measures for mitigation was also stressed. It was noted that typologies should be allowed to emerge naturally from the literature, and the Special Report provided opportunities to address challenges shared across developing and developed countries. The need to make the report short, concise, and user-friendly to support city-scale decision-makers was highlighted.

Suggestions were made for reframing the chapters and clarifying their titles. This included using the word “transformation” when not referring to climate “change” specifically. There were also recommendations for overarching topics, including health and quality of life, finance, water, food security and food waste, supply and disposal singularity, resource use, living space, building circularity, inclusive new governance, nature-based solutions, and energy. Links between climate change and cities’ micro-climates were also noted, including the urban heat-island effect.

Other delegates cautioned against altering the outline, noting it was not for negotiation but was indicative to give signals to the authors for content. The highly inclusive consensus achieved in its scoping was highlighted.

Suggestions were made to include more attention to human health and health systems, well-being, and physiology. The impact of temperature rise on humans and all living things was stressed, with associated risks from genetic mutations and new diseases and consequences for human health, particularly given dense concentration and inadequate human waste disposal. Mention was also made of city noise generated by sources of emissions, the importance of artificial intelligence (AI) and digitalisation in smart cities, energy efficiency in heating and cooling, and the need for information on emissions trends.

Related views focused on creating mechanisms to align climate change policies with other city policies. Responses to climate risks and extreme events with major economic and other impacts on cities were also called for, along with best estimates of the cost of inaction, highlighting the AR6 WGIII conclusion that two-thirds of emissions can be attributed to cities worldwide. Reference to means for achieving resilient cities, eradication of poverty, job creation, and economic development was also requested.

Calls were also made for reference to relocation in terms of both preventing it and developing emergency strategies for extreme events, particularly in developing countries. The importance of clearer definitions of methods and tools, such as the use of models, was also noted, as well as aligning the Special Report with the Sustainable Development Goals (SDGs) and the Global Goal on Adaptation and low-carbon climate-resilient development. Governance and proper city planning were emphasised, including addressing how inequalities contribute to climate vulnerability. Comments stressed sea level rise, flash floods, disaster risk reduction and preparedness, international commitments to early warning systems (EWS) for everyone, contingency planning, regular simulation exercises for high-risk areas, risk mapping, and multi-city mapping to identify at-risk areas. The interconnection between cities and rural areas for food security was also emphasised in the second, third and fourth Chapters.

The Chair informed that there would be an informal question and answer session on the outline during the lunch break to help delegates seek clarity on issues of concern. To advance the work further, he proposed establishing a Contact Group to continue the outline discussions on Sunday, 28 July, as the Plenary would resume on Monday, 29 July. Subsequently, the Contact Group, co-chaired by Mr Pedro Ivo Ferraz da Silva (Brazil) and Ms Tina Christensen (Denmark), met on 28 July.

On 29 July, the SSC Chair introduced the revised draft outline for the Special Report, indicating that the proposed changes were based on discussions during the Contact Group that took place on 28 July and interventions in the plenary on 27 July. The SSC had worked in three groups, respectively focusing on differentiating city types, including recognising development level as an important aspect of differentiation, ensuring a balance between adaptation and mitigation across the report, and integrating a sustainable development lens as well as all other comments.

Mr Winston Chow and Mr Bart van den Hurk, WGII Co-Chairs, then described the changes made to the document to acknowledge the diversity of cities and ensure equal treatment of mitigation and adaptation, noting that no changes had been made to chapter headings but that comments had been incorporated into the content.

Algeria; Antigua and Barbuda; Argentina; Azerbaijan; Barbados; Belgium; Belize; Botswana; Brazil; Burkina Faso; Burundi; Chile; Congo, Republic of the; Cuba; Denmark; Egypt; France; Germany; Greece; Guinea; Haiti; India; Indonesia; Iraq; Italy; Japan; Kenya; Kiribati; Libya; Luxembourg; Malawi; Malaysia; Mexico; Mozambique; the Netherlands; North Macedonia; Norway; Republic of Korea; the Russian Federation; Saudi Arabia; Senegal; Singapore; South Africa; Sweden; Switzerland; Timor-Leste; Türkiye; Ukraine; the UK; the USA, and Zambia, as well as C40 Cities Climate Leadership Group; the Inuit Circumpolar Council - Canada; and Save the Children International (SCI), took the floor.

The SSC's efforts in producing a revised outline version were appreciated. Some delegates expressed their satisfaction with the revised outline. The need to trust the SSC and the scientists was stressed. Calls were made to keep further amendments to a minimum. At the same time, some of the changes made were questioned, and additional modifications were requested. Proposals to reorder the chapter structure and to modify the chapter titles to improve their clarity and focus.

Questions included whether references to development levels were about cities or were intended to differentiate between developed and developing countries. It was suggested that "development status" should be changed to "diversity of development" to improve the clarity of the reference. There were queries about the meaning of a new reference to "cost of inaction" and the difference between this and "loss and damage." It was also suggested that the "cost of inaction" should be accompanied by a reference to the "cost of action."

There were calls to define cities clearly to include all geographic areas. Ensuring inclusivity was underlined in the choice of case studies and in the selection of experts. Examples should consist of cities in landlocked countries, Small Island Developing States (SIDS), other island countries, Least Developed Countries (LDCs), coastal areas, Africa, as well as peri-urban settings and formal and informal settlements. Success stories that can inspire others should be incorporated, including aspects related to water, sanitation, and hygiene and how these could tackle waterborne diseases. Whether specific cities would be cited as examples, be they positive or negative, was questioned.

The need to consider the common barriers that cities face was underlined. All countries have their unique mix of technology or infrastructure, and the deletion of the reference to "path dependencies" and "lock-in" was suggested. There were also calls to address "energy" in a neutral manner and replace "energy transitions" with "just transitions" to incorporate all relevant sectors.

The language change in the outline from "loss and damage" to "losses and damages" was questioned, noting that "loss and damage" is the term commonly used in the underlying literature and is agreed language in other processes. Delegates again urged a better balance between mitigation and adaptation.

There were diverging views about whether to refer to "sustainable development" or to the "Sustainable Development Goals (SDGs)" in the outline. There were calls to reinsert the reference to the "SDGs", noting the need to rely on an agreed concept. Others preferred retaining reference to "sustainable development", pointing out that it has a broader connotation and a longer time horizon than the "SDGs". It was noted that there were differences in how "climate-resilient development" was used in the AR6 WGII report and the underlying literature, and the suggestion to only refer to "sustainable development" was made. References to "equity" in the text elicited calls for replacing them with references to "sustainable development in and across regions." There were also suggestions to replace "compounding risks" with "compounding and cascading risks."

The references to "historical emissions" were also questioned, with views calling for replacing these references with "past, present and future emissions." The reference to "socio-economic trends" could be sufficient, as it covered historical and current emission trends.

The importance of the connection between air pollution and climate change in the context of cities and health impacts was emphasised, noting that the reference to "air pollution" should be kept in the outline.

There were also discussions around whether to reference “finance” or “financial systems”, with some views asserting that “financial systems” was a broader and, hence, more appropriate term. Other views expressed preference for “finance”, noting it covered a range of issues not covered by “financial systems”, such as access to and availability of finance.

The 2024 Innovate4Cities Conference was underscored, noting that one of its objectives was to inform the Special Report. There was a call for disaggregated data to ensure that populations in informal settlements, including children, were adequately represented and their needs reflected. The importance of equity, vulnerabilities, and an intersectional approach was emphasised.

Concerns were expressed that current efforts would not be able to address the fundamental gaps in working with Indigenous Knowledge as a distinct knowledge system. Calls were made for more transparency and flexibility in the author and expert selection process, noting that Indigenous Knowledge holders and experts may not hold university degrees or have Western peer-reviewed publications. The need for support and guidance in this regard was highlighted. It was proposed that an Indigenous Peoples taskforce or advisory body be established to ensure that the seventh assessment cycle can progress in working with Indigenous Knowledge.

There were also suggestions for additional elements to be included in the outline, such as a roadmap for rebuilding destroyed cities, “early warning systems” as a standalone solution in Chapter 5 and explicit reference to demand-side measures at the national level. Further proposals included adding circular economy or circular approaches, ecosystem-based adaptation, low-carbon and climate-resilient cities, as well as tourism and the interaction of marine ecosystems and urban areas. Elements such as desertification, the role of cities in addressing climate change, peri-urban forest fire risk increase, and gender perspectives should also be considered.

The SSC Chair said the SSC would reflect on the comments and consider how they could be incorporated into the Report’s outline.

Mr Bart van den Hurk, WGII Co-Chair, underscored that the chapter outlines were indicative and clarified that the report would include diverse urban experiences.

On 30 July, the SSC Chair introduced further changes made by the SSC to the outline.

Mr Bart van den Hurk, WGII Co-Chair, then summarised the proposed narrative of the report, including why cities and what was at stake, as well as past and present trends. This was followed by actions and options to reduce climate risks through adaptation and mitigation and how to facilitate and accelerate change, noting enabling conditions and barriers. Finally, the proposed narrative addressed specific challenges and solutions to climate change in cities for a variety of urban types, addressing the diversity of regional differences.

Algeria; Antigua and Barbuda; Argentina; the Bahamas; Barbados; Belgium; Benin; Brazil; Chad; Chile; Congo, Republic of the; Cuba; Denmark; Finland; France; Germany; Haiti; Iceland; India; India; Italy; Kenya; Kiribati; Libya; Luxembourg; Malawi; Malaysia; Mexico; Monaco; the Netherlands; New Zealand; Peru; the Russian Federation; Saint Kitts and Nevis; Saudi Arabia; Singapore; South Africa; Sweden; Switzerland; Timor-Leste; Türkiye; Ukraine; the UK; and the USA; as well as the Conflict and Environment Observatory (CEOBS); and the Friends World Committee for Consultation (FWCC) took the floor.

Views were expressed that, despite not necessarily favouring every amendment made, flexibility could be shown in accepting the revised outline as presented. Trust in the 600 experts and practitioners who had participated in the scoping process that produced the outline was urged. It was noted again that the document was just an outline with an indicative list of items IPCC members want to see in the Special Report and not a decision text. The items not explicitly included in the outline could still be in the information document (IPCC-LXI/INF.1) from which the report’s authors could draw. The opportunity for further improvement in the government review of the draft report was mentioned.

Caution was expressed against introducing new concepts and broadening the scope to a list of topics going beyond cities. The usefulness of some of the amendments, such as on gender, sea level rise particularly for deltas and coastal areas, as well as Early Warning Systems, costs and benefits of action and inaction, and framing of the unique circumstances of LDCs and SIDS, was noted. There were calls, however, for highlighting that LDCs were the most vulnerable to and most affected by climate change. The relevance of cities in setting the world on the critical 1.5°C path was highlighted. It was also suggested that case studies in Chapter 5 could incorporate other aspects not considered in the first four chapters. Integration of the issue of interdependence of macro-ecosystems and urban areas was also urged.

Calls were made to review the outline chapter-by-chapter. There was an objection to the terms "transformative adaptation", "maladaptation", and "hotspots." Reflection of best practices in adaptation, such as action plans, was called for instead of just "climate-resilient development and decarbonisation." Reference to "losses and damages" was called for, where vulnerability, impacts, and risks were discussed. There was a suggestion not to single out specific methodological approaches but to allow for all of them in an outline listing potential assessment methodologies as bullet points.

It was queried whether a reference to planned and unplanned relocation referred to climate-induced relocation and included cross-border relocation. Other comments included that the evaluation of target-setting by cities cannot be reconciled with the vast differences between countries. Net zero was a national objective that cities could not achieve without coordinated support from other regions and national governments. The report should concentrate on attainable actions that can be addressed at the city level. The socio-economic impact of climate policies must be equitable and reference to their synergies and trade-offs with the SDGs and to competing priorities should be reflected clearly.

It was noted that the world was now undergoing the highest number of violent conflicts since World War II, and the destruction of cities and urban areas during conflict drives emissions higher because the debris and the need to reconstruct urban areas were significant sources of emissions. Reference to "conflict" in Chapter 3 was called for in the context of reducing urban risk. The 2023 UNEP Emissions Gap Report highlighted that military emissions data was insufficient. Only limited amounts of peer-reviewed literature on such emissions have been able to feed into the IPCC, and thus, the IPCC has not addressed armed conflict as a significant source of emissions in the past. It was noted that an increasing volume of literature on this, particularly grey literature, was becoming available.

The Chair invited the Panel to agree on the revised outline as presented.

Belarus, Denmark, Haiti, India, Kenya, Monaco, the Netherlands, Norway, the Russian Federation, Saudi Arabia, Türkiye, and the USA took the floor.

Additional suggestions were made, including deleting reference to "social tipping points" as it was covered by "uncertainties" and referring to "sustainable development and climate resilience" everywhere that "sustainable development" appeared. There were again calls to reinsert a reference to "historical" before "socio-economic trends." The suggestion to include reference to fragility and conflict situations was opposed as too tenuously related to climate. There were calls to refer to "linking" net-zero targets instead of "achieving" them as being potentially more feasible. Suggestions were made to limit the mention of "tipping points" to Chapter 4 and to include reference to "means of implementation", including capacity building and technology transfer. Calls were made to delete references to "policies" for behavioural and lifestyle changes.

The SSC Chair responded that this revised draft resulted from carefully balancing government guidance and being true to the science, expressing concern about further changes. She suggested that the SSC consult among its members and offer further explanations.

India, Iraq, Kenya, Saudi Arabia, as well as the European Union (EU) took the floor.

Views were expressed that city “targets-setting” should be replaced with “plans”. Vast differences between cities should be considered. While there were views not favouring reopening the text, it was noted that no strong opposition had been expressed to removing “decarbonisation”, “social tipping points”, or “transformative adaptation” and “maladaptation”. It was suggested that “losses and damages” can provide solutions to cities. Calls were made to account for the impact of climate change on archaeological sites and to recognise net-zero emissions as a global, multidisciplinary goal with economic repercussions that cannot only be achieved through cities. It was noted that reviewing the scoping outline was the Panel’s responsibility.

The Chair invited the SSC to consider whether and how views might be addressed, inviting governments to consult informally.

Germany, India, and the USA took the floor.

There were requests for clarification on what to anticipate and queries on additional opportunities to provide comments on the outline.

The Chair asked that the SSC deliberated first and bring back their proposed course of action the following day and adjourned the session.

On 1 August, the SCC Chair presented a revised outline for the Special Report.

The WGII Co-Chairs explained the proposed revised outline, adding that a fine balance had to be struck between the science in diverse circumstances while not being policy-prescriptive. “Historical” was not needed before “socio-economic trends” because that term already included historical information. A bullet that listed assessment methodologies was left unchanged to give authors space to assess in appropriate ways. “Policies” for behavioural and lifestyle changes were not deleted because they did not affect the meaning. “Losses and damages” were not added to the list of characteristics of cities in Chapter 5 because their prominent role was already well known. Impacts on archaeological sites and marine ecosystems’ interdependence with cities were covered under impacts, and synergies and trade-offs were already covered. No changes were made to the proposed narrative order nor common scientific terms, including “hotspots”, “social tipping”, and “net-zero” targets. Fragility and conflict were already included in the context of cities in Chapter 5.

Five edits had been made. “Strong” was removed before risk reduction, adaptation, and resilience building, as the message could be conveyed without it. “Target-setting” was changed to “targets adopted by cities.” Reference to “incremental and” transformational adaptation and “avoiding” maladaptation “in various regions and contexts” was added in a bullet on local risk assessments. Net-zero targets were qualified with the words “adopted by cities.” “Adaptation” and “low-carbon development” were added to a list of aims in a bullet on case studies/best practices/stories “related to” climate-resilient development in a diverse range of cities.

The SSC Chair requested flexibility and acceptance of this version to protect the fine balance between governments’ policy priorities and faithfulness to the science from the scoping meeting.

Algeria, Australia, Azerbaijan, the Bahamas, Belgium, Brazil, Burundi, Canada, Chile, China, Cuba, Denmark, Finland, France, Germany, Guinea, Haiti, Hungary, Iceland, India, Iraq, Italy, Japan, Kenya, Kiribati, Libya, Luxembourg, Malaysia, Monaco, the Netherlands, New Zealand, Nigeria, Norway, Portugal, Republic of Korea, Romania, Saint Kitts and Nevis, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, the Russian Federation, Timor-Leste, Türkiye, Ukraine, the UK and the USA took the floor.

Views were expressed favouring this version as a comprehensive, balanced document, although regrets were voiced over other changes called for earlier not being reflected. Views were also expressed that the outline was now unbalanced and flexibility was being stretched, but it could be accepted. It was noted that not everything could be detailed in the outline. It was noted that the report's

authors were to be nominated by the IPCC members and, again, that governments would also have the possibility to review the draft report.

Qualifying “adaptation policy cycles” with the addition of “in various regions and contexts” was queried given that the “adaptation cycle” was a globally used framework, including in the Global Goal on Adaptation framework adopted at UNFCCC COP28.

Requests were made for the Co-Chairs and the SSC to forward to the authors the concerns of delegates not reflected in the outline changes. Other delegates called for a chapter-by-chapter review of this revised outline. Views included that the product being developed should take into account all statements. Comments were made that the indicative number of pages should be given in the outline and that 500 pages were too long.

It was noted that adding “incremental” to “transformative adaptation” just added more qualifiers, and “transformational adaptation” does not specifically include Early Warning Systems, thus calling these into jeopardy. The concept of “maladaptation” depends on how it was defined, with much of the literature seemingly suggesting that it was only developing countries maladapting and that singling out cities in the developing countries would be problematic. It was noted that some literature calls for assessments of maladaptation to be connected to adaptation funding. It was stated that maladaptation and transformative adaptation concepts would become clear with discussion elsewhere on adaptation indicators, matrices, and methodologies. An alternative opinion was that “maladaptation” should be retained, with acknowledgement that the concept relates to all countries regardless of the level of development.

On “net-zero targets”, views were again expressed that these are more applicable to regions and countries than to cities because larger government entities could compensate for cities’ emissions elsewhere, including through reforestation. Diverging views were that many cities have already made net-zero pledges or commitments. Significant literature exists on these in numerous developed countries, and some cities had more ambitious net-zero targets than their national governments. The addition of a reference to “low-carbon development” alongside “decarbonisation” was called for everywhere.

Reference to “losses and damages” was again called for in the list of multi-dimensional characteristics of cities in Chapter 5 to support decision-making. Views emphasised that, given the world was surpassing 1.5°C global warming, losses and damages from severe impacts cannot be avoided through adaptation and mitigation. It was noted that UNEP’s 2023 Adaptation Gap Report stated that the adaptation gap was widening, with reference made to implementation, funding, and planning, and that particularly developing countries would experience losses and damages.

Other views were that the outline’s use of “losses and damages” was insufficient, but there was sufficient content in the outline for the authors to assess the relevant literature. It was again noted that Chapter 5 was not aimed at providing an exhaustive list. It was stressed that the outline provided general direction on how the report should be structured. It was proposed that the reference to “losses and damages” could be moved from Chapter 1 to the solution framing of Chapter 5, but this was opposed, given the view that it was not the Panel’s mandate to rewrite the outline.

The inclusion of “social tipping points” was considered too detailed. It was also queried what “tipping points” more generally referred to and for whom, the local or regional climate, the city, municipal management, or the urban economy. Views were also expressed that “tipping points” were too ambiguous, with too many interpretations.

Reference to common but differentiated responsibilities was called for in relation to the Paris Agreement in Chapter 3 on actions and solutions to reduce urban risks and emissions.

Support was expressed for putting some issues not included in the outline in notes to the authors, although some issues must be addressed in the outline itself. There were calls just to give the authors

general direction to ensure they would have what they need to develop a robust Special Report to support climate action at the city level.

The Chair reiterated that many of the issues raised would be addressed during the drafting process for the report and would be subject to expert and government review before the Special Report was completed. He proposed that delegates accept the outline as presented and request the SSC to provide further guidance to the authors that reflect views expressed at IPCC-61.

Algeria, India, Kenya, and Saudi Arabia took the floor.

Views were expressed that procedures clarified that the Panel agrees on a scoping outline and then forwards it to the authors but did not state clearly that an explanatory note may be used. The guidance to the authors should go through the Bureau or another mechanism recognised in the Procedure. The outline was supposed to represent consensus, and all issues the authors were to address should be included in it. Leaving some divergence of views to be settled later was problematic.

The Chair agreed that his proposed decision could request the Bureau, rather than the SSC, to provide further guidance to authors.

India and Italy took the floor.

It was noted that the Panel should not approve guidance notes for the authors and that divergences could not be captured in a consensus document but should appear in the Session report instead.

The Chair proposed that Mr Ramón Pichs-Madruga, IPCC Vice-Chair, facilitated a huddle to agree on either editing the outline or giving guidance to authors on the issues of “net-zero targets”, “social tipping points”, “transformational adaptation and maladaptation”, and “losses and damages”. The Panel agreed to this proposal.

Subsequently, Mr Ramón Pichs-Madruga, IPCC Vice-Chair, reported that the huddle had reached a compromise on three of the four elements they had been mandated to consider, including that “maladaptation” had been modified to “maladaptive practices”. Second, “achieving net-zero targets adopted by cities” was changed to “the role of cities in achieving a net-zero target”. “Losses and damages” was inserted into Chapter 5 at the beginning of a bullet on vulnerability. A separate reference to “losses and damages” was moved from a bullet on framing and defining urban systems to one on cities as hotspots of effects of hazards and emissions. He reported that the remaining issue of “social tipping points” and reference to “tipping points” were still a concern.

The Chair asked the huddle to reconvene to consider “tipping points”.

On 2 August, Mr Ramón Pichs-Madruga, IPCC Vice-Chair, reported agreement in the huddle on tipping points. The Chair introduced the draft outline for approval by the Panel.

Germany, India, Saudi Arabia, as well as the EU and Ms Laura Gallardo, WGII Vice-Chair, took the floor.

Gratitude was expressed for the consensus achieved. It was stressed that the publication of scientific outputs would increase the policy relevance of IPCC findings. Delegates were encouraged to stimulate peer-reviewed publications on all issues covered by the outline. The work of the EU’s Horizon Europe in funding relevant research was highlighted.

The Panel adopted the Decision (IPCC-LXI-5) on the seventh assessment cycle products—Outline of the Special Report on Climate Change and Cities, which includes the time schedule and budget for producing the Special Report.

4.2 Outline of the Methodology Report on Short-Lived Climate Forcers (SLCFs)

On 27 July, Mr Takeshi Enoki, Co-Chair of the Task Force on National Greenhouse Gas Inventories (TFI), presented the draft outline for the Methodology Report on Short-Lived Climate Forcers (SLCFs) (IPCC-LXI/Doc. 6). He recalled the decision from the 49th session of the IPCC(IPCC-49) (8-12 May 2019, Kyoto, Japan) on the preparation of the Methodology Report on SLCFs. He noted that the scoping meeting of the Methodology Report held on 26-28 February 2024 in Brisbane, Australia, was attended by 57 experts, along with 11 TFI Bureau (TFB) members, who agreed on the draft outline.

Noting the 2006 Guidelines for National Greenhouse Gas (GHG) Inventories (2006 Guidelines), the 2013 Wetlands Supplement to the 2006 Guidelines, and the 2019 Refinement to the 2006 Guidelines, the TFI Co-Chair added that the scoping meeting decided that the Methodology Report would be a supplement to the 2006 Guidelines. Existing guidance would not be changed or refined. Instead, the new report should be used together with the Guidelines. The TFB proposed the title, "2027 Supplement to the 2006 IPCC Guidelines for National GHG Inventories: Short-lived Climate Forcers (2027 Supplement on SLCFs)."

The table of contents would match the structure of the 2006 Guidelines, comprising one single Methodology Report including an overview chapter and five volumes, with existing IPCC methods, categorisation, and guidance in the 2006 IPCC Guidelines. The report was to begin with an overview, followed by the first volume giving guidance on general and cross-cutting issues, with some specific SLCF information. The other volumes would address the same sectors as in the 2006 Guidelines, including Energy, Industrial Processes and Product Use, Agriculture, Forestry, and other Land Uses (AFOLU), and Waste.

The proposed Terms of Reference matched those in the 2006 Guidelines, covering an inventory of anthropogenic primary emissions, with assessments to be national in scope, annual, and reported in mass units for each individual emitted species in the various sectors. The proposed list of SLCF species to be covered was included, noting that methane and halogenated species were already covered in the 2006 IPCC Guidelines. During the scoping meeting, there was a lengthy discussion about whether to include particulate matter 2.5 (PM2.5), but there was no agreement. However, there was agreement that black carbon (BC) and organic carbon (OC) could be reported as a fraction of PM2.5 and that when this was done, the reporting party should also report the total amount of PM2.5 emitted. For non-methane volatile organic compounds (NMVOCs), the methodology should produce estimates for total NMVOCs, and speciation for this should be considered by the authors as appropriate. Guidance should also be provided as a basis for future methodological development, and authors should consider guidance on future spatial and temporal disaggregation of SLCF emissions.

Proposed "Instructions to Experts and Authors" were presented in Annex 3 to ensure a consistent and coherent approach across the volumes and the use of common terminology. These were consistent with IPCC Procedures and based on the instructions given to experts writing previous methodology reports, particularly for the 2019 Refinement. The guidance also followed the 2006 Guidelines with the idea to be understandable and easy to implement and have reasonable limits on length and details. The instructions' compromise approach for treating PM2.5 was that authors should provide guidance, including on measurement techniques, for deriving emission factors directly and from ratios to anthropogenic primary PM2.5, where practicable. When ratios were used, authors should include information on anthropogenic primary PM2.5 emissions factors from which the ratios have been derived to enhance transparency. If direct emission factors were applied, authors might consider exploring the use of anthropogenic primary PM2.5 emission factors for verification and usability purposes and to inform associated uncertainty.

Annex 4 contained a proposed work plan with a timeline, which had changed slightly since document IPCC-LXI/Doc. 6 was published to reflect the proposed strategic planning schedule and a proposed budget.

France, India, Ireland, the Russian Federation, Togo as well as the EU took the floor.

There were questions on whether the literature and research gaps could be included either in a separate section or in relevant sections of the document presented. The change in title from that approved by the Panel, Methodology Report on SLCFs, to “2027 Supplement to the 2006 IPCC Guidelines for National GHG Inventories: Short-lived Climate Forcers (2027 Supplement on SLCFs)”, was queried.

Views were expressed that providing guidelines for reporting PM2.5 in the “Instructions to the Experts and Authors” contradicted the acknowledgement of ambiguity and the lack of agreement in the scoping meeting. It was also noted that the Methodology Report precedes other AR7 products and should, therefore, be based on the science of AR6, which stated that meeting the World Health Organisation (WHO) guidelines on air pollution quality and the requirements of high mitigation (1.5°C) are not co-terminus objectives. It was also mentioned that not all PM2.5 were SLCFs and that including total PM2.5 was not within the mandate and scope of the report.

There were queries regarding the possibility of coordination with the International Convention on Long-Range Transboundary Air Pollution (LRTAP) on measurement methodologies and the relationship between this Methodology Report and the WGI assessment related to the SLCF in the AR7.

The Chair announced that there would be a possibility for an informal exchange, co-facilitated by Ms Shanea Young (Belize) and Mr Frank McGovern (Ireland), on Sunday, 28 July, where some of these queries could be clarified.

On 29 July, Ms Shanea Young (Belize) and Mr Frank McGovern (Ireland) provided an update on the informal exchange, underlining a very good discussion around various topics. Participants provided many interesting insights and views, including the importance of WGI and WGIII contributions and the need for the Methodology Report to provide countries with the data needed to estimate SLCF emissions at the individual country level. The Co-Facilitators also highlighted that the need for a neutral document applicable to all countries was discussed.

Mr Takeshi Enoki, TFI Co-Chair, noted outstanding issues, including which species to address and the format and title of the report. He urged countries to interact and reach agreement on these issues.

Algeria, Azerbaijan, Belgium, Canada, Chile, Chile, China, Denmark, Egypt, Germany, India, Iraq, Japan, Luxembourg, Morocco, the Netherlands, New Zealand, Nigeria, Norway, Portugal, Republic of Korea, the Russian Federation, Saudi Arabia, Spain, Saint Kitts and Nevis, Sweden, Switzerland, Ukraine, the UK, and the USA, as well as FWCC and Union of Concerned Scientists (UCS), took the floor.

A point of order was raised to state that the meeting on 28 July was an informal exchange of views with no formal status, not a contact group, and there should, therefore, be no report back from the Co-Facilitators. Other delegates supported hearing a report from the informal exchange, noting that some delegates could not attend.

The Chair clarified that the informal exchange had no formal status and that the purpose of the report back was to update those unable to attend it.

Views expressed included support for the outline as presented, noting that the report should cover everything suggested by the experts in the scoping meeting. Views were also expressed proposing modifications to the outline. Regarding species to be addressed, there were diverging views on including PM2.5 and hydrogen. It was also underlined that it was the authors’ responsibility to assess the literature, not the Panel’s.

On PM2.5, there were views opposing its inclusion in the Methodology Report, noting a lack of mature studies, as well as insufficient and contradictory literature. There were also views that not all component parts of PM2.5 were SLCFs, not all were relevant to radiative forcing, and the report should focus on BC and OC rather than PM2.5. A lack of consensus about which aerosols contribute to global warming was highlighted, and more precise wording was suggested, such as “absorption carbon aerosols” instead of PM2.5, BC, or OC. Again, it was noted that the experts who participated in the scoping meeting did not reach a consensus about whether to include PM2.5 as a species or as ancillary information.

There were also views that underlined the importance of PM2.5 and called for its inclusion in the Methodology Report, noting that this would ensure that the new IPCC Guidelines include all anthropogenic sources of PM2.5, not just the BC and OC components. It was also stressed that PM2.5 was scientifically well-defined, unlike BC and OC, which had varying definitions. It was further noted that all PM2.5 components impact the climate, so it was important to understand these impacts. It was stressed that this would help countries identify the most effective climate mitigation measures and decrease uncertainties regarding impacts on human health. The need for the IPCC to be proactive in developing methodologies was underlined, underscoring that such methodologies could later be refined rather than waiting and losing the opportunity to gather historical data.

It was highlighted that using the report was voluntary and that developing the methodologies would not mandate reporting on any specific gas. It was noted that PM2.5 included aerosols and species, some of which scatter solar radiation and have a cooling effect, while others absorb solar radiation and have a heating effect. It was, therefore, important to estimate all emissions to understand their effect, including their effect on human health, the climate, and air pollution.

There were also diverging views on including hydrogen in the Methodology Report. Delegates noted consensus from the experts in the scoping meeting on the need to include it. The role of hydrogen in the energy transition and the increasing uptake of hydrogen as a shipping fuel were further highlighted. Calls were made to include hydrogen now rather than wait until it becomes a problem. It was noted that a growing number of peer-reviewed publications on hydrogen exists. It was also noted that hydrogen was mentioned specifically as a climate forcer in the Fourth and the Fifth Assessment Reports (AR4 and AR5) and was, therefore, not a new issue. Others pointed out, however, that hydrogen gas was not studied during the AR6 cycle. It was also suggested to wait for a proper assessment of hydrogen by WGI in AR7 and then consider its inclusion. It was noted that it was unlikely there would be a significant increase in the use of hydrogen within the next five years and that including the gas as a species in the Methodology Report was unnecessary.

Questions were raised about whether fires, as well as different types of forest, would be included as emission sources in the report. Views were expressed that forest fires were not anthropogenic and should not be included and that forest fires had a strong anthropogenic component.

The TFI Co-Chair clarified that forest fires were to be included, noting that the categorisation for this report would follow the 2006 Guidelines and all the categories in those Guidelines would be included in the scope of this Methodology Report.

There was also a discussion of the “tiered methodological approaches” and “decision trees” mentioned in the outline. Views were expressed that setting different tiers for different parties was prejudicial and not scientific. Other views supported the tiered approach, highlighting that governments would decide how to use the report, that the different tiers would be provided in case of uncertainties, and that this approach was consistent with the current reporting practice.

The TFI Co-Chair clarified that the tiers were meant to provide options that all countries could use.

Noting questions about the inclusion of some species, it was suggested for the TFI to prepare a one-page explainer about the inclusion of different species, such as nitrogen oxide (NOX), sulphur dioxide (SO2) and oxygen (O2), that sets out the effect of these gases on the climate. As SO2 and NOX evaluations have been undertaken under the LRTAP Convention and there were existing

methodologies under that Convention, it was suggested that those methodologies be adopted for use in the Methodology Report.

There were also views expressed about the title of the Report, including whether it should be a standalone document or a supplement to the 2006 IPCC Guidelines for GHG Inventories. It was reiterated that this Methodology Report builds on the 2006 Guidelines and that it should be a supplement. It was stressed that reference in the title to the 2006 Guidelines does not suggest a requirement to adhere to those Guidelines. It was also suggested that the Methodology Report be a standalone document, not a supplement to the 2006 Guidelines.

Why SO2 was proposed for inclusion rather than sulphate aerosols generally was queried. It was noted that sulphate aerosols were more dominant in some parts of the world and continue to be responsible for acid rain. It was suggested that the introduction should be targeted and not deviate into other issues questioning the reference to “air pollution” and “health”. Views were also expressed that supported the reference to these two issues, among others.

The Chair proposed establishing a Contact Group, co-chaired by Ms Shanea Young (Belize) and Mr Frank McGovern (Ireland), focusing on which species to include in the Methodology Report, the status of the report, the question of supplement versus standalone report, and the relationship between air pollution, health, and climate change.

On 30 July, the Chair noted that the discussions on the report’s title and status, interlinkages between air pollution and health, and issues surrounding PM2.5 and hydrogen were still pending, and huddles were established to facilitate reaching a consensus on these matters.

Mr Ladislaus Chang'a, IPCC Vice-Chair, stated that a huddle mandated to reach a consensus on PM2.5 met. While progress was made, the time ran out before all issues were finalised, and the discussions would continue as needed.

Regarding the title and status of the SLCF report, the Chair invited the UNFCCC Secretariat to give the UNFCCC’s perspective on its significance.

Ms Annett Moehner, Representative of the UNFCCC Secretariat, said that paragraph 20 of Decision 18/CMA.1 (FCCC/PA/CMA/2018/3/Add.2) stipulates that the Parties to the Paris Agreement shall use the 2006 IPCC Guidelines and any subsequent version or refinement of the Guidelines agreed upon by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) in their GHG inventories and their biannual transparency reports. However, the SLCF Methodology Report did not fall under the Guidelines nor under a refinement to the Guidelines, so it would not be mandatory. It would be up to the Parties to the Paris Agreement to determine the extent to which they want to use it, just as they were “encouraged” to use the 2013 Wetlands Supplement. She added that the UNFCCC Subsidiary Body for Scientific and Technical Advice (SBSTA) was mandated to undertake its first review of modalities, including the methodology, no later than 2028 and would also consider the SLCF report. She stressed, therefore, that the title did not matter.

The TFI Co-Chair said the proposal for the title had been revised to read “2027 Supplementary Methodology to the IPCC Guidelines for National GHG Inventories: Short-Lived Climate Forcers” to ensure consistency with the existing 2006 Guidelines but to also stand as an independent report.

Algeria, Belgium, Brazil, Denmark, Germany, India, the Netherlands, Norway, Saudi Arabia, Sweden, Togo, the UK, and the USA, as well as Mr Eduardo Calvo Buendía, WGIII Vice-Chair took the floor.

There were views that that the phrase “supplementary methodology” increased the ambiguity. It was also recalled that the 2000 Good Practice Guidance and Uncertainty Management in National GHG Inventories made no explicit link to the 1996 IPCC Guidelines for National GHG Inventories in its title. This had no implications, and it was up to the Parties to the UNFCCC to decide whether the SLCF report would be mandatory.

The Chair suggested deleting the reference to interlinkages between air pollution and health in the outline of Volume 1 in Annex 2 of the proposed outline. There were no objections.

The Chair also proposed shortening the title to the 2027 Methodology Report on SLCFs. Another suggestion was to use a shorter title with a subtitle, which has yet to be determined. He invited the TFI Co-Chairs to work through informal consultations on developing a proposal for the subtitle under the shorter title.

Later, the Chair reopened the discussion on the SLCF report, seeking an update on progress from the TFI Co-Chair on informal consultations on the title.

Mr Takeshi Enoki, TFI Co-Chair, said the consultations produced a proposal for "The IPCC Methodology Report on SLCFs" and a choice of options for a subtitle referring to a Supplement to IPCC National GHG Inventory "Guidelines", "Methods", "Methodologies", or "Guidance." He suggested "Guidance", noting opposition to "Guidelines" and adding that "Methods" limited the subject to estimation methods but that an inventory includes cross-cutting issues such as category analysis and uncertainty estimates.

Canada; Chile; China; Congo, Republic of the; India; Japan; the Netherlands; Saudi Arabia; the UK and the USA, as well as Mr Edvin Aldrian, WGI Vice-Chair, took the floor.

Views expressed included support for a short title with no subtitle, such as "IPCC Supplementary Methodology Report on SLCFs." Other views supported a subtitle, including one suggestion to have a subtitle that includes reference to the report as a supplement to the 2006 IPCC National GHG Guidelines, while an alternative subtitle was suggested to refer only to "Guidance to IPCC National GHG Inventories."

The Chair suspended discussion on the report's title and established a huddle to be convened by Mr Ramón Pichs-Madruga, IPCC Vice-Chair, for further informal exchange of views.

The Chair then reopened the discussion of the PM2.5 issue.

Mr Ladislaus Chang'a, IPCC Vice-Chair, reported that consultations had produced a proposed formulation for Annex I, paragraph 4, on species to be covered in the SLCF report, but no consensus had been reached.

Canada; Chile; Congo, Republic of the; India; Saudi Arabia; the UK, and the USA took the floor.

It was proposed to refer to "climatologically relevant" PM or "climate-relevant species" rather than "radiative balance" to encompass more potential effects. There was opposition to talking only about PM, as well as disagreement over whether to refer to "relevant" or "relative" contribution, with a footnote explaining its meaning as "not insignificant", as agreed in the scoping meeting. It was also noted that relevance applies either to radiative "balance" or to "direct and indirect radiative forcing." Calls were also made to delete "as appropriate."

The Chair called for the huddle to continue and consider the whole paragraph, as well as paragraph 46 of Annex 3, which was also to address the PM.

In the afternoon, Mr Ramón Pichs-Madruga, IPCC Vice-Chair, reported that the huddle on the title agreed in principle on "2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers", pending agreement on paragraphs still under discussion. There was no objection.

Mr Ladislaus Chang'a, IPCC Vice-Chair, reported that the huddle reached a tentative consensus on reference to PM2.5 in a paragraph on coverage in the Terms of Reference by adding, after a list of species "potentially covered by the new Methodology Report", the wording "as well as emissions of primary PM relevant for radiative forcing, as appropriate". The Instructions would include a text that

for BC/OC emissions, authors should provide guidance, including techniques of measurement and all variables used to derive emission factors.

There was still a disagreement on hydrogen, with three options for a footnote now under consideration. The first one was that it was within the scope to explore a basis for future methodological development of a Tier 1 method for estimating hydrogen emissions, and where the science was assessed to be robust enough to provide guidance for a Tier 1 methodological approach, it would accordingly be included. The second option was that further SLCFs would be studied in the AR7 by the WGs for future methodological guidance. The third option was that given the different views and noting the SLCFs useful for future methodological guidance would be further studied in AR7 by the WGs, hydrogen was within the scope to explore future methodological development for a Tier 1 method for estimating hydrogen emissions. This would be reassessed at the end of AR7. If the science was assessed to be robust enough before the literature cut-off date to provide guidance for a Tier 1 methodological approach, it could accordingly be included.

Algeria; Antigua and Barbuda; Argentina; Australia; Austria; Azerbaijan; the Bahamas; Belgium; Brazil; Burundi; Canada; Chile; China; Comoros; Congo, Republic of the; Denmark; Egypt; Iceland; India; Iraq; Japan; Kenya; Kiribati; Libya; Mexico; Monaco; Morocco; the Netherlands; New Zealand; Nicaragua; Nigeria; Norway; Peru; Republic of Korea; the Russian Federation; Saint Kitts and Nevis; Saudi Arabia; South Africa; Sweden; Switzerland; Syrian Arab Republic; Türkiye; Uganda; the UK, Uruguay, the USA, and Zambia, as well as the EU; Mr Robert Vautard, WGI Co-Chair and Ms Sonia Seneviratne, WGI Vice-Chair took the floor.

Views diverged. It was noted that all three options were only for the future, so none were acceptable to anyone who wanted an option for the assessment of hydrogen in the Methodological Report presently under consideration. Views accompanying a preference for the first option noted that moving its language into a footnote already represented a compromise. It was urged that the science of the scoping process be respected, cautioning against going against the consensus of the scientists who had put hydrogen on their original list of species to be covered. It was not the role of government representatives at IPCC-61 to assess the maturity of the science.

Views also included that governments and policymakers require robust guidelines, and incorporating hydrogen into IPCC guidelines would ensure comprehensive guidance for numerous sectors, such as energy, transportation, and heating, bringing national-level benefits. It was suggested that the Methodology Report would only need to consider the literature on measuring, not on the effects of hydrogen. It was noted that the treatment of hydrogen in this Report would have implications for what can be done in the Methodology Report on Carbon Dioxide Removal Technologies and Carbon Capture Utilization and Storage because the science behind hydrogen was much less speculative than many technologies to be covered in the planned CDR Report.

Those who preferred the second option expressed the opinion that the views of the expert team in the scoping meeting were not convincing. There was concern about the contradictions within the science and the many issues identified, particularly by developing countries. These included the lack of well-established science on whether hydrogen was a climate forcer, particularly given a lack of data in numerous developing countries, and the immaturity of the methodology for measuring hydrogen emissions. It was also noted that it was not a question of the measurability of hydrogen, given that techniques for measuring hydrogen have been around for a long time, but of hydrogen's relevance to radiative balance and radiative forcing. It was viewed as not scientifically meaningful to have parallel processes of a methodology report for hydrogen measurement and scoping of its scientific relevance to radiative forcing.

It was also noted that while hydrogen impacted different climate forcers, the total impact was yet to be decided. It was also stated that hydrogen emissions were of particular concern given that molecular hydrogen is the smallest molecule and can easily leak from infrastructure in addition to being routinely released into the atmosphere through venting and purging operations. Emissions estimates to date vary across valid hydrogen components, with higher emission rates often associated with liquid hydrogen. However, no empirical measurements of real-world infrastructure and facilities were

available in some countries. It was suggested that leaving hydrogen to WGI to deal with within the AR7 would encourage additional understanding, after which methodological guidance could be developed.

The third option was developed as a potential compromise, and some delegates who preferred the first one expressed a willingness to accept the third as a basis for further discussion. It was noted, however, that the timeline in the third option contained a contradiction regarding when the science of hydrogen would be assessed.

Another compromise offered was to modify the wording of the first option to specify that the authors of the report would explore the science, and if no robust science was found for including hydrogen, they would not continue. This would also include a language clarifying that the development of the methodology would be done based on the conclusion that there was robust science.

The Chair encouraged the huddle to be reconvened.

On 31 July and 1 August, respectively, Mr Ladislaus Chang'a, IPCC Vice-Chair, reported back from the huddle, noting no agreement had yet been reached, although some progress had been made. On 2 August, he reported that the huddle had successfully reached an agreement on the issues being discussed, including on the relevant footnote noting that while hydrogen has not yet been well assessed as a climate forcer by WGI, the emissions relevant for radiative forcing were to be considered by the authors in an appendix on the "Basis for the Future Methodological Development."

The Chair invited the Panel to consider the draft decision, which also reflected a change in the title of the report and a deletion of the reference to "interlinkages with air pollution and health."

The Panel adopted the Decision on the AR7 products—Outline of the 2027 IPCC Methodology Report on Inventories for Short-Lived Climate Forcers (Decision IPCC-LXI-7), in which it decided to prepare a Methodology Report with the title "2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers", agreed on the Terms of Reference for the production of the Report, as well as the Table of Contents, Instructions to Experts and Authors, and workplan, and decided that the budget for the production of the Methodology Report is as contained in Decision IPCC-LX-10 on the IPCC Trust Fund Programme and Budget.

5. STRATEGIC PLANNING SCHEDULE FOR THE SEVENTH ASSESSMENT CYCLE

On 29 July, the Chair introduced the Strategic Planning Schedule (SPS) for the seventh assessment cycle (IPCC-LXI/Doc. 10). As requested by the Panel (Decision IPCC-LX-9), the SPS took into account the views expressed by governments during IPCC-60, as well as the Panel's invitations under the Paris Agreement on the Global Goal on Adaptation and the GST. The 67th Session of the IPCC Bureau (BUR-67) considered a proposed schedule prepared by the WGs and the TFI Co-Chairs and requested the Co-Chairs to prepare a further iteration of the schedule to address overlaps in government review periods. The Bureau's agreement on this revised schedule had been sought through a written process, but a consensus was not reached. The most recent iteration would be the starting point of discussions in IPCC-61.

Ms Katherine Calvin, WGIII Co-Chair, noted that two common themes had emerged from the views expressed during IPCC-60. These included concerns over the length of time for drafting and review and the need to consider inclusivity. Based on these themes, the proposed schedule was developed using two principles, which were scheduling meetings and drafting and review periods, in line with past practice with sufficient duration for each stage of the reports' production, as well as ensuring inclusivity and a feasible workload. The schedule was developed with the conditions of holding a joint scoping meeting and delivering the reports in the consecutive order of WGI, WGII, and WGIII while ensuring a feasible workload for all, avoiding holiday periods and more than two consecutive weeks overlaps in government review periods. The delivery dates for the cycle were March 2027 for the Special Report on Climate Change and Cities and July 2027 for the two Methodology Reports. For the AR7, the proposed dates were May 2028 for the WGI Assessment Report, June 2028 for the WGII

Assessment Report and the updated IPCC Technical Guidelines on Impacts and Adaptation, late July or early August 2028 for the WGIII Assessment Report and May 2029 for the Synthesis Report (SYR). The end of the cycle would be in late 2029 or early 2030, and its total duration would be 6.5 years, similar to AR5 and AR6.

Ms Joy Jacqueline Pereira, WGIII Co-Chair, underlined that the Bureau was committed to ensuring that the AR7 cycle was inclusive regarding author representation and literature assessment. The proposed measures and activities to improve inclusivity (IPCC-LXI/INF.15) included networking activities, including pre-scoping initiatives, broadening the author pool and considering outcomes from the planned Gender, Diversity, and Inclusivity Expert Meeting. Other proposed actions included starting coordination for preparing the zero-order draft before the first lead author meeting (LAM1) and organising dedicated expert meetings and author training sessions. It was important to monitor and evaluate inclusivity practices through surveys and frequent discussions in Bureau meetings throughout the cycle.

Algeria; Antigua and Barbuda; Argentina; Australia; the Bahamas; Barbados; Belarus; Belgium; Belize; Brazil; Burundi; Canada; Chad; Chile; China; Comoros; Congo, Republic of the; Cuba; Denmark; Egypt; Estonia; Finland; France; Germany; Haiti; Hungary; Iceland; India; Indonesia; Iraq; Ireland; Italy; Japan; Jordan; Kenya; Kiribati; Latvia; Libya; Luxembourg; Malawi; Monaco; the Netherlands; New Zealand; Nigeria; Norway; Peru; Poland; Portugal; Republic of Korea; Romania; the Russian Federation; Saudi Arabia; Singapore; South Africa; Spain; Saint Kitts and Nevis; Saint Lucia; Sweden; Switzerland; Timor-Leste; Türkiye; Uganda; Ukraine; the UK; the USA; Uruguay; Venezuela, Bolivarian Republic of; Zambia, Zimbabwe, as well as the EU; the Arctic Monitoring and Assessment Programme (AMAP) Secretariat; CAN International; Mr Edvin Aldrian, WGI Vice Chair and Ms Aïda Diongue-Niang, WGI Vice-Chair took the floor.

Delegates expressed their appreciation to the Co-Chairs and other Bureau members for their hard work in putting together the schedule to minimise overlaps. There were, however, diverging views on the timeline.

Views expressed included support for the timeline, noting that it was comparable to, and in some instances, an improvement on, previous cycles. It was highlighted, for instance, that the time allocated for government review was longer than was allocated under the AR6 cycle. It was noted that AR7 was neither compressed nor rushed, as the cycle included only one Special Report, compared, for instance, to three Special Reports during the AR6 cycle.

Other views objected to the timeline, calling it rushed and unprecedented. They stressed that it would negatively impact inclusivity, especially the participation of developing countries. For instance, the schedule did not allow for sufficient time for scientific communities, especially those from developing countries, to produce their papers and go through the publication cycles, given that publication and review processes were taking longer in developing countries. In addition, views were expressed that the schedule would impact the scientific rigour of the cycle and did not give enough time for the needed literature and government reviews.

It was stressed that the lead time between the AR7 scoping meeting, the LAM1, and the literature cutoff date was too short, with the lead time being insufficient to identify gaps in the literature and fill the gaps. There were also calls for a schedule that included no overlaps and that enabled authors to address feedback from governments in an inclusive, exhaustive, and adequate manner.

The alignment of the SPS to the GST-2 also elicited diverging views. Views were expressed questioning the focus on a single process, that is, the UNFCCC, stressing that aligning the schedule with GST-2 would make the IPCC more policy prescriptive, not more policy relevant. The GST was important, but so was the Global Goal on Adaptation and other processes within and outside the UNFCCC, and the UNFCCC was not the only target of IPCC products. It was further noted that countries' updated nationally determined contributions (NDCs), due in 2025, would be the basis of GST-2 and that countries would use the AR6 findings in preparing their updated NDCs. Therefore, the need to align AR7 with GST-2 was questioned.

Views were also expressed calling for the IPCC products to be published before GST-2, given that the UNFCCC was one of the IPCC's main stakeholders at the international level. Delegates underlined that science should not exist in a vacuum and that the AR7 products should help inform the GST-2. Lacking IPCC input to the GST would result in a significant missed opportunity to provide important scientific perspectives from developing countries, especially SIDS and LDCs. It was, therefore, crucial that AR7 WG contributions be available for the second GST, and it would be regrettable that the reports would not be available for the technical assessment phase of GST-2 by June 2028.

There were also calls for the Co-Chairs to explore the possibility of streamlining and accelerating the schedule without jeopardising inclusivity. It was mentioned that buffer time was built into the schedule and moving up the dates so all three WG reports were published before June 2028 was proposed so the reports would be available for GST-2's technical assessment phase. There were also calls to ensure the IPCC's products align with future GSTs.

It was stressed that delaying the timeline was not the solution to ensuring inclusivity. A longer cycle did not mean greater engagement, highlighting that inclusivity challenges are structural and cannot be addressed by minor extensions of the schedule. The various measures planned for increasing inclusivity in AR7 were highlighted, such as training for Coordinating Lead Authors and Lead Authors and better access to scientific literature. Assessment of literature in languages other than English and other knowledge types, such as local and Indigenous Knowledge, would be strengthened in this cycle.

The ongoing climate emergency was underlined as a reason to ensure that the IPCC could continue to provide policy-relevant input to support action at both the international and national levels. Some countries' challenges in engaging fully with the IPCC process were acknowledged, highlighting various activities to address this issue and promote better inclusivity. It was emphasised that AR7 must improve on the inclusivity of authors, experts, and sources of knowledge, not through delaying action, but rather through supporting developing country engagement. It was stressed that some of these systemic issues were beyond the scope of the IPCC. There have been ongoing efforts to address these issues, and the needed science must not be delayed because of them. It was also proposed that the IPCC Scholarship Programme be improved to address inclusivity challenges further.

It was also suggested to accelerate the development of the updated IPCC Technical Guidelines on Impacts and Adaptation. The need for the timely provision of AR7 products to feed into national policy and decision-making was also highlighted. It was underscored that the IPCC is an important source of information for policymakers, especially for LDCs, since these countries generally lack the capacity and expertise to undertake the needed research.

It was noted that the World Climate Research Programme (WCRP) and FutureEarth had been contacted. The WCRP reported that their publication was designed to be fast-tracked to ensure results will be available in accordance with the proposed AR7 schedule, also saying FutureEarth supports the timeline and insists on the importance of publishing the three WG reports in time for GST-2. The ongoing development of the seventh phase of the Climate Model Intercomparison Project (CMIP7) was noted, calling for the provision of a dual track to speed up the climate modelling process. It was suggested that to support national coordination and communications, the IPCC could use structured expert dialogues to support the work of national Focal Points and alleviate their workloads.

It was highlighted that the availability of a large and growing amount of new literature for the AR7 does not mean equal contributions from developed and developing countries, with the majority of this literature emerging from developed countries. More than 80% of the literature cited in the AR6 WGI report was from authors from developed countries, and 99% of that literature was in English, with the need to adjust the schedule to allow for better participation of developing country experts being stressed.

The Chair noted the very extensive exchange of views with a wide range of perspectives and invited the Co-Chairs to respond to delegates' questions and comments.

Mr Robert Vautard, WGI Co-Chai, noted that the volume of literature doubles in every, cycle and by the scoping meeting at the end of 2024, the amount of literature available for WGI alone would likely match what was available for the entire AR6 cycle before its scoping meeting. He added that the scoping meeting was not linked to a significant literature trigger but that, rather, literature was triggered by the decision to produce a report and by the gaps from previous reports.

Mr Xiaoye Zhang, WGI Co-Chair, drew attention to the need to elect a new Bureau by the end of 2029, which necessitates completion of the WG assessment reports in 2028 and of the entire AR7 cycle by May 2029. The aim was shorter and more concise, policy-relevant but neutral reports. This cycle included only one Special Report, unlike previous cycles. The current timeline was, therefore, not rushed but had been carefully crafted by the three WGs TSUs. He underlined that maintaining the timeline would help maintain momentum and procrastination did not make inclusiveness happen.

Mr Winston Chow, WGII Co-Chair, affirmed that the timeline was realistic, highlighting the availability of a large and substantial body of work on adaptation from developed and developing countries.

Mr Bart van den Hurk, WGII Co-Chair, reiterated the various activities planned to address inclusivity, as outlined in document IPCC-LXI/INF.15, underscoring the need for continuity and planning.

Ms Katherine Calvin, WGII Co-Chair, responded to comments about overlaps in the proposed schedules, explaining that there were three weeks of overlaps that impact governments in the current schedule, including a two-week overlap in the reviews of the WGI second order draft and the TFI final government draft and a one-week overlap in the reviews of the WGII second order draft and the TFI approval. The possibility of moving the approvals forward by two to three months had been considered, but the decision had been made to develop the current schedule by working forward from the start of the cycle and drafting the schedule based on previous timing.

Ms Joy Pereira, WGIII Co-Chair, underlined the volume of literature published since AR6 and noted that much more will be published before the cut-off date. A longer timeline is more difficult to handle, as it increases the burden on authors to assess all literature and also has a greater impact on countries with lower capacity. The IPCC timelines could not be perfectly aligned with those of the external research community, and the longer the wait for new studies, the more outdated the literature would become. She added that inclusion was not a function of time alone but was about deliberate efforts to counter longstanding inequalities and reiterated some of the planned inclusivity activities.

The Chair recapped the various views expressed, noting that the Co-Chairs endorsed the proposed schedule. While some governments argued for a slower approach with a later end date, some endorsed the schedule as proposed, and others expressed willingness to accept it but preferred an accelerated schedule. The Chair proposed setting up a contact group to try to reach a consensus.

Germany, Luxembourg, the Russian Federation, Switzerland and the USA took the floor.

There were questions about the mandate of the contact group, specifically whether the decision text would be discussed.

The Chair urged the contact group to focus on consensus on the timeline and ancillary issues such as approaches to inclusivity.

The Panel agreed to set up a Contact Group, which was co-chaired by Mr Fabrice Lambert (Chile) and Mr Ole-Kristian Kvissel (Norway).

On 1 August, Mr Fabrice Lambert (Chile) reported that the contact group had met for three hours. Still, no consensus has been attained on shortening, lengthening, or keeping the proposed timeline (IPCC-LXI/Doc. 10). Consensus on inclusivity and IPCC capacity building in LDCs and SIDS might be possible.

In the afternoon, the Chair announced that it was hard to see a way forward that satisfied the goals of all the delegates at this stage, noting the same issues had come up in IPCC-60 as in IPCC-61 and only a little progress had been made. He, therefore, proposed postponing a decision on the SPS until after the report of the AR7 scoping meeting in December 2024, at which time the Panel would be called upon to decide whether to prepare a report, its scope, work plan, and budget, in line with the IPCC's Principles and Procedures. He said a decision for IPCC-61 must appropriately reflect the outcome and align with the Principles and Procedures, note the Bureau's submission of the document on the SPS (IPCC-LXI/Doc.10), and state that the Panel would agree on the schedule based on the report of the December scoping meeting, in line with the Principles and Procedures, Annex A, paragraph 4.1.

Denmark, India, Indonesia, the Russian Federation and Saudi Arabia took the floor.

It was noted that the report of that scoping meeting would itself include a proposed schedule for delivery of the three WG reports for consideration and agreement at a subsequent IPCC session, in line with the Principles and Procedures.

In response to comments and questions, the Chair proposed that the Secretariat prepare formal decision text for further consideration.

On 2 August, Ms Ermira Fida, IPCC Deputy Secretary, presented a draft decision, explaining that it captured the discussions on this agenda item. The draft noted two documents, the SPS, submitted by the Chair (IPCC-LXI/Doc. 10), and the document on improving inclusivity in AR7, prepared by the WGs and TFI Co-Chairs (IPCC-LXI/INF. 15), and agreed that the work plan would be considered with the outlines of the three WG reports, in alignment with Appendix A, paragraph 4.1, of the IPCC Principles and Procedures.

India, Indonesia, Luxembourg, Saudi Arabia and the UK took the floor.

There was a request to include a reference to the Scoping Meeting for the Methodology Report on Carbon Dioxide Removal Technologies and Carbon Capture Utilization and Storage in the document. Questions were raised about the consistency of the draft decision with Appendix A, paragraph 4.1, of the Principles and Procedures. There was a question about why the document only included subsets of the IPCC products.

Responding to a comment objecting to the reference to the document on the AR7 SPS (IPCC-LXI/Doc. 10), the Chair clarified that the document was presented under his authority.

The Chair requested the Secretariat to consult with interested delegates and redraft the decision.

Following further consultations, the Deputy Secretary introduced the revised text.

The Panel adopted the Decision (IPCC-LXI-9) on the Strategic Planning Schedule for the Seventh Assessment Cycle. The decision noted the SPS document submitted by the Chair (IPCC-LXI/Doc. 10), and the document on improving inclusivity in AR7, prepared by the WGs and TFI Co-Chairs (IPCC-LXI/INF. 15), and recalled IPCC-60 Decision on the Planning for the Seventh Assessment Cycle (IPCC-LX-9). According to the Decision(IPCC-LXI-9), in accordance with paragraph 4.1 of Appendix A of the Principles Governing the Work of the IPCC and based on the reports of the scoping meetings of the WG and TFI reports, the Panel would agree at its 62nd Session on the scope, outline, and work plan including schedule and budget. The decision also noted Decisions on the outlines of the Outline of the Special Report on Climate Change and Cities and of the 2027 IPCC Methodology Report on Inventories for Short-Lived Climate Forcers (IPCC-LXI-5 and IPCC-LXI-7).

Germany, Hungary, India and Saint Kitts and Nevis took the floor.

Delegates expressed disappointment that the AR7 SPS was not agreed upon at IPCC-61, emphasising their expectation that a schedule that ensures and improves inclusivity and policy

relevance would be adopted at this session. They urged all delegates to provide constructive statements at IPCC-62 to reach an agreement on the schedule.

6. OPTIONS FOR EXPERT MEETINGS AND WORKSHOPS FOR THE SEVENTH ASSESSMENT CYCLE

Mr Xiaoye Zhang, WGI Co-Chair, introduced the options for expert meetings and workshops for the seventh assessment cycle (IPCC-LXI/Doc. 7). Expert meetings and workshops would form an important pillar of the cycle to enhance cross-WG and TFI collaboration, raise collective awareness, and prepare consensus on emerging topics. Two expert meetings were held in July 2024, respectively, on Carbon Dioxide Removal Technologies and Carbon Dioxide Capture, Utilisation and Storage and Reconciling Land Use Emissions. A third expert meeting on Gender, Diversity and Inclusivity has been scheduled for later in 2024, and a workshop on the IPCC Inventory Software for August 2024.

Mr Robert Vautard, WGI Co-Chair, presented three proposals for future expert meetings expected to be organised before the first quarter of 2026. There was a proposed expert meeting on adaptation guidelines, metrics, and indicators to be led by WG II. Another possible expert meeting on high-impact events and tipping points to be led by WGI was included in a separate proposal (IPCC-LXI/Doc. 7. Add.1). This remained a topic associated with significant uncertainties and was addressed separately and to varying degrees by the WGs during the AR6. The proposal was to include 60 participants and hold the expert meeting before the AR7 LAM1, with support from the WCRP. The decision on the hosting country was pending. There was also a proposal for an expert meeting on novel approaches to assessing knowledge on climate change and society's response, which would be led by the IPCC Chair. This expert meeting would address the means of assessing the increasing body of literature on climate change, the potential and limitations of using Artificial Intelligence (AI) and how to draw on broader forms of knowledge. There were also several other possible topics for expert meetings, including health and climate change, regional climate information, Earth observation data accessibility, science communication, scenarios, equity, sustainable development, and overshoot.

The Chair clarified that the two documents presented by the WGI Co-Chairs contained the portfolio of expert meetings under consideration (IPCC-LXI/Doc. 7) and the proposal for the expert meeting on high-impact events and tipping points (IPCC-LXI/Doc. 7. Add.1). The portfolio contained proposals for expert meetings on other topics identified as priorities in the AR7 cycle beyond the three presented. However, these were subject to further consideration by the Bureau.

Algeria; Argentina; Australia; Belgium; Brazil; Burundi; Canada; Chile; Congo, Republic of the; Cuba; Denmark; Finland; France; Germany; India; Iraq; Italy; Japan; Kenya; Luxembourg; Malawi; Mexico; the Netherlands; New Zealand; Norway; Republic of Korea; the Russian Federation; Saudi Arabia; South Africa; Spain; Saint Kitts and Nevis; Sweden; Switzerland; Syrian Arab Republic; Timor-Leste; Türkiye; the UK; Ukraine; the USA; Uruguay; Venezuela, Bolivarian Republic of; and Zimbabwe as well as the EU; the Center for International Environmental Law (CIEL); FWCC; and the Inuit Circumpolar Council took the floor.

The need to consider the budgetary implications of the various expert meetings and for the Financial Task Team (FiTT) to first look at the proposals was underscored. There were also questions about the nature of the decision the Panel was required to make about the proposed expert meetings, as well as the basis for the preparation of the documents, particularly the one which contained a specific proposal for the high-impact events and tipping points expert meeting.

General views were expressed, such as suggesting that further and detailed discussions of workshops and expert meetings should wait until the AR7 schedule was decided. Questions were raised about how the proposed priority areas were selected. It was supported also holding workshops instead of expert meetings, or a combination of both, noting that workshops could accommodate more experts, therefore allowing more significant participation of developing country experts. It was further stated that workshops allow national focal points to nominate experts to attend, while holding only expert meetings would compromise diversity. Diverging views were expressed that expert meetings were more appropriate for technical issues such as adaptation indicators.

It was suggested that the Panel should consider the possibility of organising sub-regional expert meetings before the general expert meetings, so that sub-regional priorities could be discussed and fed into the centralised expert meetings.

There were also discussions around ensuring inclusivity in selecting experts for the meetings, with delegates urging the selection of experts from LDCs and SIDS. The need to ensure balanced participation of experts from all regions was underscored. In addition, calls were made to ensure the effective participation of Indigenous Peoples, especially in the expert meeting on novel approaches to assessing knowledge.

Diverging views were also expressed about the contents of the proposed meetings.

Support was expressed for holding the expert meeting on high-impact events and tipping points, given its usefulness for all the assessment reports, as well as for the Special Report on Climate Change and Cities. It was highlighted that this would help improve communication with policymakers on the issue, with support expressed for such a meeting to take place early in the AR7 cycle before LAM1.

Views in support of the expert meeting stressed the importance of addressing current challenges, including the lack of homogeneity of definitions of and thresholds for high-impact events and tipping points across the WGs. There were suggestions to combine the expert meetings on tipping points and overshoot. Another suggestion was to include consideration of exceeding and returning from a warming level. Links between the tipping points, the crossing of tipping points, and losses and damages were also noted.

There were suggestions on including societal tipping points, such as shifts in moral norms and societal support for action. Clarification regarding tipping points related to economic aspects was requested, especially on what type of outcome was expected from the expert meeting.

Views were also expressed opposing an expert meeting on tipping points, underlining that the proposal included too many potential topics. The description of the different types of tipping points, such as physical and societal aspects, was considered incoherent. It was noted that this expert meeting may provide an opportunity to advance highly speculative and risky solar geoengineering technologies. It was emphasised that such technologies did not address the root causes of climate change and that, according to AR6, they pose new challenges to humanity and nature.

Regarding the expert meeting on novel approaches to assessing knowledge**,** it was highlighted that the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) was undertaking similar work, including through its task force on Indigenous and local knowledge systems. The inclusion of experts from the IPBES community in the expert meeting was therefore recommended. Collaboration with IPBES was supported, provided the specific focus was on climate change, given that IPCC and IPBES have different mandates.

The use of the term “novel approaches” in relation to traditional knowledge was questioned, noting that traditional knowledge was not new. Reference to “inclusive and novel approaches” instead or to “enhanced inclusion of diverse knowledge sources” was supported. Delegates also suggested avoiding reference to “trade-offs” in this context.

There were views supporting IPCC expanding its incorporation of different knowledge sources, including Indigenous, local, and grey knowledge, and new and emerging technologies such as AI. It was cautioned that consideration of Indigenous Knowledge should not get lost during the meeting. Other views expressed were that the proposed meeting included too many types of knowledge and that, instead, a meeting focused on AI and machine learning should be organised.

While all relevant knowledge should be assessed, it was noted that the task of the authors was to assess and synthesise material drawn from available literature as defined in IPCC procedures, including through the process of assessing grey literature. It was questioned whether other forms of

knowledge, especially other knowledge systems beyond traditional IPCC literature, were covered by the existing guidance and procedures. The need to ensure the scientific rigour of IPCC products was underlined, and it was suggested that the procedures could be adapted to allow for the objective, comprehensive and transparent consideration of Indigenous and local knowledge.

The need to engage Indigenous Peoples in any discussion of Indigenous Knowledge was emphasised. An example of the Sami Climate Council in Finland was provided, facilitating dialogue between Indigenous Peoples and climate scientists for science advisory purposes. Relevant best practices could be shared.

Attention was drawn to the fact that IPCC-accredited observers, including Indigenous Peoples, were not allowed to nominate experts to expert meetings, with a query on how the IPCC could improve the inclusivity and transparency of expert meetings. A “nothing about us without us” approach was emphasised, stressing the importance of empowering Indigenous Peoples to be directly involved in the process, including through representation in expert meetings. There was also a call to include local people and knowledge, noting that some countries do not have Indigenous Peoples.

Regarding the expert meeting on adaptation measures, there was support, given its very specific mandate and clear framing, but it was suggested that it should be held as a workshop instead of an expert meeting. It was also underlined that its timing was crucial and collaboration with IPBES was possible.

Regarding the expert meeting on science communication, it was noted that there was an existing budget line for this, and support was expressed for holding the meeting. Suggestions to include the role of focal points in communication were also heard.

On other expert meeting topics, there was support for overshoot, risk, health and climate, accessibility of Earth observation data for climate studies, and gender.

The Chair clarified that the Panel could decide on a specific proposal for an expert meeting or workshop, highlighting that the only proposal meeting this criterion was the expert meeting on high-impact events and tipping points (IPCC-LXI/Doc. 7. Add.1).

The Secretary confirmed that the procedurally correct action was to wait until the FiTT convenes in February 2025.

Mr Robert Vautard, WGI Co-Chair, highlighted that the dates for the expert meeting on high-impact events and tipping points were not an issue of prioritisation but of timing, noting that the best time for it was after the scoping meeting that defines the topics, but before LAM1, because of the need to interact across the three WGs to clarify definitions. The discussions would start with tipping points in the Earth system, that is, climate and ecosystem tipping points, but would also include social tipping points to ensure consistency across the WGs.

The Chair clarified that he would take responsibility for the expert meetings on novel approaches for assessing knowledge and science communication.

The Chair introduced a draft decision that took note of the documents providing options for expert meetings and workshops (IPCC-LXI/Doc. 7) and the proposed expert meeting on high-impact events and tipping points (IPCC-LXI/Doc. 7. Add.1) and invited the Bureaux of the WGs and TFI and the IPCC Chair to bring forward proposals on expert meetings and workshops at IPCC-62 and future sessions, considering the views expressed at IPCC-61.

India and Saudi Arabia took the floor.

Delegates sought clarification on the meaning of “bring forward proposals” and asked if the proposed expert meeting on high-impact events and tipping points was being approved through the decision. Objections to “taking note” of the documents discussed were also heard.

The Chair proposed deleting reference to the documents providing options for expert meetings and workshops (IPCC-LXI/Doc. 7) and the proposed expert meeting on high-impact events and tipping points (IPCC-LXI/Doc. 7. Add.1).

Kenya and Saudi Arabia took the floor.

Delegates sought clarity about whether the other topics that had been discussed so far would be disregarded.

The Chair clarified that the document providing options for expert meetings and workshops (IPCC-LXI/Doc. 7) did not contain fully articulated proposals for expert meetings and workshops and, as such, could not be taken forward now.

Germany, Luxembourg, and the UK took the floor.

Views were expressed opposing the deletion of the reference to the documents, noting that delegates had spent a long time discussing the proposed topics for expert meetings and supporting a reference to the topics and the discussion.

Following consultations, the Chair introduced a revised draft decision, explaining that reference to the two documents (IPCC-LXI/Doc. 7 and IPCC-LXI/Doc. 7. Add.1) had been removed from the beginning of the decision but that the proposed decision was taking note of the document providing options for expert meetings and workshops (IPCC-LXI/Doc. 7).

Algeria, Kenya, the Netherlands, Saudi Arabia, Switzerland as well as the EU took the floor.

There were diverging views on referencing the documents, underlying the importance of including reference to the document providing options for expert meetings and workshops (IPCC-LXI/Doc. 7) at least to reflect the discussions undertaken at IPCC-61.

The Chair clarified that it was a common practice to refer to documents at the top of the decision text.

The Panel adopted the Decision (IPCC-LXI-6) on Options for Expert Meetings and Workshops for the seventh assessment cycle, which invited the Bureaux of the WGs/TFI and the IPCC Chair to bring forward proposals for Expert Meetings and Workshops at IPCC-62 and future IPCC sessions, in line with Appendix A, paragraph 7.1 of the IPCC Principles and Procedures, taking into account the views expressed by Member Governments at IPCC-61 regarding the document providing options for expert meetings and workshops (IPCC-LXI/Doc. 7).

7. AD HOC GROUP ON LESSONS LEARNED FROM THE SIXTH ASSESSMENT CYCLE

On 27 July, Ms Debra Roberts, Co-Chair of the Ad Hoc Group on Lessons Learned (AGLL), introduced the document on Lessons Learned from the Sixth Assessment Cycle (IPCC-LXI/Doc. 9). She summarised the background to the AGLL, beginning with a request from the 57th Session of the IPCC (IPCC-57) (Geneva, Switzerland, 27-30 September 2022) that the IPCC Bureau and the TFB "facilitate the process of collecting and synthesising the lessons learned from the sixth assessment cycle" (Decision IPCC-LVII-6). Their report was presented at IPCC-60, which established the AGLL with a mandate to advise governments on the way forward considering lessons learned from the sixth cycle and to report back to IPCC-61. The AGLL comprised 69 members representing 38 countries, with advisory members from the Bureau, Secretariat, and TSUs, and met virtually five times between IPCC-60 and IPCC-61.

Ms Brittany Croll, AGLL Co-Chair, summarised the document's table, containing a list of all the topics raised in the AGLL. The list was in no order of priority and did not represent consensus nor reflected divergent views but, rather, provided a comprehensive view of the range of topics discussed. Many of the topics may require more discussion, especially those with implications for the IPCC Principles and Procedures. The second column, on status, indicated whether the topic in question was "Work

in Progress" for the "Urgent/near future" or for "Later in the cycle." The third column addressed whether the topic had resource implications ("Yes", "No", or "Potentially"). While the AGLL had no mandate to examine this, the topics varied in requirements, and further consideration of resources, staffing, and timetable would be needed by the Financial Task Team (FiTT) and the IPCC Bureau. The fourth column listed the entity or entities with authority over action on each topic, while the Panel has ultimate authority. The fifth column, on implications for the IPCC Principles and Procedures, listed, for every topic, any possible specific implications with "Yes", "No", or "Potentially." The AGLL Co-Chair acknowledged that while there was no specific AGLL mandate, the wide range of topics entailed great variance in what was required, and this information was included for awareness.

Ms Debra Roberts, AGLL Co-Chair, said that the columns on status and resourcing were validated by the IPCC Secretariat and the Legal Officer, as requested by the AGLL's members.

Ms Brittany Croll, AGLL Co-Chair, added that the Panel could consider the AGLL report as a resource document for use by any relevant IPCC bodies as they see fit.

The Chair commented on the thoroughness and effectiveness of the process, flagging that the table was not a set of agreed actions but a set of topics on which the Panel might take action, by agreement, at a later date, with some information given on each.

Algeria, Azerbaijan, Belgium, Benin, Burundi, Canada, Chile, Denmark, Germany, India, Iraq, Italy, Japan, Kenya, Luxembourg, the Netherlands, New Zealand, Norway, Republic of Korea, Saint Kitts and Nevis, Saudi Arabia, South Africa, Sweden, Switzerland, Syrian Arab Republic, Türkiye, the UK, the USA as well as the Center for International Environmental Law took the floor.

Appreciation was expressed for the discussions that took place in the AGLL. Views focused on its status going forward. It was stressed that there was no convergence within the AGLL and that some of the information provided in the table was not within the Group's mandate. There was support for using the AGLL product as a "resource document" to inform all relevant IPCC bodies of possible actions. Diverging views were that the definition of "resource document" needed clarifying and that calling the AGLL's paper a "document" was problematic because nomenclature was normally reserved for decisions and reports with official status. "Information note" was offered as an alternative.

Views were expressed that the AGLL's paper represented a process of self-expression, given that the AGLL did not discuss or accept any of the topics addressed and that the "resource document" should encompass the entire corpus of the AGLL, including all the written submissions made by its members. Suggestions were made for including the Co-Chairs' summaries after each meeting, visual aids, and AGLL recommendations. There were requests for more details on the AGLL's composition, expertise, and representation, as well as the constructive roles of members and the Secretariat and the technical support given.

Diverging views were heard on specific lessons in the AGLL report. It was noted that IPCC-61 was not a setting for making individual comments or suggestions for improvements to individual items listed in the table. Other views referred to specifics, including support for the items highlighting reinforcement to authors and training on how to use grey literature. The table's item stating that "authors' selection should consider the need to prioritise authors that reside and work in their "home country" was considered problematic. The importance of the document's items on improving inclusivity and representation, such as for SIDS, was also stressed. It was suggested that the AGLL's work could lead to innovative solutions, given all the inputs from contributors from different regions, perhaps even being used during COP29 for resource mobilisation.

It was suggested that IPCC-61 take note of the AGLL's work. There was support for addressing the urgent actionable items quickly, focusing on priorities and providing more information on the key topics for the near future and their next steps. Actions to be addressed by IPCC-61 were particularly stressed to increase the Panel's policy relevance. They were linked to protecting the integrity of the Panel and enhancing the professionalism of the Panel's internal practices.

Other views included the idea that actions that do not need the Panel's intervention should be encouraged. At the same time, items entailing changes to IPCC Principles and Procedures could be addressed when taken up later in the seventh cycle. Other items could be addressed at the managerial level by the TSUs or the Secretariat. Guidelines were needed for those items for which responsibility lies with the Bureau and the Secretariat to expedite follow-up actions. Other suggestions included that the national focal points could address some urgent issues. Some of the table's items could be on the agenda for future IPCC sessions. Furthermore, the Secretariat, with the Legal Officer, could facilitate consideration of which issues required the Panel's attention, which ones required a decision, and which ones could be "noted." Support was expressed for the Secretariat taking the lead on managerial-level topics and providing progress reports to the Panel. Suggestions for having a standing agenda item for monitoring progress or a monitoring mechanism were also made. Support was heard for including reports on actions taken on lessons learned in the progress reports already provided to the Panel.

It was also suggested that the document was a valuable asset to use as a reference for future discussions and Panel decisions to show that the IPCC process was agile and remained policy-relevant. Requests were made to the Secretariat and the Chair to provide their views on priority issues and on where the Panel itself needed to be involved. It was stressed that many items would require the Panel to discuss the resource implications and IPCC Principles and Procedures.

Diverging views included objections to having the document as a standing agenda item and to prioritising some items over others to justify initiating particular actions. Support was also expressed for using the AGLL's document simply as a report of an exchange of views on issues that might arise at a future date. The suggestion that IPCC-61 "take note" of the AGLL's report received objections because it had not been discussed. It was also suggested that any changes in Procedures must continue to be introduced on their terms, not as lessons learned. Questions were also raised about how the AGLL paper could be acted upon or used as a reference in the absence of consensus, particularly in light of the conflicting messages contained therein and lack of agreement over proposed items such as fewer in-person plenaries, more parallel contact groups, and shorter Summaries for Policymakers. It was also stated that IPCC-61 had too little time to discuss this item. It was noted that many items were already underway or covered by other processes or agenda items or would become useful in different processes in the future.

A need for increased Indigenous Knowledge was expressed through the participation of Indigenous Peoples at IPCC meetings and for better dissemination of IPCC outcomes throughout the UN, particularly in human rights institutions, given that equity and justice were inextricably linked to climate change and climate action.

Ms Debra Roberts, AGLL Co-Chair, clarified that the AGLL did not have full representation of all IPCC Member countries. She agreed that the full package of materials should be made available to the Panel in some form as a "resource" to provide all relevant information in one place for everyone to access while not being binding on anyone for subsequent decision-making.

Ms Brittany Croll, AGLL Co-Chair, said the term "resource document" was intended to be neutral, to reflect the conversations in the AGLL discussions and the fact that it was intended to be a repository of the ideas discussed there, but that other terms may be preferred by the Panel.

The Chair proposed a decision that the Panel "take note of the document and the associated material that came with it", making clear that this is not an agreement on a set of actions but a list of topics that may be addressed by individual parts of the IPCC system, with no specified ways forward. Other documentation could be included as well.

Australia, Belgium, Chile, Denmark, Germany, India, Iraq, Luxembourg, the Netherlands, New Zealand, Saudi Arabia, South Africa, Switzerland, Togo, and the UK took the floor.

Preference was expressed for taking note "of the process of the AGLL," concluding with the production of documents, including all submissions, rapporteur notes, and the final Co-Chairs' product. It was

stressed that all such documents should be produced on the responsibility of the people who prepared them rather than of the Panel. There was opposition to asking any IPCC body to address any items or to make the paper a point of reference.

The Chair observed a consensus that the document was a starting point. He proposed that the AGLL Co-Chairs work with the Legal Officer and consult with concerned delegates to produce a decision to bring back to the Panel on which consensus might be reached. There were no objections to proceeding in this way.

On 30 July, the Chair informed the Panel that a draft decision on the AGLL had been posted on PaperSmart, for later discussion.

Ms Brittany Croll and Ms Debra Roberts, AGLL Co-Chairs, reported that they had consulted with many delegates on an appropriate decision text and heard a wide range of views on how the process should move forward. They heard acknowledgement of the work done over an extensive length of time and around the IPCC, maintaining its role as a learning organisation and keeping the doors open to benefit from the work undertaken by the AGLL. The expressed hope that succinct decision text would bridge the range of views and could contribute to improving the seventh cycle.

The Chair noted extensive consultation and careful decision crafting, opening the floor for comments.

Algeria; Argentina; Belgium; Brazil; Canada; Chile; China; Egypt; Estonia; Finland; France; Germany; Guinea; Haiti; Iceland; India; Iraq; Italy; Libya; Luxembourg; Monaco; Morocco; Mozambique; New Zealand; Norway; Republic of Korea; the Russian Federation; Saint Kitts and Nevis; Saudi Arabia; South Africa; Sweden; Switzerland; Syrian Arab Republic; Timor-Leste; Türkiye; Ukraine; the UK; the USA; Uruguay, and Venezuela, Bolivarian Republic of, took the floor.

Consensus was noted regarding making improvements in the seventh cycle. Views were expressed that the text should be strengthened by recognising the AGLL report itself, not just its work, given its attempt to digest all the views and prioritise some kind of list despite no consensus. Regrets were also expressed that there was no mechanism created for discussion on items that do have consensus, such as on how to help authors. There were calls to state that these topics “will” be further discussed during the seventh assessment cycle instead of “may” or that “there would be value in further discussing these subjects in the seventh cycle.” Suggestions were made that they should be “acted on” as well for wording on monitoring or reporting on progress on actions to implement them, and for attaching the AGLL’s report to the decision.

Diverging views were heard on accepting the proposed decision as written. There was support for deleting the reference to further discussion of these topics during the seventh assessment cycle because this was a given. It was again queried how something with no consensus could be acted on, noting that the AGLL document did not fully capture all views and not everyone was at the meetings. It was also felt that “lessons learned”, rather than “these topics”, could be discussed or that “exchanges” of views, rather than “discussions”, could take place. Reference to follow-up actions was also opposed.

There were calls for flexibility and compromise on the proposed text and for reflecting the various views expressed in the Session report.

Ms Debra Roberts, AGLL Co-Chair, thanked everyone for the work done. She suggested using the current text to move forward but also taking on board the concerns heard about the means to move forward. Perhaps it could be mentioned in the report of IPCC-61 that there would be regular reporting, through the Chair, Bureau, Secretariat, and other standing agenda items, on important issues. She opined that this would be the most efficient way to take on board an acknowledgement that the IPCC needs to keep learning and improving and keeping that conversation alive in the IPCC context.

The Chair called the decision text a delicate compromise. He noted the concerns about how the lessons learned would be taken forward. He flagged that the new agenda items on progress from the

Chair, the Vice-Chairs, and the Secretariat provide a mechanism to report on developments relevant to topics identified in the AGLL's report. He confirmed that the report of IPCC-61 would cover the issues and reflect the concerns and regrets that delegates have expressed. In conclusion, the Chair invited the Panel to approve the decision text proposed by the AGLL Co-Chairs.

The Panel adopted the Decision (IPCC-LXI-3) on the Ad Hoc Group on Lessons Learned from the sixth assessment cycle, in which it appreciated and took note of the work of the AGLL but also noted that this work did not reflect Panel consensus, and the topics were indicative, not exhaustive. These topics may be further discussed during the seventh assessment cycle in an inclusive and transparent manner within the IPCC as appropriate.

8. RESOURCE MOBILIZATION

The Secretary presented the document on Resource Mobilisation (IPCC-LXI/INF. 5) with a cash balance of around CHF 25 million and projected a cash balance of just under CHF 30 million by the end of the year. Highlighting the intense AR7 cycle ahead, the Secretary appealed to all countries to maintain their contributions to deliver on expectations for the cycle and to maintain the sustainability of the Trust Fund.

The Secretary further thanked all countries that had provided both cash and in-kind donations, including the hosts of IPCC-60 and IPCC-61, Türkiye and Bulgaria, respectively, and invited all countries to put their names on the list of contributors. Noting that contributions to the Trust Fund were voluntary, he highlighted that there were 24 contributing countries at the start of the AR6 cycle, and now there are 51, including developing countries.

South Africa and Switzerland took the floor.

Clarification was sought regarding contributions from 2023 and whether they appeared in the table. There were also queries about the fundraising strategy considering other UN processes.

The Secretary assured all contributing countries that their contributions were duly noted in the document and appreciated. Responding to a question about the Secretariat's funding strategy, he highlighted conversations with the Permanent Missions in Geneva and bilateral meetings with Ministers during UNFCCC COPs, stressing the need to avoid confusion between contributing to the UNFCCC and the IPCC.

The Chair underlined the collaboration between the Board of Trustees for the Scholarship Fund and the Chair to raise funds for chapter scientists. He urged countries to support the IPCC, despite the healthy cash balance, to ensure the sustainability of the process.

The Panel took note of the report on resource mobilisation.

9. MATTERS RELATED TO OTHER IPCC ACTIVITIES

9.1 Terms of Reference of the IPCC Publications Committee

On 1 August, the IPCC Legal Officer presented the Terms of Reference (ToR) for the IPCC Publications Committee (IPCC-LXI/Doc. 4), noting these were requested by IPCC-60 to implement a recommendation made by the Informal Group on Publications and agreed to by the Bureau. This included details on the Committee's duration for the rest of the seventh assessment cycle, its structure with nine members, and its purpose to oversee the implementation of the Panel's and Bureau's recommendations regarding publications, translations, and access to literature and to advise the IPCC Secretariat.

Belgium, Germany, and Saudi Arabia took the floor.

It was queried whether the Co-Chairs of the Task Group on Data Support for Climate Change Assessments (TG-Data) or their delegates would serve in an advisory role to the Committee. It was suggested that the Committee "will undertake to explore expanding access to literature for IPCC authors" more actionable by replacing it with "will identify options and implement, under the guidance of the Bureau, the expansion of literature for IPCC authors." Suggestions were offered that the Committee members should be "appointed" rather than "nominated". It was proposed that the statement that the ToR "is intended to enhance and not conflict with the IPCC Principles and Procedures" be replaced with "are in line with the IPCC Principles and Procedures." A request was made to add to the ToR that the Committee "will make proposals for revising and enhancing the IPCC copyright policy to facilitate outreach about IPCC products, notably in other languages than English", noting that similar requests to consider options and proposals have been made before.

The Chair asked the Secretariat to bring forward a revised draft reflecting the discussions. The Chair deferred further discussion on this item until Friday.

On 2 August, the Legal Officer presented a revised version of the ToR (IPCC-LXI-Doc. 4 Rev.1), highlighting the change made.

Belgium, Germany, the Netherlands, Saudi Arabia, and Türkiye took the floor.

It was noted that the original proposal was to revise and update the copyright policy to facilitate outreach, particularly in languages other than English. A desire was expressed to see the copyright policy changed. Noting that some of the changes to the ToR would have cost implications, it was proposed to make them conditional on the availability of funds. There was also a suggestion for the Publication Committee to report to the IPCC Bureau twice yearly instead of "regularly."

In response to the questions, the Legal Officer clarified that the revised document does not involve any changes to the IPCC copyright policy. The additions indicate that the Copyright Policy would be applied to facilitate outreach but with no change to the policy itself. There was a proposal to add the issue of changing the Copyright Policy to the agenda for a future meeting before the publication of IPCC reports.

The Chair clarified that changing the IPCC Copyright Policy was outside of the scope of this agenda item. He suggested that the Legal Officer have a conversation with interested delegates to try to accommodate the requests made.

Following further consultations, the Legal Officer introduced an updated document.

Belgium, Germany, India, and Saudi Arabia took the floor.

Views were expressed about whether the Publications Committee should report to the Bureau or to both the Panel and the Bureau. It was also proposed to report "through the Bureau to the Panel", noting that TG-Data reports through the Bureau to the Panel.

The Chair suggested that the Publications Committee report to the Bureau, but, where required, also directly to the Panel, based on the precedent of TG-Data.

The Panel adopted the Decision (IPCC-LXI-11) on Matters related to other IPCC activities – Terms of Reference of the IPCC Publications Committee, which approved the ToR as amended.

9.2 IPCC Scholarship Programme

Mr Mxolisi Shongwe, Programme Officer at the IPCC Secretariat, introduced the IPCC Scholarship Programme report (IPCC-LXI/Doc. 8). IPCC-60 had appointed four members for a new Board of Trustees. The Board of Trustees, at its inaugural teleconference, endorsed Mr Jean-Pascal van Ypersele to take the role of Chair, but the position did not exist within the IPCC Scholarship Programme Trust Deed. The Programme Officer invited the Panel to consider amending the Trust

Deed to create the position of Chair to help in its operations. He suggested that the Chair might either be appointed by the Panel from amongst nominated candidates or elected by each new Board at their first teleconference.

The Programme Officer also informed the Panel of a balance in the Scholarship Trust Fund of just over CHF 1.6 million, as detailed in a statement in Annex 1 of the Scholarship report. Mr Shongwe reported on the partnerships with the Prince Albert II of Monaco Foundation, the Cuomo Foundation, the World Academy of Sciences, and the University of Oxford.

The Chair invited the Panel to take note of the information provided and to consider whether to amend the Trust Deed, decide how a Chair of the Board of Trustees should be selected and provide guidance as appropriate.

Mr Jean-Pascal van Ypersele, on behalf of the Board of Trustees, reported four Board teleconferences were held intersessionally since IPCC-60, with a goal to make the most of existing resources and expand and diversify funding sources. Bemoaning the interest rate on the Scholarship Fund of about 0.2% per year over the 15 years of its existence, there was a limited margin to obtain a higher yield, given the WMO's very risk-averse Finance Regulations. It was, therefore, essential to expand and diversify the funding sources to increase significantly the number of scholarships and activities supported by the Scholarship Programme during the seventh assessment cycle. Numerous initiatives could be taken to that effect, hoping to be able to report some positive results at IPCC-62. He also reported plans to look for funding for chapter scientists for AR7 and to work with the Chair and the WG Bureaus to help fund a chapter scientist for each developing country with a CLA. He said this effort would be aimed at both the Special Report on Climate Change and Cities and each AR7 WG contribution, for a total of 60 chapter scientists, while ensuring that this would not decrease the availability of funds for the classical PhD scholarships. Mr van Ypersele thanked everyone involved.

Belgium; Congo, Republic of the; France; Germany; Japan; Ukraine; and the USA took the floor.

There was general support for the Board of Trustees electing its Chair, or even more informally agreeing on a Chair, at each inaugural teleconference. Views varied on whether the Panel at its following session should "endorse" or "be informed of" this selection. There was a suggestion that Board Chairs might have four-year terms with the possibility of one re-election by the Board. A request was made to clarify the ToR for the Chair in the interest of transparency.

General support was expressed for improving support for chapter scientists from developing countries. A suggestion was made for regular progress reports to the Panel on this. Requests were also made to enhance transparency in the scholarship process with more information on funding provided by partners, how to become a funding partner, and who is eligible for scholarships. Other suggestions entailed perhaps developing a blueprint for a memorandum of intent to engage more organisations and possibly partner with another organisation for the administration and management of the Programme. This would reduce the large workload of the IPCC Secretariat.

A desire was expressed for discussions to find solutions to the difficulties the Cuomo Foundation reported in sending funds to some African countries and the subsequent replacement of two African candidates with others, as noted in the document.

Mr Ladislaus Chang'a, IPCC Vice-Chair, informed the Panel of a survey of the previous beneficiaries of the Scholarship, with responses from 39 of them and positive feedback on the benefits they received from the Scholarship Programme.

The Chair requested an agreement that the Legal Officer would develop an amendment to the IPCC Scholarship Program Trust Deed that would result in having a Chair for the Board of Trustees. He further asked the Legal Officer to consider the question of whether Panel approval would then need to be sought.

This proposal was agreed to by the Panel.

In response to a request for further information about the Cuomo Foundation situation, the Secretariat explained that the Foundation reported to the IPCC that they had tried everything, giving no details, and had eventually identified alternative scholars. The Secretariat has set up a meeting with them on 7 November 2024 to find out how to resolve the situation going forward.

The Chair asked the Panel to note the report. He observed that there was agreement that the Trust Fund Board should have a Chair. He asked the Panel to agree that there would be an amendment to the Trust Deed that the IPCC Legal Officer would bring at a later date.

The Panel agreed to amend the Scholarship Programme Trust Deed to have a Chair and took note of the report (IPCC-LXI/Doc. 8).

10. REPORT OF THE IPCC CONFLICT OF INTEREST COMMITTEE

10.1 Report by the COI subcommittee on the revision of the COI disclosure form

Mr Ladislaus Chang'a, IPCC Vice-Chair and Chair of the IPCC Conflict of Interest (COI) Committee, presented the report of the COI Committee (IPCC-LXI/Doc. 5). The sub-committee of the COI Committee convened five times via Zoom since IPCC-60. Building on the current COI disclosure form, WMO best practices and other good practices, the sub-committee recommended that the COI disclosure form should be edited for greater clarity, brevity, and readability to make it easier for individuals to complete and for the COI Committee to make an informed decision on a potential conflict of interest. The proposed forms were included in the Annexes of the report (IPCC-LXI/Doc. 5).

Germany, Saudi Arabia, and the USA took the floor.

Views expressed included that certain changes were unnecessary and, in some cases, created confusion. Examples of the unnecessary changes mentioned were in Section 2 on employment and consulting and Section 6 on public statements and positions. It was suggested that these sections be changed back to their original version. Other views supported the proposed changes, noting the purpose of the amendments was to enhance transparency. It was also noted that the form contained some editorial errors.

The COI Committee Chair proposed reverting to the original versions of Sections 2 and 6.

Following a break to allow further consultations with the COI Committee and interested delegates, the COI Committee Chair presented a revised form in which Sections 2 and 6 had been changed back to their original versions.

The Panel adopted the Decision (IPCC-LXI-10) containing the recommendations of the sub-committee of the COI Committee on the revision of the COI disclosure form as set out in Annex I to the decision.

11. PROGRESS REPORTS

The Chair introduced two new standing progress reports, one jointly from the IPCC Chair and Vice-Chairs and one from the Secretariat, intended to improve the transparency and accountability of intersessional activities.

11.1 Report by the IPCC Chair and Vice-Chairs

The Chair presented the IPCC Chair and IPCC Vice-Chairs' Progress Report (IPCC-LXI/INF. 11). The activities were categorised under IPCC Business and Management and under Outreach and Engagement. He highlighted that the process of recruiting a science adviser for the Chair was almost finalised.

Belgium; Congo, Republic of the; India; the Netherlands; Norway; Saudi Arabia; South Africa; and the UK took the floor.

Alternative views were heard regarding incorporating progress on lessons learned in the progress report, including because there was no IPCC-61 agreement on a follow-up or implementation mechanism. Before including anything on those in future reports, further decisions on lessons learned would be needed. It was noted that "lessons learned" were likely to inform the business during the seventh assessment cycle, but a decision on the Chair's progress report incorporating them would not be something that should be considered. It was suggested that "reporting back" on something not agreed upon was not needed, and the definition of "report back" was queried. It was suggested that it referred to linking reports back to the AGLL document or elements within it, but it was noted that there was no decision on a formal mechanism for that.

Views were expressed that some lessons learned issues were labelled as being for the Bureau or Secretariat and that it would be good to know what may have been done and what should be done later. Elements of improvements could be reported under this agenda item even though lessons learned for the Panel to address is another issue. Support was heard for the Chair, taking account of the commitments he made when running for his office in his progress reports. Further views highlighted that the WG Co-Chairs could already report back on what they think was important, so the question of what the Chair thinks was important to report on should be placed in his hands.

In response to a query, the Chair stated that the activities listed in the report do not account for everything. The Chair noted the helpfulness of getting guidance from delegates on what would be useful in the new reports since they were an innovation. The reports were for reporting on intersessional activities, which was their starting point. Some may inevitably touch upon topics raised in the AGLL. The reports were offered because the Chair, Vice-Chairs, and Secretariat were the only parts of the IPCC not giving reports on intersessional activities and there was a lot of work going on. He said the reports would not be structured according to the AGLL report but that reporting according to promises made in his campaign, including on inclusivity, policy relevance, and interdisciplinarity, was a good idea.

The Panel took note of the IPCC Vice-Chairs' Progress Report (IPCC-LXI/INF. 11).

11.2 Report by the IPCC Secretariat

The Secretary presented the Secretariat Progress Report (IPCC-LXI/INF. 9), noting that as this was the first such report, it covered the period from 1 August 2023 to 30 June 2024. He complimented the host country, Bulgaria, for the success in hosting IPCC-61. He added that everyone who applied for their visas in time got them. He reported numerous activities of the IPCC Secretariat, highlighting that it was the smallest Secretariat in the UN system, with 15 staff members. There was ongoing work to recruit more staff members, per an IPCC-60 decision (IPCC-LX-10), saying this would ease human capacity constraints that impact efficiency. The Secretary noted with appreciation the support from the IPCC's host organisation, the WMO, including in financial and human resources aspects, reiterating that the IPCC was fortunate to have Ms Ko Barrett, a former IPCC Vice-Chair, as the new Deputy Secretary-General of the WMO.

Belgium, Chad, India, Kenya, Libya, South Africa, Switzerland, as well as Mr Noureddine Yassaa, WGIII Vice-Chair, took the floor.

There were questions regarding the support needed by the Secretariat for its increasing workload, as well as on the status of producing a strategic human resources plan with consultancy assistance in light of the relevant IPCC-60 decision.

There were queries regarding expectation management, particularly regarding the selection process. Awareness could be raised through videos on what the IPCC was, scoping meetings, and facts and figures on the selection so that non-selected experts could be more aware of the process and not be

discouraged from future engagement with the IPCC. Clarification was sought on whether the nomination process was the task of the Bureau or the Secretariat.

The Chair responded that transparency on the selection processes would usually be covered by the WG reports on preparations for scoping meetings.

Other comments focused on visa issues, asking if the Secretariat working with the national Focal Points and Panel members could consider a mechanism to make the process more accessible. For instance, several applicants have to travel to other countries to obtain visas. It was suggested that prospective IPCC participants applying for a visa from a Schengen country where a meeting's host country does not have an embassy should benefit from the willingness of any other Schengen country with an embassy there to give the prospective visa applicant a Schengen visa. It was also suggested that a host country's government help the applicant get an appointment with their embassy. s. Certain bureaucratic processes have made delegates sometimes pay higher prices for hotels and flights. Having exact dates of the sessions and pre-plenary meetings as early as possible was necessary to avoid this.

Regarding the two open positions, the Secretary responded that the Secretariat had received many applications, and that recruitment was almost complete. On the status of the recruitment of the independent consultant to develop a human resources strategy, he said the process was underway, following WMO rules. Regarding visas, the Secretary noted there were deadlines and rules that had to be followed by all applicants. The Secretariat always collaborates closely with the host country, which, in this case, even established a unit that worked 24/7 to ensure success. Over 36 delegates from Africa were attending IPCC-61. Problems were only faced by delegates who applied late for their visas. The Secretary expressed appreciation to Bulgaria and the WMO Travel Unit for facilitating the process, pointing out the fact that of 12 delegates who applied late, 10 still got visas. He urged everyone to apply for visas in time as applying late makes it difficult and frequently creates extra costs. He confirmed that the Secretariat was exploring all means to ensure that all could attend IPCC sessions.

The Chair noted that foreign ministries had authority over visa issues. He pointed out that timely notice of meetings was needed so that these processes could be facilitated. When the SPS was approved it would be possible to schedule meetings in advance.

The Panel took note of the Secretariat Progress Report (IPCC-LXI/INF. 9).

11.3 Report by Working Group I

Mr Xiaoye Zhang, WGI Co-Chair, presented the WGI Progress Report (IPCC-LXI/INF. 4). As of mid-July 2024, the TSU has expanded by recruiting two Data Officers, as well as two Science Officers responsible for supporting the preparation of the Special Report on Climate Change and the AR7 WGI report respectively. Interviews were ongoing for the Head of Science Team position.

The Special Report Scoping Meeting took place in Riga, Latvia, in April 2024, and most of the WGI Bureau Members and the WGI TSU staff attended in person. Since then, WGI has contributed to preparing the scoping meeting report. Regarding the joint AR7 Scoping Meeting, the call for experts closed in June, WGI received more than 1,000 nominations, and the selection process was ongoing. WGI has contacted various international organisations to set up informal discussions related to the content of the WGI AR7 report. Cooperation between the three WGs has continued through bi-monthly meetings and other activities.

Mr Robert Vautard, WGI Co-Chair, added that the proposed dates for WGI were set collaboratively with the other WGs to ensure sufficient buffer time around nomination calls and to enable flexibility around potential dates for plenaries and other meetings. This was based on lessons learned from previous cycles to ensure enough time for the reports' production.

France, India, Saudi Arabia, Switzerland, and Türkiye took the floor.

The WGI work was appreciated. Clarification was sought regarding what elements from the lessons learned from the sixth cycle fed into the proposed strategic schedule for WGI, noting that there was no consensus on the lessons learned. It was suggested that the report reflect that there was no consensus on the strategic planning schedule as well. Questions regarding the preference for expert meetings by WGI were raised, as well as on the discussions with international organisations.

Responding to questions, Mr Xiaoye Zhang, WGI Co-Chair, identified lessons learned, including the need for a more concise report than AR6. Mr Robert Vautard, WGI Co-Chair, added that the expert meeting on high-impact events and tipping points was one of the expert meetings to be supported by WGI. Informal discussions were ongoing with various organisations, such as IPBES and several NGOs. He confirmed that the only strategic schedule is the one being considered by the Panel.

The Panel then took note of the WGI Progress Report (IPCC-LXI/INF. 4).

11.4 Report by Working Group II

Mr Winston Chow, WGII Co-Chair, presented the WGII Progress Report (IPCC-LXI/INF. 8). The WGII TSU was established both in the Netherlands and Singapore and had now 12 staff members from eight countries and five regions. The call for nomination of experts for the AR7 scooping meeting had been sent to Focal Points and observer organisations, and almost 2,400 nominations were received, with more than 1,300 indicating expertise for WGII. The selection process was ongoing, and invitations are expected to be sent in September 2024, with the scoping meeting in December 2024 in Kuala Lumpur, Malaysia.

Mr Chow then provided an update on other WGII activities, including participation in the UNFCCC Subsidiary Body on Scientific and Technical Advice (SBSTA) session in June 2024.

The Panel took note of the WGII Progress Report. (IPCC-LXI/INF. 8)

11.5 Report by Working Group III

Ms Joy Jacqueline Pereira, WGIII Co-Chair, presented the WGIII Progress Report (IPCC-LXI/INF. 2). WGIII agreed on a distributed TSU structure, which has nodes in: the U.S. Global Change Research Program (USGCRP) in Washington DC, US; a partner entity in Asheville, North Carolina, US; and Malaysia. There was progress in the recruitment for the different nodes, including filling four TSU Washington positions and two TSU Malaysia positions.

Japan, Türkiye, and the UK took the floor.

There were calls to ensure the WGIII contribution to AR7 was more solution-oriented than the WG III contribution to AR6. Questions were raised about the reason for extending the deadline for nominating experts and about the number of nominations that have been received.

Responding to the questions, Ms Joy Jacqueline Pereira, WGIII Co-Chair, said 1,700 nominations were received for WGIII for 60 positions. Ms Katherine Calvin, WGIII Co-Chair, added that there had been a joint call for experts across all three WGs and that the deadline was extended based on a request.

The Panel then took note of the WG II Progress Report (IPCC-LXI/INF. 2).

11.6 Report by the Task Force on National Greenhouse Gas Inventories

Mr Takeshi Enoki, TFI Co-Chair, presented the TFI Progress Report (IPCC-LXI/INF. 6). The scoping meeting for the Methodology Report on SLCFs was held in Brisbane, Australia, on 26-28 February 2024, and was attended by 68 participants (57 experts and 11 TFB members). The next step was to send out a call for nominations for lead authors. An Expert Meeting on Carbon Dioxide Removal Technologies and Carbon Capture Utilization and Storage was held in Vienna, Austria, from 1-3 July

2024, and the Scoping Meeting of the Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture Utilization and Storage was scheduled for late October 2024. The outputs of this Scoping Meeting were to be considered at the 62nd Session of the IPCC (IPCC-62). The report of the Expert Meeting was still being prepared. An Expert Meeting on Reconciling land emission estimates was held in Ispra, Italy, on 9-11 July 2024. The TFB established a Science Steering Committee to organise this Expert Meeting.

Belgium, South Africa, and Türkiye took the floor.

There were calls for more updates on the status of the expert selection for the scoping meetings. There were also suggestions to update and better integrate the TFI website with the IPCC website, including creating a combined calendar for better tracking of events.

The Panel then took note of the TFI Progress Report (IPCC-LXI/INF. 6).

11.7 Task Group on Data Support for Climate Change Assessments

Mr Sebastian Vicuña, TG-Data Co-Chair, presented the TG-Data Progress Report (IPCC-LXI/INF. 7) highlighting an IPCC poster, event, and presentation at the 2024 General Assembly of the European Geosciences Union (EGU) and an update to the TG-Data webpage. A webinar on the role of AI took place in March 2024. TG-Data had a proposal for an Expert Meeting on Earth Observation Data for improving access to global satellite information to strengthen assessment over regions with sparse data coverage. He gave figures on the final status of data curation work for AR6, showing how data included in the different WGs and the Synthesis Report (SYR) were managed. Work started several sessions ago to secure funding for the Data Distribution Center (DDC) for the seventh assessment cycle, and that funding was still required for 2025 and 2026.

The TG-Data Co-Chair provided details on preparations for launching an open call to tender bids for DDC membership. Some revisions to the plan had been completed following advice from the IPCC Secretariat and consultation with delegates requesting clarifications. Interest from highly renowned institutions was expected, including current DDC members. Participation would be in a cost-share format, noting the objectives of making IPCC data fair and improving data access. The call would include a list of expected activities, information on the eligibility of interested organisations, the cost-share basis, and the in-kind resources being offered. The criteria for selection would include, *inter alia*, coverage of expected activities, institutional capabilities to perform them, and the in-kind resources being offered. The IPCC Bureau has established a selection committee to evaluate the proposals, with the call for tenders to be sent out in November 2024 and DDC membership to be finalised by May 2025.

The TG-Data Co-Chair listed activities in the TG-Data work plan, such as author support, oversight of DDC, and outreach activities. A revised version of the DDC work plan would be provided at IPCC-62, if needed, for approval of the disbursement of funding being requested.
Belgium and the USA took the floor.

A desire for more elaboration on specific activities of organisations tendering bids to participate in the DDC was expressed, given that DDC tasks and reports were getting increasingly complex. It was also suggested that the proposal for an expert meeting should be considered in coordination with WG Co-Chairs and that information on the financial implications should be presented to the FiTT for discussion and approval at its next meeting. It was also suggested that the TSU should sign off on the work plan before it moves forward.

The TG-Data Co-Chair responded that the budget for the expert meeting should be considered under expert meetings, not included in the TG-Data or DDC budget. As the issue of data management has become increasingly complex over the last decade, costs have been allocated, and TG-Data is now making them more evident and explicit and giving guidance on the complexity of figures and data and outreach activities.

The Chair consulted with the Legal Officer and the TG-Data Co-Chairs and then invited the Panel to take note of the progress report and agree on the launch of the call for tender pending the addressing of the comments made by delegates. It was so agreed.

The Panel took note of the TG-Data Progress Report (IPCC-LXI/INF. 7).

11.8 Gender Action Team

Ms Diana Ürge-Vorsatz, IPCC Vice-Chair and Chair of the Gender Action Team (GAT), presented the GAT Progress Report (IPCC-LXI/INF. 14), recalling the GAT was responsible for the Gender Policy and Implementation Plan and reported to the IPCC Executive Committee (ExCom) and the IPCC Bureau. Since IPCC-60, the GAT's work has centred around the Code of Conduct and process for addressing complaints, training, and preparations for the Expert Meeting on Gender, Diversity, Equity, and Inclusion. Following rounds of review from GAT members, a draft process for addressing informal and formal complaints would be submitted to ExCom for feedback and then to the Bureau for their input. Approval of any relevant elements may then be sought from the Panel.

For the Expert Meeting, 40 participants were expected, and an offer to host the meeting had been received from Canada. The GAT was working on preparations for the Expert Meeting with a Scientific Steering Committee (SSC). Given the expected 40 participants, the GAT has revised the SSC membership to reduce the size while making it as representative as possible and ensuring that the SSC takes full advantage of the expertise available.

On the training, the GAT arranged, with support from the Secretariat, WMO, and UN Ethics Office, a training against sexual harassment and a briefing on ethics for IPCC Bureau Members, TG-Data Co-Chairs, TSUs and Secretariat staff on 26 July 2024. About 35 people participated, and there was a survey circulated. A vendor would be procured to assist with developing training materials and conducting inclusivity training, and the GAT was working on the Terms of Reference for this tender.

Canada; Chad; Congo, Republic of the; and France took the floor.

Satisfaction was expressed with the GAT's work, as was its fundamental importance to ensure the IPCC can redress sexual, racial, and any other forms of discrimination. There was a call for similar briefings for the Task Force Bureau Members before their meetings.

The GAT Chair thanked governments for their constructive comments and confirmed that she would expedite the Panel's priorities to the GAT.

The Panel took note of the GAT Progress Report (IPCC-LXI/INF. 14).

11.9 Communication and outreach activities

Mr Andrej Mahecic, Programme Manager Communications and Media Relations of the IPCC Secretariat, presented the Progress Report on Communications and Outreach Activities (IPCC-LXI/INF. 3). Activities took place in the areas of media relations, communications, outreach and social media. There was a new IPCC branding for the seventh assessment cycle, including updating IPCC materials with the newly updated logos of its parent organisations. The statistics were showing how coverage of the IPCC in the media varies according to the news context at the time when its reports come out. He cited 1.3 million followers of the IPCC on social media, representing increases across all platforms, and 1.8 million users of the IPCC website, showing the importance of keeping it up to date.

Belgium; Congo, Republic of the; India; Saudi Arabia and Switzerland took the floor.

Questions included how the determination was made and authorisation given regarding who can speak on behalf of the IPCC on informal platforms. Clarifications were sought on how the products were communicated and how the use of approved language in the products was ensured. There were

also queries about the target audience and how outreach and communications could be improved in all global regions. Questions also included the extent to which IPCC's parent organisations have conveyed IPCC information to their stakeholders. It was suggested that fact sheets be featured more permanently on IPCC websites and in campaigns and that the TFI website be brought back to the main IPCC website to make it possible to access all information in one location.

The Programme Manager Communications and Media Relations replied that there was a process of Secretariat clearance for social media platforms and that language was entirely in line with the approved language of the reports. Guidelines on the use of social media and possible opportunities for a broader discussion with the Bureau on that and on initial media training and for a more substantial conversation about IPCC representation rules were being planned. Such information was outlined in the strategy and implementation plan shared with the new Bureau after the recent elections. The primary target audience for IPCC reports were policymakers, but also other experts, academics, youth, media and others. The fact sheets were useful, and these feature on the IPCC website. A big effort was made to update them at the beginning of the new cycle. Consideration was being given to turning them into videos. On integrating the TFI into the IPCC website, he said the IPCC website is already enormous, so this would have to be discussed.

The Panel took note of the Progress Report on Communications and Outreach Activities (IPCC-LXI/INF. 3).

12. MATTERS RELATED TO UNFCCC AND OTHER INTERNATIONAL BODIES

Ms Annett Moehner, Representative of the UNFCCC Secretariat, presented the progress report on matters related to the UNFCC (IPCC-LXI/INF. 13). The IPCC participated in several events during the 60th Sessions of the UNFCCC Subsidiary Bodies (SB60) such as the 16th meeting of the research dialogue and the first dialogue under the United Arab Emirates Just Transition Work Programme 2024. Other events with IPCC participation included an in-session workshop on progress, challenges, gaps, and priorities in implementing the gender action plan, as well as two expert dialogues on mountains and climate change and on the disproportionate impacts of climate change on children.

The IPCC was also considered within negotiations on the Research and Systematic Observation (RSO) and in the refinement and procedural and logistical elements of the overall GST process relating to consideration of inputs such as IPCC reports.

The Subsidiary Body for Scientific and Technological Advice (SBSTA) noted with appreciation the IPCC Secretary's statement during the opening SBSTA plenary and welcomed the commencement of the seventh assessment cycle. She encouraged the IPCC to continue providing relevant information to Parties to the UNFCCC on the scientific, technical, and socio-economic aspects of climate change and to enhance inclusivity and regional representation in the AR7 cycle.
On procedural and logistical elements of the overall GST process, the UNFCCC Parties agreed in 2018 that the GST would entail a two-year process comprising three components: information collection and preparation, technical assessment and consideration of outputs. The Parties invited the IPCC to provide input. The 2018 decision also stipulated that the information collection component would end six months before the consideration of outputs unless critical information emerges after that, which requires consideration, noting that this would allow for IPCC information to be received any time before the end of the two-year period. The Parties decided that the collection phase of the GST-2 would start in November 2026, and the consideration of outputs would conclude at the end of 2028.

In June 2024, the Subsidiary Body for Implementation (SBI) and SBSTA began advanced consideration of refining the procedural and logistical elements of the process. The progress on this is captured in an informal note, which encompasses the views of the Parties, including the relative timing of the three components and the balance and availability of IPCC reports. The note does not represent consensus but will be further considered with a view to concluding this work at COP29. The UNFCCC would continue to work closely with the IPCC, including in the context of the SBSTA-IPCC Joint Working Group, to ensure efficient and effective participation of the IPCC at COP29.

China, Germany, India, Iraq, Ireland, Kenya, the Russian Federation, Saint Kitts and Nevis, Saudi Arabia, the UK, and the USA took the floor.

Views were expressed that the GST refinement discussion was inappropriate to bring up at IPCC, especially given the current lack of conclusion on it under the UNFCCC, and that presenting informal information to a scientific community might create some misunderstanding, especially given that the GST was a very sensitive issue. It was requested to delete mention of any discussion of outcomes or conclusions from the refinement negotiations in Bonn in the report of IPCC-61. It was suggested that processes still underway within the UNFCCC that have not yet reached a conclusion should not be reported back to the IPCC, only settled decisions, similar to how IPCC reports are available for perusal by the UNFCCC after they are approved. It was recalled that the IPCC is scientific while the UNFCCC is political, working in the interests of countries, not science and that imposing additional deadlines on the IPCC through some permanent coordination mechanism between the two would harm the IPCC and the science. It was also noted that the GST process was supposed to reach conclusions such as how many countries were progressing on their commitments and whether they were doing enough, which could only be done on the basis of information from governments through officially approved channels, not through the IPCC and scientific literature.

Diverging views focused on the importance of hearing what is happening within the UNFCCC because of the special close relationship between it and the IPCC and the importance of joint efforts between them for synchronising their work. It was also observed that the UNFCCC is the main audience of IPCC reports, so the UNFCCC's work is relevant here and that the information provided by the UNFCCC Secretariat was factual and did not pre-empt any outcome of their ongoing negotiations. The usefulness of some coordination between them was also noted, particularly given the need for the IPCC to understand the needs of the users of its information.

Other comments were made noting the role of the IPCC in the consensus achieved at COP28 that reaffirmed the need to keep the goal to limit global warming to 1.5°C alive, with emphasis on applying the principle of common but differentiated responsibilities, as well as the role of science for the energy transition and in achieving consensus on the climate resilience framework, putting adaptation and mitigation on equal standing, and ensuring developed countries provide technical assistance and funding through new agreements. The aim to conclude the new collective quantified goal on climate finance at COP29 was also mentioned, as well as the need to strengthen international cooperation, which was an important conclusion of AR6. It was noted that through the GST all countries would be able to strengthen their actions as well as international cooperation.

Comments on some lack of balance in the UNFCCC Secretariat's presentation were made, such as a lack of mention of the work to be done by developing countries on their new NDCs by the end of 2025, as well as the paramount importance of the IPCC's scientific processes to them and the status of the ongoing work on the Global Goal on Adaptation. Mention was made of the synergies between these and the IPCC's planned update to the 1994 Technical Guidelines for Assessing Climate Change Impact and Adaptations, matrix indicators for adaptation, and other WGII work.

The Chair noted that the report of the Session should reflect what was said in the Plenary, including the diversity of views expressed.

The Panel took note of the progress report on matters related to the UNFCC (IPCC-LXI/INF. 13).

Simone Schiele, Representative of the IPBES Secretariat, presented the IPBES report (IPCC-LXI/INF. 10), noting several ongoing activities under the IPBES rolling work programme to 2030. These included achieving the 2050 Vision for Biodiversity, various methodological assessments, and preparations for a second Global Assessment of Biodiversity and Ecosystem Services, which would start in 2025 and be finalised at the end of 2028. Ongoing work was on building capacity and strengthening knowledge foundations, including with Indigenous and local knowledge and supporting policy.

The IPCC and IPBES Chairs jointly participated in a UNEA-6 event on “Tackling the Triple Planetary Crisis: Building the Linkages from Science to Action” in February 2024. IPBES has been exploring concrete approaches for cooperation and potential joint activities, calling on members in 2021, 2022, and 2023 for suggestions of thematic or methodological issues related to biodiversity and climate change that would benefit from collaboration between the IPCC and IPBES. All these suggestions were to be compiled and made available at the 11th Session of IPBES. IPBES invited its national focal points to engage with their IPCC counterparts to bring these communities closer together at the government level. The IPCC Deputy Secretary participated on behalf of the IPCC Chair in a recent IPBES Multidisciplinary Expert Panel and provided a report on the activities of the IPCC and collaboration with IPES. Further collaboration was anticipated in the context of the AR7 and the IPBES second global assessment.

Belgium; Burundi; Chad; Chile; Congo, Republic of the; France; Germany; India; Japan; Monaco; Norway; Switzerland; Türkiye; as well as the European Association of Environmental and Resource Economists (EAERE)European Association; Mr Ramón Pichs-Madruga, IPCC Vice-Chair and Mr Gervais Itsoua Madzous, WGIII Vice-Chair took the floor.

There was general support for strengthening collaboration between IPBES and the IPCC. Specific comments stressed the need for collaboration at the grassroots and scientific levels and related to the scientific and technical level of cooperation and collaboration, with calls to jumpstart that conversation. There were comments supporting a “bottom-up” approach, including joint meetings already started by some countries at the national level with IPBES and IPCC focal points, to provide updates, share best practices, and develop joint roadmaps. There were also calls for other interested countries to join, to foster common understandings of both processes, and for work together in their countries. It was noted that policymakers were keen on the interplay between the IPCC and IPBES and that this enthusiasm should be bolstered by the science and messages of both bodies. It was suggested that the Bureau should keep this dimension in mind when considering the collaboration.

The benefits of collaboration on thematic or methodological issues and sharing best practices regarding grey literature were noted. Specific suggestions were made for the IPCC Bureau to report on progress on collaboration with IPBES, collaborate on more joint workshops, and help local governments deepen coordination and synergies toward mutual solutions. It was noted that knowledge of biodiversity and of the connection between local biodiversity, biodiversity loss, the disappearance of species, and the climate change that was accelerating such loss was very low in some countries, necessitating more scientific research. There were queries on how the IPCC’s work on revising adaptation indicators and IPBES’s work on indicators on the impacts on biodiversity and ecosystems could be taken together to help countries suffering from climate change preserve their biodiversity.

It was also noted, however, that increasing scientific cooperation should be based on developing appropriate research agendas, particularly regarding questions of potential trade-offs, such as between conservation and adaptation, where the two organisations had different mandates. This was suggested, given that having overlaps between the organisations without developing a concrete scientific understanding of the basis of their mandates could be counterproductive.

Potential cooperation in two areas was highlighted relevant to efforts to remove environmentally harmful fossil fuel and energy subsidies, in contrast with biodiversity subsidies in which specific commitment is measured and work on pricing. Carbon pricing may help in many, but not necessarily all, cases. Biodiversity pricing was not always possible, but giving value to biodiversity and natural capital may, in many cases, help in decision-making processes at the global, national, and business levels.

There were calls for the IPCC Chair to initiate more engaged discussions on the terms of engagement between the IPCC and IPBES and a more scientific basis for that. It was suggested that more analytical engagement was needed, such as on the definition of the term “triple planetary crisis”, and that informal engagement should be encouraged, including cooperation between focal points, without

overburdening the current assessment cycle or taking up more time on the issue at IPCC-61. It was noted that perhaps an ad hoc group could be formed to explore ways to strengthen cooperation.

Mr Ramón Pichs-Madruga, IPCC Vice-Chair, as a liaison point between the IPCC and IPBES, recalled that there were various existing linkages and activities undertaken to serve as a foundation for further collaboration. There was growing interest in several options for further collaboration between the Focal Points. While the IPCC has broad prior experience, there were areas in which the IPCC could learn from IPBES, such as Indigenous and local knowledge. It was crucial while maintaining autonomy to move toward more formal collaboration through an organised process, with clarity on its mandate and bearing in mind the terms of reference and procedures of each body.

The Panel took note of the IPBES report (IPCC-LXI/INF. 10).

13. ANY OTHER BUSINESS

13.1 Report of the Innovate4Cities Conference in 2021

Mr Bernhard Barth, a Representative of UN-Habitat, reported on the Innovate4Cities Conference in 2021 (IPCC-LXI/INF. 12), noting that the Global Covenant of Mayors for Climate and Energy and UN-Habitat co-organized this IPCC co-sponsored event. The Conference, which took place online due to the COVID-19 pandemic, was a direct successor of the 2018 IPCC Cities and Climate Change Science Conference, initiated in response to a decision (IPCC/XLIII-6) of the 43rd Session of the IPCC (IPCC-43) in 2016 to develop the Special Report on Climate Change and Cities, and was aimed at stimulating research, particularly in underrepresented sectors and regions. The 2021 Innovate4Cities Conference further helped to synthesise knowledge from academia, local government, business, and civil society and consisted of 200 events over five days. It attracted almost 7000 participants.

The purpose was to contribute knowledge, including an updated research and action agenda, on topics in the context of climate change, such as the systems approach, urban health, temporal and spatial scale, digitalisation, smart cities, and justice and equity. Overall, the Conference and follow-up activities were aimed at supporting the development of the Special Report.

Recommendations included that the topics raised during the Innovate4CitiesConference be considered during the scoping of the Special Report, including the roles of informality, justice and equity, and history and cultural heritage in climate-resilient development, and where significant gaps in knowledge such as implementation and finance exist. Other recommendations were to explore increasing outreach opportunities in the global urban community, have the Special Report led by all three WGs, and give suitably qualified and experienced urban practitioners consideration in the authors' nomination and selection.

The Panel took note of the presentation on the report on the Innovate4Cities 2021 Conference (IPCC-LXI/INF. 12).

14. PLACE AND DATE FOR THE SIXTY-SECOND PLENARY SESSION OF THE IPCC

The IPCC Secretary announced that the 62nd Session of the IPCC (IPCC-62) is tentatively scheduled to take place from 24 February 2025. The Secretariat has received an offer from a prospective host country, the host country has requested that their name be withheld until they have gone through their internal process and protocol. Therefore, the location will be announced shortly. Furthermore, Peru has offered to host the 63rd Session of the IPCC (IPCC-63).

The Panel took note of the information provided.

15. CLOSING OF THE SESSION

Ms Ko Barrett, WMO Deputy Secretary-General and former IPCC Vice-Chair, congratulated the Panel for agreeing on the outlines of the Special Report and the Methodology Report. She expressed her commitment to supporting the IPCC in carrying out its work, noting that she oversees the IPCC Secretariat in her new role.

Mr Ladislaus Chang'a, IPCC Vice-Chair, underscored the importance of the pre-plenary briefing and the request that this practice be sustained to strengthen inclusivity, particularly for developing countries.

The Chair acknowledged that the issues of access and inclusivity had been persistent themes throughout this meeting and highlighted the ongoing discussions and activities to address these issues.

Closing IPCC-61, the Chair appreciated the flexibility shown by delegates and noted that the meeting was finished almost at its scheduled end time. He thanked the Government of Bulgaria and the city of Sofia for hosting IPCC-61 and expressed his appreciation to the young volunteer scientists for their efforts during the meeting. He expressed his gratitude to the Bureau members, including the WG Co-Chairs and Vice-Chairs, as well as WG TSUs and all delegates, highlighting the key roles played by the IPCC Vice-Chairs, Mr Ladislaus Chang'a, Mr Ramón Pichs-Madruga and Ms Diana Ürge-Vorsatz.

The Secretary also expressed gratitude to the Government of Bulgaria.

With the Chair, the Secretary thanked the Secretariat for the organisation of the meeting, as well as the security personnel, interpreters, the WMO, and hotel staff.

The Chair declared IPCC-61 closed.

ANNEX 1

SIXTY-FIRST SESSION OF THE IPCC
27 July – 2 August 2024, Sofia, Bulgaria

Decisions adopted by the Panel

Decision IPCC-LXI- 1. Adoption of the Provisional Agenda

Documents: IPCC-LXI/Doc.1 and IPCC-LXI/Doc.1, Add.1

The Intergovernmental Panel on Climate Change at its Sixty-first Session adopts the Provisional Agenda as contained in document IPCC-LXI/Doc.1.

Decision IPCC-LXI- 2. Admission of Observer Organizations

Document: IPCC-LXI/Doc. 3, Rev.1

The Intergovernmental Panel on Climate Change at its Sixty-first Session decides to grant the following organizations IPCC observer status, in accordance with the IPCC Policy and Process for Admitting Observer Organizations:

1) Bureau international des poids et mesures (BIPM)
2) Children and Youth International (CYI)
3) Save the Climate
4) Central American Commission on Environment and Development (CCAD)
5) International Society of City and Regional Planners (ISOCARP)
6) International Organization for Standardization (ISO)
7) Woodwell Climate Research Center (Woodwell)
8) Wellcome Trust (Wellcome)
9) West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL)
10) Human Rights and Environment Improvement Centre (HREIC)
11) The Degrees Initiative (Degrees)
12) Coalition Climat pour la Biodiversité et le Développement (CCBD)

Decision IPCC-LXI- 3. Ad Hoc Group on Lessons Learned from the sixth assessment cycle

Document: IPCC-LXI/Doc. 9

The Intergovernmental Panel on Climate Change at its Sixty-first Session appreciates and takes note of the work of the Ad Hoc Group on Lessons Learned from the Sixth Assessment Cycle but also notes that this work does not reflect Panel consensus and the topics are indicative, not exhaustive. These topics may be further discussed during the seventh assessment cycle in an inclusive and transparent manner within the IPCC as appropriate.

Decision IPCC-LXI- 4. Matters related to other IPCC activities – IPCC Scholarship Programme

Document: IPCC-LXI/Doc. 8

The Intergovernmental Panel on Climate Change at its Sixty-first Session agrees to the amendment of the IPCC Scholarship Programme Trust Deed as to the election of a Chair of the Board of Trustees, and accordingly requests the IPCC Secretariat to present the amendment to the Trust Deed for the Panel's approval at the Sixty-second Session of the IPCC.

Decision IPCC-LXI- 5. Seventh assessment report (AR7) products – Outline of the Special Report on Climate Change and Cities

Document: IPCC-LXI/Doc. 2, Rev. 1

The Intergovernmental Panel on Climate Change at its Sixty-first Session decides:

(1) To agree on the outline of the Special Report on Climate Change and Cities as contained in Annex 1 to this document.

(2) That the time schedule for the production of the Special Report is as follows:

9 August – 20 September 2024	Call for nominations of authors
23 September – 19 December	Selection of authors
10–15 March 2025	First Lead Author Meeting
21–25 July 2025	Second Lead Author Meeting
17 October – 12 December 2025	Expert Review of the First Order Draft
12–16 January 2026	Third Lead Author Meeting
8 May – 3 July 2026	Government and Expert Review of the Second Order Draft
3–7 August 2026	Fourth Lead Author Meeting
11 December 2026 – 5 February 2027	Final Government Distribution of the Final Draft and Government Review of the Summary for Policymakers
15–19 March 2027	Approval of the Summary for Policymakers and acceptance of the Special Report

(3) That the budget for the production of the Special Report is as contained in Decision IPCC-LX-10 on the IPCC Trust Fund Programme and Budget.

ANNEX 1

IPCC Special Report on Climate Change and Cities

Summary for Policymakers

Technical Summary

Chapter 1: Cities in the context of climate change: framing of the report

- Integrated storyline of the report, chapter narrative, sequence, and linkages to other relevant processes and assessments
- Framing and defining urban systems and settlements, and their regional and climatic characteristics (including complex, cascading, compounding, and repeating risks)
- Sustainable development and climate resilience, acknowledging the diversity of development status of cities and countries
- Cities as hotspots of effects of hazards and emissions, losses and damages, vulnerabilities, exposure, and impacts, while also being key climate actors
- Framing of multi-dimensional urban characteristics, including physical, socioeconomic and environmental features
- Treatment of urban vulnerabilities, marginalized areas and people, gender, equity, informality and justice
- Psychology, perception, behaviour and attitudes toward climate change and cities
- Interconnection between local context and global context (governance, science, and climate change), and between urban and rural systems
- Assessment methodologies, including following a regional approach, diverse knowledge systems (including Indigenous Knowledge), practitioner expertise, city networks, and considered time frames and spatial scales

Chapter 2: Cities in a changing climate: trends, challenges and opportunities

- Understanding and learning from the past (global climate, hazards, crises, socioeconomic developments); past, current and future global and city-specific climate (trends, means, extremes)
- Urbanization, urban service, common and different urban development trends (population, demographics, informality and inequity, development stage, land use, geography, minorities and intersectionality, urban extent, form, path dependencies, lock-in, retreat, reconstruction, growth and decline, resource and carbon footprint, health and wellbeing, waste management, ecosystems, economy, finance and insurance, work, artificial intelligence and digitalization)

- Urban emissions trends including consumption-based emissions; the role of cities in emissions and mitigation; future global and city-level scenarios, considering local options, equity, sustainable development, infrastructure, and informal settlements

- City-specific risks and their global and regional climatic impact-drivers (extremes and their attribution, slow-onset events, e.g., sea level rise); compounding and cascading risks; scenarios with and without risk reduction, adaptation, resilience building, changes in vulnerability and exposure across systems and sectors, including eco-systems and biodiversity, food, health and housing, innovative technologies/methods (measurements and models)

- Current mitigation and adaptation, planned and unplanned relocation, losses and damages experienced, and the socio-economic trends that shape them, including policy, governance, colonization

- Understanding the two-way interaction/feedback between cities, regions and countries, science behind the interactions (understanding the biophysical mechanisms); social interactions; climate and air quality, and other environmental changes, multi-hazard components (compounding and cascading hazards)

- Data, information, tools accessibility/availability/usability/transparency

- Uncertainties, implementation gaps, unprecedented situations

- Complexity and the need to contextualized climate change within broader societal trends (geopolitical, polarizing societal trends) and goals (Sustainable Development Goals), justice, cascading effects on critical infrastructure

Chapter 3: Actions and solutions to reduce urban risks and emissions

- Common and context specific urban mitigation options for spatial planning, energy (heating, cooling, electricity), existing and new buildings and infrastructure, mobility and transport, water, land, food, demand-side measures and behavioral change and cross-sectoral, integrated approaches in urban systems such as circularity

- Common and context specific urban adaptation and disaster risk reduction options for managing risks in natural, ecological and human systems (including but not limited to physical infrastructure, urban nature-based solutions and ecosystem-based adaptation, and planning and social policies such as relocation, health systems, early warning systems)

- Evaluation of city actions across mitigation and adaptation, and responding to losses and damages such as reconstruction and rehabilitation, including lessons-learned, effectiveness and feasibility, mitigation measures with baseline emissions inventories and targets adopted by cities

- Urban observation and modelling tools for monitoring and evaluation for sectors and unaccounted sources

- Local risk assessments using scientific information, Indigenous Knowledge, and local knowledge of impacts, types and scales of adaptation responses (including positive experiences and outcomes, and aspects of maladaptive practices) and adaptation cycles in various regions and contexts

- Integrating mitigation and adaptation into sustainable development and just transitions, planning approaches under and for uncertainty, synergies and trade-offs, nexus approaches, social innovation, climate resilient development, adaptation targets and the role of cities in net-zero targets

- Metrics for assessing mitigation and adaptation options in the context of sustainable development and the characteristics of and within cities, including service provisioning that delivers health and well-being for all

- Case studies/best practices/stories related to climate resilient development, adaptation, decarbonization and low-carbon development in a diverse range of cities

Chapter 4: How to facilitate and accelerate change

- New ways of planning under and for uncertainty; the likelihood of tipping points

- Providing climate and information services to enable action, including evaluation of mitigation, adaptation, responses to losses and damages, and the cost and benefits of action and inaction, and sustainable development

- Innovation in governance, urban planning policies, decision-making, technology, urban service provision, energy access and shelter, infrastructure, social systems, and finance, including adoption of innovation, facilitation of societal trends, acknowledging the diverse capacities

- Institutional capacities, competencies, inclusive multi-level governance

- Indigenous Knowledge, local knowledge, diverse knowledge systems and values

- Policies for behavioural and lifestyle changes including demand-side mitigation measures, education for empowerment, community engagement, social movements and communications

- Finance, financial instruments, legal frameworks, economic and policy instruments

- Holistic planning and systems thinking approach towards decarbonized and climate resilient cities

- Structural inequity, gender, colonialism, and justice

- Enabling conditions for poverty eradication, equity in just transitions

- Political will and leadership

- Conflicting goals and trade-offs

Chapter 5: Solutions by city types and regions

This chapter contains a synthesis of solution-relevant information and a collection of case studies by city types in the context of urban sustainable development, distinguished by multi-dimensional characteristics such as:

- Geographical location (regions)
- Development stage
- Informality
- City climate and projections
- Climatic impact-drivers
- Adaptation and mitigation options
- Sectoral contributions to the economy
- Migration, urbanization and demographic trends
- Fragility and conflict situations
- Losses and damages, vulnerability, impacts and risks
- Early warning systems
- Capacities
- Inclusiveness, equity and justice
- Governance
- Climate finance

Annex I: Glossary

Decision IPCC-LXI- 6. Options for Expert Meetings and Workshop for the seventh assessment cycle

Documents: IPCC-LXI/Doc. 7; IPCC-LXI/Doc. 7, Add. 1

The Intergovernmental Panel on Climate Change at its Sixty-first Session:

Invites the Bureaus of the Working Groups/TFI and the IPCC Chair to bring forward proposals for Expert Meetings and Workshops at the Sixty-second Session of the IPCC (IPCC-62) and future IPCC sessions, in line with Appendix A, paragraph 7.1 of the IPCC Principles and Procedures, taking into account the views expressed by Member governments at the Sixty-first Session (IPCC-61) regarding document IPCC-LXI/Doc. 7.

Decision IPCC-LXI-7. Seventh assessment report (AR7) products – Outline of the 2027 IPCC Methodology Report on Inventories for Short-Lived Climate Forcers

Document: IPCC-LXI/Doc. 6

The Intergovernmental Panel on Climate Change at its Sixty-first Session decides:

(1) To prepare a Methodology Report with the following title" 2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers";

(2) To agree on the Terms of Reference for the production of a Methodology Report as contained in Annex 1, the Table of Contents as contained in Annex 2, the Instructions to Experts and Authors as contained in Annex 3, the Workplan as contained in Annex 4, each annex as attached to this Decision; and

(3) That the budget for the production of the Methodology Report is as contained in Decision IPCC-LX-10 on the IPCC Trust Fund Programme and Budget.

2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers

Background

1. At the 49th Session (IPCC-49) held in May 2019 (in Kyoto, Japan) the IPCC approved the Task Force on National Greenhouse Gas Inventories (TFI) to produce an IPCC Methodology Report on SLCFs following the Appendix A to the Principles Governing IPCC Work (Decision IPCC-XLIX-7).
2. IPCC TFI carried out preparatory work including Expert Meetings[1] during the AR6 cycle. The Scoping Meeting produced the draft Table of Contents, which is outlined in Annex 2.

Scope

3. The new Methodology Report will provide guidance on SLCF emissions which are:
   - Anthropogenic, not including secondary human-induced substances
   - National
   - Annual
   - Reported in mass units for each individual emitted species.

4. Coverage:
   - Taking into account that this work aims to cover all IPCC inventory sectors with categories where the science is assessed to be robust enough to provide guidance for a Tier 1 methodological approach and have a relative contribution to the global/regional emissions of the species, species[2] assessed and potentially covered by the new Methodology Report will be NO_X, CO, NMVOCs, SO_2, NH_3, BC and OC, as well as emissions of primary particulate matter relevant for radiative forcing, as appropriate.
   - Methane and halogenated species under Montreal Protocol and Kigali Amendment will not be covered since these are already addressed by the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (*2006 IPCC Guidelines*), the 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands (*Wetlands Supplement*) and the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (*2019 Refinement*).
   - For NMVOCs, the methodology should provide estimates for total NMVOCs. The speciation of NMVOCs should be considered by authors, as appropriate.
   - Anthropogenic emissions[3] only, where anthropogenic refers to emissions from human activities and from managed[4] land.
   - Sources covered are those of anthropogenic emissions, where scientific evidence is available; while for others, guidance could be provided as a basis for future methodological development.
   - Geographical and temporal coverage is national and annual level, and authors should also consider guidance on spatial and temporal disaggregation of SLCF emissions.

5. Key elements:

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1 The Joint 1st and 2nd IPCC Expert Meeting on SLCFs: https://www.ipcc-nggip.iges.or.jp/public/mtdocs/2110_SLCF.html
The 3rd IPCC Expert Meeting on SLCFs: https://www.ipcc-nggip.iges.or.jp/public/mtdocs/2204_SLCF_EM3.html

2 Given the uncertainties in the radiative forcing of H_2 and taking note that H_2 has not yet been well assessed as a climate forcer by IPCC WGI, H_2 emissions relevant for radiative forcing are to be considered by the authors as an Appendix subtitled "Basis for future methodological development" subject to the IPCC's Principles and Procedures on review and adoption.

3 as defined in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (*2006 IPCC Guidelines*), the 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands (*Wetlands Supplement*) and the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (*2019 Refinement*).

4 land where human interventions and practices have been applied to perform production, ecological or social functions.

- Structure: Information on each sector will be synthesised into a single document (a volume for each of the inventory sectors: Energy, Industrial Process and Product Use (IPPU), Agriculture, Forestry and Other Land Use (AFOLU), Waste. There will also be a volume on cross-cutting issues, including reporting tables).

- Content of cross-cutting guidance: The volume for cross-cutting issues will include: introduction[5], with guidance on SLCF species and definitions, approaches to data collection[6]; uncertainties; methodological choice and identification of key categories; time series consistency; quality assurance/quality control (QA/QC) and verification; and reporting guidance and tables.
- Content of sectoral guidance: The volumes for each sector will include tiered methodological approaches; decision trees; methods and emission factors, where appropriate; cross-references as necessary to avoid double counting or omissions of emissions; sector-specific guidance on uncertainty assessment and QA/QC; and reporting and documentation guidance.

Approach

6. The result of the work will be an IPCC Methodology Report "2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers".
7. The authors will ensure consistency with categories and build on the methodological guidance within the *2006 IPCC Guidelines, Wetlands Supplement* and *2019 Refinement*.
8. The authors will follow "Instructions to Experts and Authors" presented in Annex 3 to ensure a consistent and coherent approach across all the volumes and chapters, including the use of common terminology.
9. Importantly, the authors will provide guidance based on the *good practice*[7] guidance definition and the structured tiered approach described in the *2006 IPCC Guidelines, Wetlands Supplement* and *2019 Refinement.*
10. The production of the Methodology Report will be completed in 2027 as noted in the work plan in Annex 4 following Decision IPCC-LX-9.

[5] considering the importance for climate effects of spatial distribution and temporal resolution of SLCF emissions, and changes in co-emitted species

[6] including generic methods of measurements, approaches to estimate BC/OC**,** including on techniques of measurement and all variables used to derive emission factors, NMVOC speciation, spatial distribution and temporal resolution, technology, and abatement information.

[7] *"Good practice" is a key concept for inventory compilers to follow in preparing national greenhouse gas inventories. The key concept does not change in the 2019 Refinement. The term "good practice" has been defined, since 2000 when this concept was introduced, as "a set of procedures intended to ensure that greenhouse gas inventories are accurate in the sense that they are systematically neither over- nor underestimates so far as can be judged, and that uncertainties are reduced so far as practicable". This definition has gained general acceptance amongst countries as the basis for inventory development and its centrality has been retained for the 2019 Refinement. Certain terms in the definition have been updated based on feedback from the statistics community, such that this definition can be also understood as "a set of procedures intended to ensure that greenhouse gas inventories are accurate in the sense that they are systematically neither over- nor underestimates so far as can be judged, and that they are precise so far as practicable" in the context of refinement of Chapter 3 of Volume 1.*
Good Practice covers choice of estimation methods appropriate to national circumstances, quality assurance and quality control at the national level, quantification of uncertainties and data archiving and reporting to promote transparency.

2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers

Overview

Volume 1. General Guidance

- *Introduction*
  (including, but not limited to: Background on SLCFs and their importance for climate, Key differences between SLCFs and GHGs emissions, Holistic approaches to SLCFs and the importance of co-emitted species, Spatial distribution and temporal resolution and relevance to climate effects, Interlinkages with meteorology, Importance of technologies and abatement technologies)
- *Approaches to Data Collection*
  (including, but not limited to: Spatial distribution and temporal resolution, Measurement techniques, NMVOC speciation, Technologies and Abatement technologies)
- *Uncertainties*
- *Methodological Choice and Identification of Key Categories*
  (including, but not limited to KCA by SLCF species, Issues of co-emitted species in SLCF KCA)
- *Timeseries consistency*
  (including, but not limited to: Addressing changes in measurement techniques, Addressing changes in technologies, including for abatement)
- *QA/QC and Verification*
  (including, but not limited to: Consistency with co-emitted GHGs and SLCFs, Comparison with global/regional inventories, Comparisons with atmospheric observations and models)
- *Reporting guidance and Tables*

Volume 2. Energy Sector

- *Introduction*
- *Stationary combustion*
- *Mobile combustion*
- *Fugitive Emissions*
- *Other*

Volume 3. IPPU Sector

- *Introduction*
- *Mineral Industry*
- *Chemical Industry*
- *Metal Industry*
- *Non-Energy products from fuels and Solvent Use*
- *Other*

Volume 4. AFOLU Sector

- *Introduction*
- *Generic methodologies*
- *Consistent representation of land*
- *Emissions from Livestock and Manure Management*
- *Land use categories*
- *Managed soil*[8]
- *Other*

Volume 5. Waste Sector

- *Introduction*
- *Solid Waste Disposal*
- *Biological Treatment of Solid Waste*
- *Incineration and Open Burning of Waste*
- *Wastewater Treatment and Discharge*
- *Other*

[8] As expanded by the Wetlands Supplement guidance/categorization

2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers

1. Work on a 2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers will be guided by the IPCC procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of the IPCC Reports (Appendix A to the Principles Governing the IPCC Work[9]). This document is consistent with the IPCC procedures and applies to all experts engaged in the production of a new Methodology Report.
2. In this document the term "experts" covers Co-Chairs, members of the TFI Bureau (TFB), technical support unit (TSU) Staff, Coordinating Lead Authors (CLAs), Lead Authors (LAs), and Review Editors (REs) as well as Contributing Authors (CAs) and Expert Reviewers.
3. These notes are intended as guidance to experts contributing to a new Methodology Report. They are intended to ensure a consistent and coherent approach across all the volumes or chapters and to promote common terms used.

Confidentiality

4. Authors meetings are closed meetings. Any discussions are confidential except for any published report of the meeting. This is to ensure that experts participating in the meetings can express themselves and discuss issues freely and openly.
5. The IPCC considers the drafts of a new Methodology Report, prior to acceptance, to be pre-decisional, provided in confidence to reviewers, and not for public distribution, quotation or citation.
6. The TSU will keep drafts of a new Methodology Report sent for the IPCC review, any comments received on them and the responses by authors. All written expert and government review comments will be made available to reviewers on request. These will be made available on the IPCC website as soon as possible after the acceptance by the Panel and the finalisation of the report.

Conflict of Interest

7. It is important that all experts involved in the IPCC activities avoid any conflict of interest or the direct and substantial appearance of a conflict of interest. It is recognised that many experts in Emission Inventories are employed by, or funded by, parties with some interest in the outcome (e.g. most inventory compilers are funded by national governments or industry). It is therefore important to be open and transparent about financial and other interests.
8. The IPCC implements a Conflict of Interest (COI) Policy[10] that applies to all individuals directly involved in the preparation of IPCC reports, including senior IPCC leadership (IPCC Chair and Vice-Chairs), other Bureau and Task Force Bureau members, authors with responsibilities for report content (CLAs, LAs), Review Editors and staff of the TSU. The overall purpose of this policy is to protect the legitimacy, integrity, trust, and credibility of the IPCC and of those directly involved in the preparation of reports, and its activities.
9. Before an individual is appointed as a CLA, LA and RE for a new Methodology Report, the TFB will request the individual to complete a Conflict of Interest Disclosure Form ("the COI Form") contained in Annex B to the COI Policy which will be submitted to the TSU. The TFB will then evaluate the form to determine whether the individual has a conflict of interest that cannot be resolved.
10. All CLAs, LAs and REs will inform the TSU annually of any changes in the information provided in their previously submitted COI Form. The TFB will evaluate the revised information.
11. All COI Forms and any records of the deliberations of the COI Expert Advisory Group, deliberations and/or decisions of the COI Committee in relation to conflict of interest issues in respect of specific individuals and any information disclosed by individuals for the purposes of the COI Policy will be transferred to the Secretariat after they have been reviewed and will be securely archived by the Secretariat and retained

[9] https://www.ipcc.ch/site/assets/uploads/2018/09/ipcc-principles-appendix-a-final.pdf

[10] https://www.ipcc.ch/site/assets/uploads/2018/09/ipcc-conflict-of-interest-2016.pdf

for a period of five years after the end of the assessment cycle during which the relevant individual contributed, after which the information will be destroyed. Subject to requirement to notify the existence of a conflict of interest to others, the information referred to above will be considered confidential and will not be used for any purpose other than consideration of conflict of interest issues under these Implementation Procedures without the express consent of the individual providing the information.

Responsibilities of authors and other experts

12. The role of authors is to impartially assess ALL the available literature and to describe the best methodologies available. Experts should be impartial. Authors should review all literature available up to a cut-off date to be decided by the TFB as part of the agreed work plan.
13. After drafting the report authors will be asked to consider all comments received on the drafts and to adjust and revise the text accordingly. They should document their responses. If they do not accept a comment this should be explained. Review Editors should check whether the accepted changes were fully incorporated in the revised text.
14. Responsibilities and duties of authors and other experts are currently explained in more detail in the IPCC procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of the IPCC Reports (Appendix A to the Principles Governing the IPCC Work).

Literature

15. The use of literature should be open and transparent. In the drafting process, emphasis is to be placed on the assurance of the quality of all cited literature. Priority should be given to peer-reviewed scientific, technical and socio-economic literature if available.
16. It is recognized that other sources provide crucial information for IPCC Reports. These sources may include reports from governments, industry, and research institutions, international and other organizations, or conference proceedings. Use of this literature brings with it an extra responsibility for the author teams to ensure the quality and validity of cited sources and information as well as providing an electronic copy. In general, newspapers and magazines are not valid sources of scientific information. Blogs, social networking sites, and broadcast media are not acceptable sources of information for IPCC Reports. Personal communications of scientific results are also not acceptable sources.
17. For any sources written in a language other than English, an executive summary or abstract in English is required.
18. All sources will be integrated into a reference section of an IPCC Report.
19. For more details of the procedure on the use and referencing of literature in IPCC Reports, see Annex 2 to the IPCC procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of the IPCC Reports (Appendix A to the Principles Governing the IPCC Work).

Principles of the new Methodology Report

20. Guidance in the new Methodology Report should be understandable and easy to implement. Lead authors should make efforts to balance the need to produce a comprehensive self-contained report with reasonable limits to the length and detail of the guidance. In particular:
    a. The guidance should follow a cookbook approach by providing clear step by step instructions. It should not try to be a textbook. Detailed background information on emission processes, scientific studies, etc. is generally referenced rather than included.
    b. Lead authors must consider relevant scientific developments and national methods used by countries in their inventories.
    c. Authors should bear in mind that the target audience is a diverse group of readers who are primarily concerned with the elaboration of national inventories. For this reason, the emphasis should be on ensuring clear communication of practical and understandable guidance.

21. This work aims to cover all IPCC inventory sectors with categories where the science is considered to be robust enough to provide guidance for a Tier 1 methodological approach and have a relative [11] contribution to the global/regional emissions of the species, using the significance and prioritization criteria as shown below.

Significance and prioritization criteria

- Significance of the category and the species within the sector on a global/regional scale. Categories significant only for a limited number of particular countries, currently or in the foreseeable future, may not meet this criterion.
- Sufficient data availability and maturity of scientific advances to provide a basis for methodological development, including:
    - Ability to develop default emission factors and parameters
    - Feasibility of obtaining the necessary data to implement the methods

22. The general structure, approach and definitions used in the *2006 IPCC Guidelines*, such as tiered approach and decision trees will be followed. Annexes may be used where necessary to contain additional data to support the methodologies, although large numbers of annexes will probably not be necessary. Appendices are not ruled out where scientific knowledge is insufficient for countries to agree full methodologies, but please avoid as far as possible work on areas that have to be relegated to an appendix. Appendices should be sub-titled by "Basis for future methodological development".

Definitions

23. The following terms will be used throughout the new Methodology Report, and it is essential that all Lead Authors have a common understanding of their meaning and relevance.
24. **Tier** A Tier refers to a description of the overall complexity of a methodology and its data requirements. Higher tier methods are generally more complex and data-intensive than lower tier methods. The guidance for each category should contain at least a Tier 1 method, and in many cases there will be a Tier 2 and Tier 3. The general expectation is that Tier 2 and Tier 3 methods will both be consistent with *good practice* guidance for key sources, although in some cases Tier 3 will be preferred.
25. **Tier 1** approaches are simple methods that can be applied by all countries in all circumstances. Default values for the emission factors and any other parameters needed must be supplied (see below for documentation needed).
26. **Tier 2** methods should in principle follow the same methodological approach as Tier 1 but allow for higher resolution country specific emissions factors and activity data. In some categories, this may not be the case. These methods should better replicate the parameters affecting the emissions. Country specific emission factors are needed and possibly more parameters will also be needed.
27. **Tier 3** methods give flexibility either for country specific methods including modelling or direct measurement approaches, or for a higher level of disaggregation, or both. This is a more complex method, often involving a model. This will replicate many features of nation emissions and require specific parameters for each country.
28. **Default information** is data that is appropriate for use where there is no better detailed, country specific information. If appropriate, authors may specify regional default data. Users of the guidelines should be encouraged to try to find better country specific data. Default data are appropriate for Tier 1 methods and the guidelines should contain all the default values needed. Emission factors for higher tiers need not be specified because it is a function of higher tier methods to find data reflecting national circumstances. Default information is included primarily to provide users with a starting point from which they can develop their own national assumptions and data. Indeed, national assumptions and data are always preferred because the default assumptions and data may not always be appropriate for specific national contexts. In general, therefore, default assumptions and data should be used only when national assumptions and data are not available.

[11] i.e. not insignificant

29. **Decision Trees**. A decision tree is a graphical tool to assist countries in selecting from the IPCC methods.
30. **Key categories** are inventory categories which individually, or as a group of categories (for which a common method, emission factor and activity data are applied) are prioritised within the national inventory system because their estimates have a significant influence on a country's total inventory in terms of the absolute level, the trend, or the level of uncertainty in emissions. Key category analysis should be performed species by species. The appropriate threshold to define key categories should be considered by authors.
31. **Sector** refers to the four sectors of the guidelines (Energy; Industrial Process and Product Use (IPPU); Agriculture, Forests and Other Land Use (AFOLU) and Waste) these are divided into categories and subcategories.
    a. Sector 1
    b. Category 1.A
    c. Sub-category 1st order 1.A.1
    d. Sub-category 2nd order 1.A.1.a
    e. Sub-category 3rd order, 1.A.1.a.i
32. **Worksheets**. These will be printed versions of spreadsheet tables, that, when filled in, enable the user to perform the emission estimation. They should contain all the calculations and written text with any formulae. Additional worksheets may be required to compile the results of the worksheets into the reporting tables.
33. **Reporting Tables** are tables that present the calculated emission inventory and sufficient detail of other data used to prepare the inventories for others to understand the emission estimates.
34. Usage:
    a. **"Good Practice"** is defined in the *2019 Refinement* as follows: "a key concept for inventory compilers to follow in preparing national greenhouse gas inventories. The key concept does not change in the 2019 Refinement. The term "good practice" has been defined, since 2000 when this concept was introduced, as "a set of procedures intended to ensure that greenhouse gas inventories are accurate in the sense that they are systematically neither over- nor underestimates so far as can be judged, and that uncertainties are reduced so far as practicable". This definition has gained general acceptance amongst countries as the basis for inventory development and its centrality has been retained for the *2019 Refinement*. Certain terms in the definition have been updated based on feedback from the statistics community, such that this definition can be also understood as "a set of procedures intended to ensure that greenhouse gas inventories are accurate in the sense that they are systematically neither over- nor underestimates so far as can be judged, and that they are precise so far as practicable" in the context of refinement of Chapter 3 of Volume 1".

       The concept mentioned above should be applied to all species dealt with in this report.
    b. Good Practice covers choice of estimation methods appropriate to national circumstances, quality assurance and quality control at the national level, quantification of uncertainties and data archiving and reporting to promote transparency.
    c. "**Shall**" should not be used. Either say "Good Practice is…" or say what needs to be done or what should be done. These all indicate what needs to be done to comply with Good Practice.
    d. "**Be encouraged to**" indicates a step or activity that will lead to higher quality inventory but are not required for ensuring consistency with the IPCC Guidelines.
    e. "**Recommend**" should not be used. In the GPG2000, the word "recommend" was avoided and "Suggested" was used instead.
    f. "**Inventory agency**" is the body responsible for actually compiling the inventory, perhaps from contributions from a number of other bodies while "**inventory compiler**" is the person actually compiling the inventory,

Reporting Tables and worksheets

35. Worksheets reflect the application of tier 1 methods only, due to the varied implementation of higher tier methods by countries. Lead authors should stress the importance of documentation and archiving of particular types of information of relevance to each category, although advice may be given of what needs to be reported for transparency at higher Tiers.

Emission factors and methods

36. Authors should provide default emission factors and parameters. In doing this work, they should draw on the widest possible range of available literature, scientific articles and country reports.
37. All data reported in the guidance as IPCC default values shall be justified by authors by providing TSU with all background data used, and the source of those data, as well as all information on the method applied to derive the default values from the background data, as needed to replicate the calculation, in a timely manner as drafts are being developed. Background data should be compiled in the attached form (Appendix 1) to facilitate the upload in the Emission Factor Database (EFDB). Lead authors should be familiar with the draft cross-cutting guidance on data collection in Volume 1 and the guidance on cross-cutting issues in this note on terms, data types, data demands of methods and stratification requirements. Default data should also meet the EFDB evaluation criteria – robustness, documentation, and applicability[12].
38. Authors should develop guidance to provide additional information on rationale, references and background information on parameters used for estimating of default values where such information is available (similar to Annexes in Chapter 10, Volume 4, of the *2019 Refinement*), with a view to enhancing the transparency and applicability of default values presented in the new Methodology Report.
39. Single IPCC default emission factors might not be ideal for any one country, but they can be recommended provided that regional factors are unavailable, and the defaults are representative of typical conditions as far as can be determined. It may be necessary or appropriate to provide a range of default emission factors along with clear guidance about how countries should select from within the range. Lead authors may also provide multiple default emission factors, disaggregated by region, technology (including abatement technologies), or another relevant classification scheme.
40. It is important to provide more default emission factors that reflect the unique conditions of developing countries. In general, default emission factors for Tier 1 should represent emissions without category-specific mitigation measures, as well as relevant abatement technologies for which data are available.
41. Users of the guidelines should be encouraged to develop and use country specific data. Emission factors for higher tiers need not be specified in the *2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers*. Default information is included primarily to provide users with a starting point from which they can develop their own national assumptions and data. Indeed, national assumptions and data are always preferred because the default assumptions and data may not always be appropriate for specific national contexts.
42. The basic principle concerning national methods will continue to apply – countries are encouraged to use national data or methods so long as they are consistent with the IPCC Guidelines.
43. Authors shall prefer IPCC methods applied to estimate GHG emissions when those can be straightforwardly applied to estimate SLCF emissions as well as when those can be applied mutatis mutandis. The use of consistent methodologies allows inventory-compilers to use the same datasets for both sets of estimates. This is to enhance efficiency in the use of resources available to inventory-compilers and thus to promote accuracy of estimates.
44. Where the method applied for SLCF differs from that applied to estimate GHG emissions from the same source, or the source is not covered in the *2006 IPCC Guidelines*, in addition to methodological guidance, guidance on activity data sources available at international level, and where possible at national level, will be provided.
45. Authors should note the issue of double-counting, for example in the Energy sector the IPCC default method for combustion assumes an Oxidation Factor equal to 1 resulting in all carbon calculated as CO_2,

[12] EFDB evaluation criteria: https://www.ipcc-nggip.iges.or.jp/EFDB/documents/EFDB_criteria.pdf

while the addition of SLCF methods will require to estimate also other carbon compounds (CH_4, CO, NMVOC and BC/OC). Authors should provide guidance to inventory compilers on how to address the issue of double-counting.

46. For BC/OC emissions, authors should provide guidance, including on techniques of measurement and all variables used to derive emission factors.

47. In considering the methodologies for SLCF emissions in the AFOLU sector, authors should not include natural background emissions from land as these are not considered to be anthropogenic.

Boxes

48. Consistent with the *2006 IPCC Guidelines*, the new Methodology Report may contain Boxes, which should not be used to provide methodological guidance, but for information purposes or providing examples.

Decision trees

49. Consistent with the format and structure of the *2006 IPCC Guidelines*, the new Methodology Report may contain a decision tree for some sub-categories to assist countries in selecting from the IPCC methods. These decision trees link the choice of IPCC methods to national circumstances via specific questions about data availability and status as a key category[13].

50. To ensure consistency in decision tree logic and format across categories, lead authors should adhere to the following requirements:

    a. The decision trees should be based on a series of questions with clear yes/no answers, and two subsequent branches along yes/no paths.

    b. The decision trees should start with assessing data availability for the highest tier method, and then direct countries step-wise towards lower tier methods if activity data, emission factors or other parameters are not available.

    c. The decision tree should indicate the lowest tier method that is judged to be appropriate for estimating emissions from a key category.

    d. If data are not available for the method referred to in c, the 'No' response should direct the reader to the question "Is this a key category?" If the answer to this is 'Yes', the decision tree should recommend that the country collect the necessary data to implement a higher tier method. If the answer is 'No', then the decision tree can recommend a lower tier method. There is no need to deal with the case for a key source where a country does not have the resources to gather additional data needed to implement higher Tier methods. This is dealt with in Volume 1 of the *2006 IPCC Guidelines*.

    e. The branches of the decision trees should end in 'out-boxes' that correspond to specific tiers identified in the guidance for that category and are labelled by Tier. Lead authors may also recommend out-boxes for hybrid tiers.

    f. Lead authors may develop separate decision trees for different sub-categories. Alternatively, they may include decision tree options for selecting different tiers for different sub-categories. This second option is appropriate if it is advantageous to recommend a higher tier method only for significant sub-categories rather than for the entire category. **Decision trees that use the 'significance' criterion must include the "25-30% rule"[14], as reassessed by authors.**

51. Additional Formatting Guidelines (see example):

    a. Decision trees should be drafted in separate files. The TSU will integrate these files into the main text at a later date.

    b. Decision trees should NOT ask the question: "Does this source occur in the country?" This is because decision trees will only be used for sources which occur.

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[13] The most appropriate choice of estimation method (or tier) may also depend on national circumstances, including the availability of resources and advice on this will be given in the cross-cutting volume.

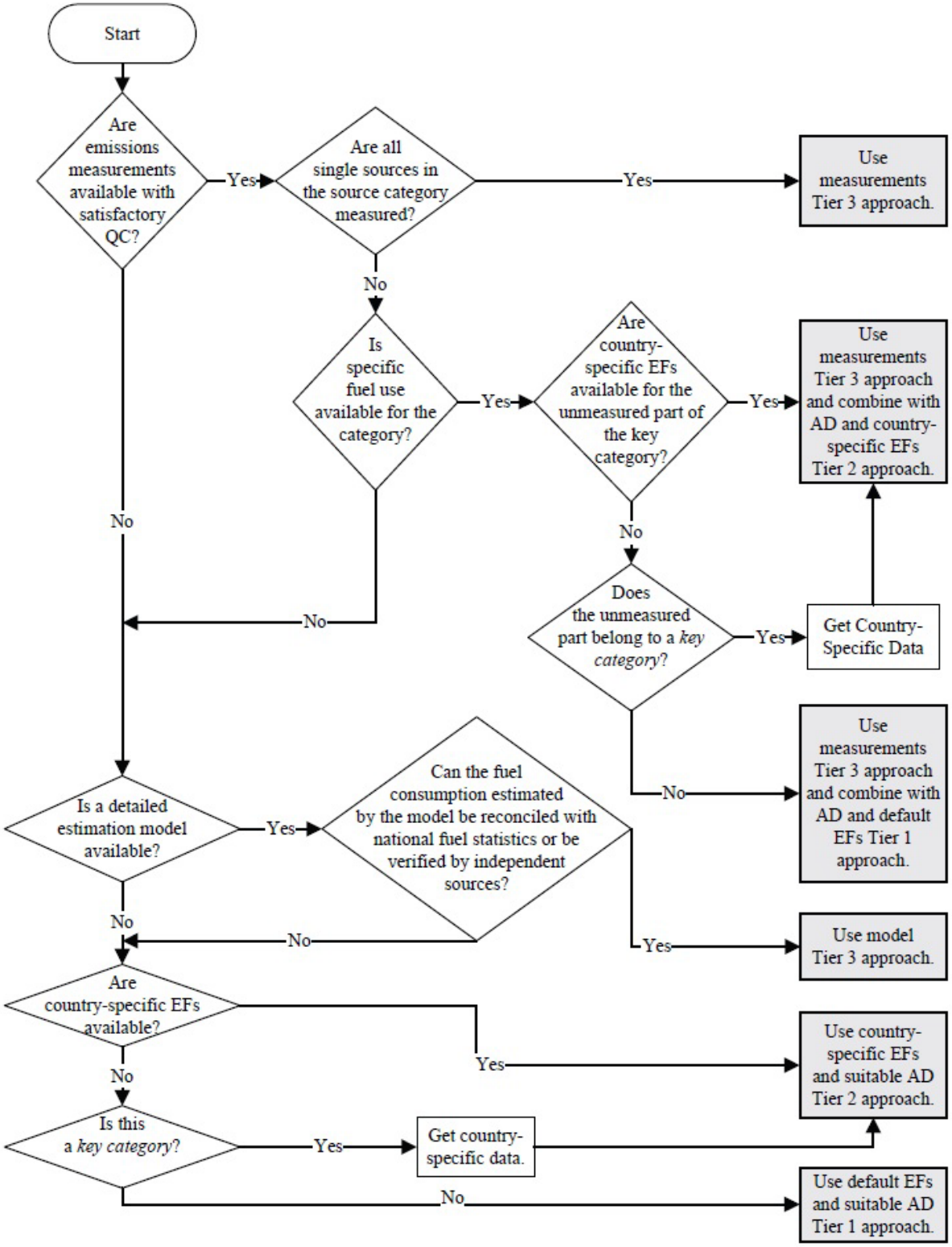
[14] As defined in the *2019 Refinement* (i.e., a significant sub-category is one that makes up more than 25-30% of emissions from a category).

c. There should be a “START” box.
d. “Diamonds” should be used for questions/decisions.
e. “Squares” should be used for all other information.
f. The out-boxes should be individually numbered.
g. The text font should be Times New Roman 10pt.
h. Text should be centred within the boxes.

Example. Decision tree for estimating emissions from fuel combustion

(Figure 1.2 Chapter 1 Volume 2 of the 2006 IPCC Guidelines)

Figure 1.2 Generalised decision tree for estimating emissions from fuel combustion



Note: See Volume 1 Chapter 4, "Methodological Choice and Key Categories" (noting section 4.1.2 on limited resources) for discussion of *key categories* and use of decision trees.

Units

52. SI units shall be used throughout: in text, equations, worksheets and tables. Emissions have to be expressed in mass units and units have to be used consistently within each sector. When similar activity data is used for different sectors same units need to be used (CLAs have to take care about such harmonisation). Conversion factors have to be provided (for example to estimate N_2O from N). Where input data available may not be in SI units conversions should be provided.
53. Standard abbreviations for units and chemical compounds are given in Appendix 2.

Appendix 1. EFs and parameters Documentation

This form should be used to document all EFs and parameters used in the new Methodology Report. This gives the minimum information that should be considered by the authors.

Author[1]					
IPCC Category					
Name of EFs / parameters					
Activity, e.g. Fuel[2] in the Energy Sector					
Species[3]:	CO	NOx	…	…	…
Value:					
Unit:					
Uncertainty (as +/% or 2.5 and 97.5 percentiles)[4]					
Applicability[5] – fill in as necessary if data not generally applicable. Describe appropriate Technologies, Practices, Abatement Technologies, Region, and/or Regional Conditions					
Source of data (chose one)	Measurement - Scientific Literature Other Measurement National Inventory Report Calculated Based on fuel quality Expert Judgement[6]				
Method of derivation of the value (e.g., arithmetic mean, weighted mean, adjustment of a literature data by expert judgment etc.					
Reference[7]					
URL					
Abstract in English (if the abstract is in another language)					

Note:

1. *The author is the LA/CA/CLA who writes the relevant section and proposes the data.*
2. *Fuels as defined in the Energy volume of the 2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers*
3. *Add additional species as required*
4. *As defined by cross-cutting volume*
5. *Only to be completed where it is necessary to specify the applicability of the data*
6. *Attach the elicitation protocol*
7. *As reference to document, report, calculation or if expert judgement to those involved (Names or group e.g. "Waste BOG on Solid Waste Disposal Sites") with DOI, where possible*

Appendix 2. Units and Abbreviations

Abbreviations of, and how to spell, chemical species

BC	Black Carbon
CCl_4	Carbon tetrachloride
CF_4	Tetrafluoromethane
C_2F_6	Hexafluoroethane
CFCs	Chlorofluorocarbons
CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
EC	Elemental Carbon
H_2	Hydrogen
HFCs	Hydrofluorocarbons
NH_3	Ammonia
NMVOCs	Non-methane volatile organic compounds
NO_X	Nitrogen oxides
N_2O	Nitrous oxide[15]
OC	Organic Carbon
PFCs	Perfluorocarbons
PM_x	Particulate Matter (x – micrometres)
S	Sulphur
SF_6	Sulphur hexafluoride
SO_2	Sulphur Dioxide

[15] In the IUPAC N_2O is officially named “Dinitrogen Oxide”. However, “nitrous oxide” is widely used and understood in the emission inventory community and by the UNFCCC and so, to avoid confusion, will be used.

Units and abbreviations

cubic metre	m^3
hectare	ha
gram	g
gigagram	Gg
tonne	t
gigatonne	Gt
joule	J
degree Celsius	℃
calorie	cal
year	Yr
capita	Cap
gallon	gal
dry matter	Dm
atmosphere	atm

Prefixes and multiplication factors

Multiplication Factor	**Abbreviation**	**Prefix**	**Symbol**
1 000 000 000 000 000	10^{15}	peta	P
1 000 000 000 000	10^{12}	tera	T
1 000 000 000	10^{9}	giga	G
1 000 000	10^{6}	mega	M
1 000	10^{3}	kilo	k
100	10^{2}	hecto	h
10	10^{1}	deca	da
0.1	10^{-1}	deci	d
0.01	10^{-2}	centi	c
0.001	10^{-3}	milli	m
0.000 001	10^{-6}	micro	μ

Standard equivalents

1 tonne of oil equivalent (toe)	1 x 10^{10} calories
10^3 toe	41.868 TJ
1 short ton	0.9072 tonne
1 tonne	1.1023 short tons
1 tonne	1 megagram
1 kilotonne	1 gigagram
1 megatonne	1 teragram
1 gigatonne	1 petagram
1 kilogram	2.2046 lbs
1 hectare	10^4 m^2
1 $calorie_{IT}$	4.1868 joule
1 atmosphere	101.325 kPa

2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers

Date	Action	Comments
February 2024	Scoping Meeting	Prepare ToR, ToC, Workplan and Guidance to authors
February 2024	TFB36 Meeting	Adoption of Outcomes of the Scoping Meeting and Submission to IPCC
3rd quarter 2024	IPCC-61	IPCC Plenary approves ToR, ToC, Workplan and Guidance to authors
3rd quarter 2024	Call for Nomination of Authors and Review Editors	IPCC invites nominations from governments and international organizations
3rd quarter 2024	Establishment of the Steering Committee	TFB select members to join TFI Co-Chairs in the Steering Group *(to ensure consistency across all the volumes and continuity with the earlier IPCC inventory reports)*
4th quarter 2024	Selection of Coordinating Lead Authors, Lead Authors and Review Editors	Selection by TFB considering expertise and geographical and gender balance
1st half 2025	1st Lead Author Meetings	LAM1 to develop zero order draft (ZOD)
2nd half 2025	2nd Lead Author Meeting	To develop first order draft (FOD) for review
1st quarter 2026 (8 weeks)	Expert Review	8 weeks review by experts
1st half 2026	Science Meeting	A small meeting of CLAs and some LAs to discuss specific issues that require intensive discussion to reinforce the writing process
1st half 2026	3rd Lead Author Meeting	To consider comments and produce second order draft (SOD) for review
2nd half 2026	Literature cut-off date (one week before SOD Review)	Peer-reviewed papers accepted by the cut-off date (even if not yet published) will be considered. Non-peer-reviewed documents which are made publicly available by the cut-off date.
2nd half 2026 (8 weeks)	Government & Expert Review	8 weeks review by governments and experts
1st half 2027	4th Lead Author Meeting	To consider comments and produce final draft (FD)
1st half 2027	Government Review	Distribute to governments for their consideration prior to approval (at least 4 weeks prior to the Panel)
2nd half 2027	Adoption/acceptance by IPCC	Final draft submitted to IPCC Panel for adoption/acceptance
2nd half 2027	Publication	Electronic means

Decision IPCC-LXI-8. Approval of the Draft report of the Sixtieth Session of the IPCC

Document: IPCC-LXI/Doc. 11, Rev.2

The Intergovernmental Panel on Climate Change at its Sixty-first Session approves the report of the Sixtieth Session of the IPCC, as contained in document IPCC-LXI/Doc.11, Rev.2.

Decision IPCC-LXI- 9. Strategic Planning Schedule for the seventh assessment cycle

Documents: IPCC-LXI/Doc. 10; IPCC-LXI/INF. 15

The Intergovernmental Panel on Climate Change at its Sixty-first Session:

(1) Notes the document IPCC-LXI/Doc.10 submitted by the IPCC Chair and document IPCC-LXI/INF.15 prepared by the Co-Chairs of the Working Groups and TFI.

(2) Recalling the Decision IPCC-LX-9 and in accordance with paragraph 4.1 of Appendix A of the Principles governing the work of the IPCC, based on the reports of the scoping meetings of the Working Group and Task Force on National Greenhouse Gas Inventories reports, the Panel will agree at its Sixty-second Session on the scope, outline, and the work plan including schedule and budget.

(3) Notes the Decision IPCC-LXI-5. Seventh assessment report (AR7) products – Outline of the Special Report on Climate Change and Cities and Decision IPCC-LXI-7 Seventh assessment report (AR7) products – Outline of the 2027 IPCC Methodology Report on Inventories for Short-Lived Climate Forcers.

Decision IPCC-LXI-10. Conflict of Interest Committee on the Conflict of Interest disclosure form

Document: IPCC-LXI/Doc. 5

The Intergovernmental Panel on Climate Change at its Sixty-first Session accepts the recommendations of the sub-committee of the COI Committee on the revision of the COI disclosure form as set out in Annex I to this decision.

ANNEX I

ANNEX A

DRAFT REVISED COI DISCLOSURE FORM

CONFIDENTIAL

NAME:

ADDRESS:

E-MAIL ADDRESS:

TELEPHONE:

CURRENT EMPLOYER:

FUNCTION/ROLE IN IPCC:

PLEASE CONSULT THE ATTACHED GUIDANCE INFORMATION (SEE ANNEX 1) BEFORE COMPLETING THE FORM BELOW

PLEASE FURTHER NOTE:

"Yes" responses do not necessarily affect or prevent your participation in IPCC activities. Answering "Yes" to a question on this form does not necessarily mean that a conflict is present or that you will be unable to perform your designated function/role in the IPCC. If in doubt about whether an interest should be disclosed, individuals are encouraged to disclose that information.

1. APPOINTMENTS AND ACTIVITY

Do you hold any position or appointment, or any business or professional relationships (whether commercial or non-financial) with other bodies related to climate science, such as the UNFCCC or others?

Yes No

Details:

2. EMPLOYMENT AND CONSULTING

Do you receive any remuneration from employment or consulting, including services as a technical or other adviser from a commercial entity or other organization with an interest related to the subject of the IPCC work in which you are engaged?

Yes No

Details:

3. RESEARCH SUPPORT

Do you receive financial support (including but not limited to grants, consultancies, sponsorship, or honoraria for speaking or facilitating training) or non-financial support (including but not limited to premises, equipment, facilities, assistants, paid travel) from any commercial entity or other organization with an interest related to the subject of the IPCC work?

Yes No

Details:

4. INVESTMENT INTERESTS

Do you have investments (including but not limited to stocks, bonds, stock options, other securities such as short sales) or commercial business interests (including but not limited to ownership, partnership, joint ventures, board memberships, controlling interests), in any commercial entity with an interest related to the subject of the IPCC work? (Please also include indirect investments such as a trust or holding company. You may exclude mutual funds, pension funds or similar investments that are broadly diversified and over which you exercise no control.)

Yes No

Details:

5. INTELLECTUAL PROPERTY

Do you own any intellectual property rights (including but not limited to patents, trademarks or commercial copyrights including pending applications) or proprietary knowledge in a technology or process being used for commercial purposes that might be affected by the IPCC work?

Yes No

Details:

6. PUBLIC STATEMENTS AND POSITIONS

As part of a regulatory, legislative or judicial process, are you providing any expert opinion or testimony related to the subject of the IPCC work for a commercial entity or other organization? Yes No

Details:

7. NON-FINANCIAL INTERESTS

Are you engaged in any professional or other activities (including but not limited to editorial functions, official (paid or unpaid) function in a government agency or international organization, advisory committee associated with a public or private sector organization, board member of a public or private sector organization, board member of non-profit organization, board member of advocacy group), which outside parties could consider might represent or give rise to a conflict of interest, or the perception of a conflict of interest with regard the IPCC work with which you are engaged? Yes No

Details:

8. FINANCIAL INTERESTS

Do you hold any additional financial interests which outside parties could consider might represent or give rise to a conflict of interest, or the perception of a conflict of interest with regard to the IPCC work with which you are engaged? Yes No

Details:

9. ADDITIONAL INFORMATION

If not already disclosed above, are you aware of any aspect of your work for the IPCC that will enable you to obtain access to proprietary information or create for you a competitive advantage in your professional, financial or business dealings?

Yes No

Details:

To your knowledge, could the outcome of your work for the IPCC adversely affect the interests of any other persons or entities with whom you have substantial common personal, professional, financial or business interests (such as your adult children or siblings, close professional colleagues, administrative unit or department)?

Yes No

Details:

Which organisation is covering, partly or in full, your IPCC related travel costs?

Details:

Are you receiving any payments (other than for travel costs) or honoraria for speaking publicly on the subject of the IPCC work in which you are engaged?

Yes No

Details:

Is there any other aspect of your background or present circumstances not addressed above that you consider might be perceived as affecting your objectivity or independence?

Yes No

Details:

DECLARATION

I hereby declare that the information in and accompanying this disclosure is true and complete to the best of my knowledge and belief. I declare that I have disclosed all associations required for disclosure under the IPCC Conflict of Interest Policy; and that, except as declared, I do not consider that any of the associations present a conflict of interest.

Should there be any change to the above information and declaration, I will promptly notify the IPCC Secretariat and complete a new declaration of interest form that describes the changes. This includes any change that occurs before or during my work with the IPCC and through the period of my engagement up to finalization or publication of results, or completion of the activity concerned.

I understand that information about my interests will be held by the IPCC for a period of five years after the end of the assessment cycle during which I contributed, after which the information will be destroyed. Subject to requirement to notify the existence of a conflict of interest to others under paragraph 6 of the Implementation Procedures, I understand that these forms will be considered confidential and will be reviewed in accordance with the COI Implementation Procedures.

I hereby declare that I will comply with the IPCC COI Policy and the Implementation Procedures.

Name:

Signature:

Date:

ANNEX 1

GUIDANCE NOTE FOR COMPLETION OF THE CONFLICT OF INTEREST DISCLOSURE FORM

You have been invited to serve on the IPCC because of your professional standing and expertise. As outlined in the IPCC Conflict of Interest Policy, the role of the IPCC demands that it pay special attention to issues of independence and potential bias in order to maintain the integrity of, and public confidence in, its products and processes. It is essential that the work of the IPCC is not compromised by any conflict of interest for those who execute it. In view of this, disclosure of certain circumstances is necessary to ensure that the work of the IPCC is not compromised by conflicts of interest. In filling out this form, therefore, we rely on your professionalism, common sense, and honesty.

These arrangements and disclosure of interests are required as a matter of due diligence, to ensure appropriate assurance for the IPCC in matters of conflict of interest, professional and scientific integrity, and to protect the IPCC and participants from reputational risk.

This declaration of interests, and disclosure of conflicts of interest or potential conflicts of interest, is required under the IPCC Conflict of Interest Policy and Implementation Procedures.

You should disclose interests that could: i) significantly impair your objectivity in carrying out your duties and responsibilities for the IPCC, or ii) create an unfair advantage for you or any person or organization; and which could result in your securing a direct and material gain through outcomes in an IPCC product. For the purposes of this policy, circumstances that could lead a reasonable person to question your objectivity, or whether an unfair advantage has been created, constitute a potential conflict of interest and should be disclosed in this form.

You must also declare any relevant interests of parties with whom you have current contractual relationships or substantial common interests and which could be perceived as unduly influencing, or likely to unduly influence, your judgement (for example your employer(s), close professional associates, your administrative unit or department, sponsoring or funding entities).

A **brief** description of details should be provided in relation to any question below. You should aim to provide sufficient and explicit information to allow the IPCC to form a view on whether the circumstances disclosed give rise to an actual or potential conflict of interest. If in doubt about whether an interest should be disclosed, individuals are encouraged to disclose that information.

Please **sign** and **date** this form on the last page, and return the form to the Secretary of the IPCC with a **Curriculum Vitae** and information supporting these disclosures where applicable. **Retain a copy for your records**.

You must promptly inform the IPCC Secretariat if there is any change in this information prior to or during the course of your work or meetings for the IPCC. This form and the declarations contained therein must be completed before participation in the IPCC activity can be confirmed.

Answering "Yes" to a question on this form does not necessarily mean that a conflict is present or that you will be unable to perform your designated function/role in the IPCC. If in doubt about whether an interest should be disclosed, individuals are encouraged to disclose that information. This information will be assessed as a whole on the basis of the principles contained in the COI Policy (https://www.ipcc.ch/site/assets/uploads/2018/09/ipcc-conflict-of-interest-2016.pdf). In particular, what constitutes or not a COI is defined in paragraphs 11 to 17 of that document (reproduced below). If in doubt about whether an interest should be disclosed,

individuals are encouraged to seek advice from IPCC Secretariat Legal Officer (please contact ipcc-sec@wmo.int for contact information).

Definition of « Conflict of Interest » (paragraphs 11 to 17 of the IPCC COI Policy https://www.ipcc.ch/site/assets/uploads/2018/09/ipcc-conflict-of-interest-2016.pdf).

Conflict of Interest

11. A "conflict of interest" refers to any current professional, financial or other interest which could: i) significantly impair the individual's objectivity in carrying out his or her duties and responsibilities for the IPCC, or ii) create an unfair advantage for any person or organization. For the purposes of this policy, circumstances that could lead a reasonable person to question an individual's objectivity, or whether an unfair advantage has been created, constitute a potential conflict of interest. These potential conflicts are subject to disclosure.

12. Conflict of interest policies in scientific assessment bodies typically make a distinction between "conflict of interest" and "bias," which refers to a point of view or perspective that is strongly held regarding a particular issue or set of issues. In the case of author and review teams, bias can and should be managed through the selection of a balance of perspectives. For example, it is expected that IPCC author teams will include individuals with different perspectives and affiliations. Those involved in selecting authors will need to strive for an author team composition that reflects a balance of expertise and perspectives, such that IPCC products are comprehensive, objective, and

neutral with respect to policy. In selecting these individuals, care must be taken to ensure that biases can be balanced where they exist. In contrast, conflict of interest exists where an individual could secure a direct and material gain through outcomes in an IPCC product. Holding a view that one believes to be correct, but that one does not stand to gain from personally is not a conflict of interest.

13. The conflict of interest requirements in this policy are not designed to include an assessment of one's behavior or character or one's ability to act objectively despite the conflict of interest.

14. This policy applies only to current conflicts of interest. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but that do not currently exist, as such interests are inherently speculative and uncertain. For example, a pending application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is not a current interest.

15. Professional and other non-financial interests need to be disclosed only if they are significant and relevant. If in doubt about whether an interest should be disclosed, individuals are encouraged to seek advice from the appropriate IPCC body as defined in Annex A. Significant and relevant interests may include, but are not limited to, senior editorial roles, advisory committees associated with private sector organizations, and memberships on boards of non-profit or advocacy groups. However, not all such associations necessarily constitute a conflict of interest.

16. Financial interests need to be disclosed only if they are significant and relevant. These may include, but are not limited to, the following kinds of financial interests: employment relationships; consulting relationships; financial investments; intellectual property interests; and commercial interests and sources of private-sector research support. Individuals should also disclose significant and relevant financial interests of any person with whom the individual has a substantial business or relevant shared interest. If in doubt about whether an interest should be disclosed, individuals are encouraged to seek advice from the appropriate IPCC body as defined in Annex A “Implementation”.

17. To prevent situations in which a conflict of interest may arise, individuals directly involved in or leading the preparation of IPCC reports should avoid being in a position to approve, adopt, or accept on behalf of any government the text in which he/she was directly involved.

Decision IPCC-LXI-11. Matters related to other IPCC activities – Terms of Reference of the IPCC Publications Committee

Document: IPCC-LXI/Doc. 4

The Intergovernmental Panel on Climate Change at its Sixty-first Session agrees on the Terms of Reference of the IPCC Publication Committee, as contained in Annex 1 to this decision.

ANNEX 1

DRAFT TERMS OF REFERENCE OF THE IPCC PUBLICATIONS COMMITTEE

Terms of Reference

1. The IPCC Publications and Translations Committee (hereafter known as the "Committee") Terms of Reference are intended to be in line with and not conflict with the IPCC principles and procedures.

Purpose and Scope

2. The Committee is established for the duration of the respective assessment cycle, to oversee the implementation of the recommendations of the Panel and Bureau with regards to publications, translations and access to literature and advise the IPCC Secretariat on:

    a. Technical specifications and Terms of Reference for procurement of WMO translation services;
    b. Technical specifications and Terms of Reference for procurement processes for printing and publishing services for IPCC products;
    c. Management of citation data for past and future IPCC reports and their main components;
    d. Timely establishment of editorial sub-committees for translation into each official UN language;
    e. Proposals for enhancing quality and review of translations of scientific and technical IPCC products;
    f. Options for enhancing access to literature for IPCC authors.

Appointment of Members

3. The Committee shall be composed of nine members:

    - two from each Working Group and Task Force for Inventories Bureau;
    - one IPCC Vice Chair to be the Chair of the Committee.

    Additionally, the Head of the IPCC Secretariat and Co-Chairs of TG-Data, or their delegates, will serve in an advisory role to the Committee.

4. The members will be appointed by their respective Working Group and Task Force Co-Chairs taking into account overall gender and regional representation, with a view to collective UN language expertise. The Chair to the Committee will be appointed by the IPCC Chair from amongst the IPCC Vice-Chairs.

5. Working Group and TFI members will be supported by their respective TSUs, as needed.

Modus operandi

6. The Committee:

   a. Will meet as necessary at a time and location to be established by the Chair of the Committee. Such meetings may take place by electronic means unless they are organized in the margins of other IPCC meetings which will take place in person;
   b. Will reach decisions by consensus; where consensus is deemed not possible, the matter will be referred back to the Bureau;
   c. Five members of the Committee including the IPCC Vice-Chair shall constitute a quorum;
   d. Will liaise with the WMO Publication Board to ensure coordination, planning and scheduling related to establishment of a WMO Tender Evaluation Board ("TEB") and in the bidding/evaluation process for IPCC publications and any related products;
   e. Have at least two members of the Committee offer to serve on the TEB for an IPCC publication/procurement process overseen by the WMO. Such Committee members will serve on the TEB in their personal capacity and will need to be able to meet the neutrality and conflict of interest test for membership;
   f. May seek advice from qualified experts, such as librarians, publishing organizations and international scientific bodies;
   g. Will identify options for the expansion of access to literature for IPCC authors and for implementing these following guidance of the IPCC Bureau;
   h. Will undertake to prepare best practices for producing translations of IPCC products;
   i. Will agree annually on an implementation plan;
   j. Will report regularly to the Bureau.

ANNEX 2

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

SIXTY-FIRST SESSION OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

Sofia, Bulgaria, 27 July – 2 August 2024

LIST OF PARTICIPANTS

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