

REPORT OF THE 32nd SESSION OF THE IPCC
Busan, Republic of Korea, 11-14 October 2010

1. OPENING OF THE SESSION

Mr Rajendra Pachauri, Chairman of the IPCC, opened the 32nd Session of the Intergovernmental Panel on Climate Change (IPCC-32) on Monday, 11 October 2010, highlighting progress on the IPCC Fifth Assessment Report (AR5), including the selection of 831 authors and review editors. He noted that the past year had been a challenging period for the IPCC, but underscored that the independent review by the InterAcademy Council (IAC) had concluded that “the IPCC can claim many accomplishments to its credit,” and that “the assessment process is successful overall.” Noting the need to take action during this Session, Mr Pachauri emphasized a government-driven and transparent process to address the recommendations of the IAC Review of the processes and procedures of the IPCC.

H.E. Mr Lee Maanee, Minister of Environment, Republic of Korea, highlighted his country’s vision of global green growth and its commitment to reduce emissions by 30% relative to business-as-usual by 2020. He also emphasized the importance of international cooperation and the need to share experiences and expertise.

Former Prime Minister Dr Han Seung-soo, Chairman of the Global Green Growth Institute (GGGI), Republic of Korea, noted that although the recent UN Framework Convention on Climate Change (UNFCCC) talks in Tianjin, China, cloud prospects for an outcome of COP-16 in Cancun, the change of public perception on the need to tackle climate change is remarkable. He noted the GGGI’s goal of assisting developing countries to develop green growth policies themselves and called for delegates to support Korea’s current bid to host the UNFCCC Conference of the Parties (COP) in 2012.

Mr Chun Byung-Seong, Administrator of the Korea Meteorological Administration (KMA), noted that Korea is not exempt from the global trend of increased extreme events that are dominating the headlines and airwaves. He discussed the KMA’s work on detailed climate change scenarios in the Korean peninsula and at the regional scale.

Mr Hur Nam-sik, Mayor of Busan, highlighted Korea’s green growth model and noted Busan is host to a number of organizations, including the Regional Coordinating Unit of the Northwest Pacific Action Plan and the Asia-Pacific Economic Cooperation Climate Center.

Mr Peter Gilruth, on behalf of Mr Achim Steiner, Executive Director of the United Nations Environment Programme (UNEP), noted that the IAC Review was requested by Mr R.K. Pachauri and Mr Ban Ki-moon. He said UNEP and WMO supported the review process, and together with Denmark, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States of America, they provided the funding to make the IAC’s independent assessment possible. He said the IAC recommendations did not touch on the roles of UNEP and WMO as hosts of the IPCC, but that UNEP is ready to assist Member States to enable implementation of the recommendations, particularly those that relate to the management structures and governance within the Secretariat. He said if so requested by Member States, UNEP could bring these matters to the attention of the next session of the UNEP Governing Council / Global Ministerial Environmental Forum in February, 2011. He said UNEP expects to be in a position to announce the new IPCC Deputy Secretary in the next few days. He said the world is looking to this Plenary and to governments to take the IPCC forward by drawing and acting on the IAC’s recommendations, or to propose and agree on other arrangements in terms of “retooling” the IPCC.

Mr Jeremiah Lengosa, Deputy Secretary General, World Meteorological Organization (WMO), explained the history of the WMO's involvement in the core research activities that the IPCC depends on as well as the establishment of the IPCC. He said the Global Framework for Climate Services recently established by the World Climate Conference-3 in 2009 will now complement the WCRP and GCOS by ensuring delivery of climate information to the users through the development of new operational and user interface mechanisms. He highlighted that since the last IPCC Assessment Report, a relatively greater level of confidence in climate information at the global and continental scales was achieved, but there is a considerable way to go in providing reliable regional detail; secondly some aspects of climate change will be clearly inevitable, so societies have no option but to prepare appropriate adaptation strategies. He said the WMO Executive Council at its last session in June 2010 welcomed IPCC's activity on the preparation of the Fifth Assessment Report but also noted the need for a Special Report to assess the available scientific literature on sector-oriented climate services, and requested IPCC to consider the feasibility of preparing such a report. He noted that the IPCC's scientific process must continue, and said that early warnings and analysis of extreme weather events by WMO and the National Meteorological Services help meet the need for real-time assessments identified by the IAC Review. He concluded in saying that the WMO welcomes the Review by the IAC. He said the WMO's initial response to the IAC Review was that the report re-affirms the integrity, importance and validity of the IPCC's work while recognizing areas of improvement in a rapidly evolving field. He noted that the WMO has been pleased and proud to co-sponsor the IPCC with UNEP and to host the IPCC Secretariat for the past 22 years. He said the IPCC may wish to bring to the attention the outcomes of this Plenary to the Sixteenth WMO Congress to be held in Geneva (Switzerland), 16 May – 3 June 2011. He confirmed that WMO will continue its support to the IPCC in the future.

Ms Christiana Figueres, Executive Secretary of the UNFCCC, highlighted in a video address that climate change is now in the minds of people. She said this is why an accountable entity to bring climate change knowledge to the world is important. She said the IPCC brings this knowledge to the highest political levels. She noted that confusion dampened the public opinion in the last year, and affected how policymakers can respond to climate change. She welcomed the IAC Review. She said the IPCC must increase the robustness and the quality of its assessments, and that she hoped that member governments would strengthen and increase awareness on climate change. She said that once released, the Fifth Assessment Report will serve as a review process for long-term goals and she closed in saying that promises and pledges need to move towards steps – and that would no doubt happen in Cancun, Mexico at COP 16.

On the second day, the Panel started the Session with a minute of silence in memory of Mr Stephen Schneider and Mr Igor Shiklomanov, who both passed away since the last time Panel members met. The Chair suggested that the AR5 Synthesis Report (SYR) be dedicated to Stephen Schneider, who “embodied the IPCC in every sense”.

2. APPROVAL OF AGENDA AND OF THE DRAFT REPORT OF THE 31st SESSION

Documents: IPCC-XXXII/Doc.1 ; IPCC-XXXII/Doc. 2, Rev.1

The provisional agenda, IPCC-XXXII/Doc.1 (attached as **Annex 1**) was presented by Ms Renate Christ, Secretary of the IPCC, and the Panel proceeded to adopt the agenda. The list of participants is attached as **Annex 6**.

The draft report of the Thirty-first Session was approved with one modification to section 8.3 "Implications of decisions taken at IPCC-30". Mr Jean Pascal van Ypersele said that the last sentence should be deleted because he understood that there was clear agreement at the Plenary to stop the work of the Task Group which had suggested recommendations for the longer-term future of the IPCC in Antalya. The modification to section 8.3 was accepted and the final version of the report is attached as **Annex 2**.

3. IPCC PROGRAMME AND BUDGET FOR 2010-2014

Documents: IPCC-XXXII/Doc.3, IPCC-XXXII/Doc.3,Add.1 ; IPCC-XXXII/Doc.3,Add.2

Ms Renate Christ, introduced documents IPCC-XXXII/Doc.3, IPCC-XXXII/Doc.3,Add.1 and Add.2, which present the status of income and expenditure for the IPCC Trust Fund as of 31 December 2009 and the budget proposals, the proposal for the establishment of a P-5 position of Senior Scientific Officer with a physical science profile as well as the interim status of income and expenditure for the Trust Fund as of 30 September 2010. Ms Renate Christ submitted for adoption by the Panel a revised 2010 and the 2011 budget, as well as a forecast budget for 2012, and indicative budgets for the period 2013-2014, that is up to the end of the current assessment period. As financial implications may arise from the IAC Review, the Panel would have the opportunity to adjust the 2011 budget and future budgets at IPCC-33. Ms Renate Christ drew the attention of the Panel to the low level of voluntary contributions as outlined in document IPCC-XXXII/Doc.3/Add.2 while emphasizing that expenditures have increased. She made a plea to countries to reinforce their financial support to the IPCC.

Ms Renate Christ informed the Panel that the Financial Task Team (FiTT) is open-ended, but has a core membership of Spain (Ms Concepción Martínez) and Sudan (Mr Ismail Elgizouli) as Co-Chairs, and representatives from the Republic of Korea (Ms Won-Tae Kwon), Maldives (Mr Amjad Abdulla), New Zealand (Mr Todd Kriebler) and the United States of America (Mr Trigg Talley) as regular members. As Ms Concepción Martínez was unable to preside over meetings of the FiTT, as she was assigned to co-chair the Governance and Management Contact Group. Mr Todd Kriebler agreed to step in as Co-Chair of the FiTT.

Australia, supported by Germany, called for addressing the structural foundations of the budget beyond government contributions and for a sound look at priorities, in particular given financial constraints in national economies around the world. Supported by Germany, he called for attention to the budgetary implications of decisions made at this Session. Clarifying a question by Belgium, Ms Christ said the Panel had decided on the voluntary nature of contributions and that it was up to the Panel to reconsider this decision. The UK, supported by Germany and the USA, called for recognition of historical contributions, including in-kind contributions such as the funding of the Technical Support Units (TSUs).

Pledges of contributions were announced from Canada, Norway, Spain and the United Kingdom.

The FiTT met on five occasions during the Session and Mr Todd Kriebler reported to the Plenary on behalf of the Task Team. He highlighted the group's recommendations to improve completeness and transparency and noted prolonged discussions on travel-related matters. The FiTT also drew attention to the fact that the Panel will be facing budgetary pressures in 2012 as a result of AR5. Switzerland and the Co-Chair of the Task Force on National Greenhouse Gas Inventories (TFI) asked for clarification on previous year expenditures and in the statement of expenditure. Proposals by the Secretariat for a Senior Science Officer, as well as two temporary positions to manage the IPCC Scholarship Programme, were not accepted.

The Plenary adopted the revised 2010 budget and proposed 2011 budget as attached and approved the budget decisions presented by the FiTT (**Annex 5**).

4. THE IPCC 5TH ASSESSMENT REPORT (AR5)

Documents: IPCC-XXXII/Doc. 4; IPCC-XXXII/Doc. 5; IPCC-XXXII/Doc. 8; IPCC-XXXII/Doc. 9; IPCC-XXXII/Doc. 11; IPCC-XXXII/Doc. 12; IPCC-XXXII/Doc. 15; IPCC-XXXII/Doc. 20; IPCC-XXXII/INF. 2; IPCC-XXXII/INF. 3; IPCC-XXXII/INF. 7

4.1 Scope, content and process for the preparation of the AR5 Synthesis Report

The scope, content and process for the preparation of the AR5 Synthesis Report (SYR) document (IPCC-XXXII/Doc.4) was first taken up in Plenary on Monday morning where participants made general statements regarding the scope, length and timing of the SYR. The discussion centered mainly on the revision of a SYR outline developed at a dedicated SYR scoping meeting held in Liège, Belgium, in August 2010, and the timetable for preparation of the SYR. The proposed outline included five topics: (1) Observed changes and their causes; (2) Future changes (in the short and long-term); (3) Responses; (4) Transformations and changes in systems; and (5) Science supporting UNFCCC Article 2.

Discussions then continued in the contact group from Tuesday through Thursday, which was co-chaired by Ms Antonina Boncheva (Mexico) and Mr Nicolas Beriot (France), with Mr David Wratt (New Zealand) serving as rapporteur.

On the placement of the 5th topic on Article 2 of the UNFCCC, delegates discussed various options. While some countries were pleased to see this topic added as a stand-alone topic in the SYR outline, other countries argued that the topic should be embedded within the structure. Moving towards a compromise solution, the idea of a box on Article 2 of the UNFCCC that could serve as a roadmap, taking readers back through the SYR to understand the new scientific findings relevant to Article 2 of the UNFCCC, was suggested. At the same time, an additional section in the outline that would cover key issues on risks and vulnerabilities was proposed. Finally the group found a compromise that included incorporating these key issues under the existing topics, and allowing for a box on Article 2 of the UNFCCC at the end of the outline.

Other issues with regard to the scope and content that were discussed include:

- A reference to impacts on the Millennium Development Goals in the topic on responses.
- The need to capture information on regional aspects.
- Overlaps in the structure.
- The titles of sections and how to improve them for example the group agreed to refer to “Mitigation and adaptation measures” instead of “responses” in Topic 3.
- That Mitigation and Adaptation should be addressed simultaneously.
- The inclusion of spillover effects of mitigation responses in Topic 3.
- Risks and merits of different geo-engineering options to the extent there is supporting literature.
- Inclusion of alternative theories, assessed in the Working Group reports.

Delegates agreed to limit the Summary for Policymakers (SPM) to up to eight pages of text, excluding tables, maps, boxes and figures, and the longer report to up to 30 pages of text, excluding tables, maps, boxes, and figures.

On timing, several countries said that the WG III report should be approved before the SYR draft is being prepared, with the Netherlands calling for moving the SYR approval date. Delegates revised the timetable for writing the SYR and postponed the adoption of the SYR by one month and agreed that the Panel would invite the UNFCCC to consider holding COP 20 as late as possible in 2014 in order to allow sufficient time for government

consideration of the SYR in advance of UNFCCC COP 20. The selection of authors of the SYR Core Writing Team was also slightly postponed to ensure better allocation of resources over the different tasks. Furthermore the first CWT meeting was postponed until after the First Order Drafts of all three WGs are available. Given the extension of the timetable beyond the previously agreed 12-month period between the WG I approval and the SYR approval, the contact group suggested that a statement be added to the Synthesis Report Scoping Document saying that the SYR would be based exclusively on material contained in the three Working Group Reports and Special Reports produced during the 5th or previous Assessment Cycles. This would also appear in the Synthesis Report Preface.

The contact group also discussed how to leave to the authors some flexibility, while providing clear guidance on how a subject matter should be treated. It was suggested that once the core writing team goes through the scope and content of the SYR, and have made revisions using their judgment, they would submit a revised version of the SYR outline to the Plenary for information. Finally the Panel decided that the coverage of the bullets will depend on the assessment of the literature by the authors, cognizant of the page length restrictions, and that the IPCC Chair will report to the Panel on the evolution of the outline of the SYR after the zero-order draft has been produced.

The agreed SYR Scoping Document can be found in **Annex 4**.

4.2 Progress reports and schedule of AR5 related activities

Mr Ottmar Edenhofer, WG III Co-Chair, presented a proposal in the WG III progress report (document IPCCXXXII/Doc.12) to hold a cross-Working Group Expert Meeting on Geo-engineering. He said the meeting was meant to respond to the fact that, although geo-engineering as a mitigation option remains rather abstract and lacks comprehensive risk assessment, it is to be assessed by all three WGs in AR5. The meeting would discuss the scientific basis of geo-engineering, options, risks and impacts, and identify key knowledge gaps.

The Panel decided to hold an IPCC Expert Meeting on Geo-engineering as proposed in IPCCXXXII/Doc. 5. Countries discussed whether the geo-engineering meeting should be a workshop with a formal nomination process or an expert meeting without a nomination process. During the Plenary Session, countries met informally with the Working Group Co-Chairs to discuss the format of the meeting. The Panel finally requested that the Co-Chairs of the Working Groups provide National Focal Points with a list of the proposed participants in advance of the meeting to ensure full transparency and to allow for Focal Points to recommend additional participants. Following normal practice, the final decision on participation will be taken by the Co-Chairs of the Working Groups.

5. REVIEW OF THE IPCC PROCESSES AND PROCEDURES: REPORT BY THE INTERACADEMY COUNCIL

Documents: IPCC-XXXII/Doc. 7; IPCC-XXXII/Doc. 22; IPCC-XXXII/INF. 4; IPCC-XXXII/INF. 5; IPCC-XXXII/INF. 5, Add.1; IPCC-XXXII/INF. 6

At this Session, the Panel agreed to immediately implement several recommendations of the InterAcademy Council (IAC) Review of the Processes and Procedures of the IPCC. On others, the Panel has formed Task Groups to undertake further work with a view to completion at its next Session, considering the guidance from the IAC.

On the first day of the meeting delegates briefly discussed the order of business for dealing with the IAC Review's recommendations.

On the second day, Sir Peter Williams, representing the IAC, gave a brief presentation on the major findings of the IAC Review. He took questions and provided clarification on the IAC Review.

After a brief period of debate in Plenary, contact groups were formed on IPCC Management and Governance, Conflict of Interest Policy, Communications Strategy, and IPCC Procedures. The contact groups reported back to the Panel with their recommended way forward on each area in a closing Plenary meeting. The decisions taken at the closing Plenary Session can be viewed in **Annex 3**.

5.1 Governance and Management

The IAC Review's recommendations on governance and management (IAC Chapter 4, IPCC-XXXII/Doc.7) were taken up in a contact group Co-Chaired by Ms Concepción Martínez (Spain) and Mr Chung-Kyu Park (Republic of Korea). Mr Howard Larsen (New Zealand) served as Rapporteur.

The contact group met four times from Tuesday through Thursday. In addition a smaller drafting group was formed. The following IAC proposals and issues were discussed: the IAC's proposed Executive Committee, the proposed Executive Director, terms of office of the Chair and the Working Group Co-Chairs, and the redefinition of the roles and responsibilities of the Secretariat.

The following text summarizes the discussions in the contact group and the Plenary, as well as the relevant decisions made by the Panel at its 32nd Session. The decisions taken can be viewed in Annex 3.

Concerning the IAC's recommendations for an Executive Committee, many delegates supported the establishment of an Executive Committee, which would address the need for a body that could respond quickly in moments of crisis, as well as address operational matters. However, some cautioned that rushing into establishing an Executive Committee at this Session would be premature and many delegates called for clearly identifying needs before taking a decision to establish a new body. Some countries also cautioned against potential increased bureaucracy. It was also said that the Executive Committee would strengthen the functions of the existing management structure, since most of these functions already exist within it. Some suggested addressing the Terms of Reference (ToR) for the Bureau as a starting point. Therefore, it was generally agreed that the ToR for the Executive Committee and its composition should be carefully considered, alongside with those of the IPCC Bureau, before taking a decision to establish the Executive Committee. Some delegates also suggested that the IPCC E-team serve as the basis for establishing the Executive Committee, and act as an interim Executive Committee.

On composition of the Executive Committee, divergent views were expressed regarding the inclusion of external members. The contact group also discussed whether the Executive Committee could include the heads of TSUs, IPCC Vice-Chairs, TFI Co-Chairs, and representatives of UNEP, UNFCCC, and WMO, and their potential roles.

Regarding the functions of an Executive Committee, in the contact group various delegates proposed that the committee could deal with *inter alia*: oversight of IPCC activities and preparation of the assessments; review of the effectiveness of procedures; human resource management; communications; the IPCC programme and budget; internal problems and conflicts, and facilitating cooperation between the Co-Chairs and with the IPCC Chair.

The decision on the establishment of an Executive Committee as approved in the closing Plenary is as follows:

- I. Agreed to work toward establishing a formal body to provide governance functions that are necessary between sessions of the panel, strengthen coordination activities, and have oversight of the organisation's administration and communications; according to the mandate to be agreed in the 33rd Session.*
- II. The Task Group should consider options for the implementation of the decision concerning the recommendation mentioning the establishment of an Executive Committee. These options include those for the mandate, size, composition, functions and reporting of the body referred to in this recommendation.*
- III. The Task Group shall make recommendations on the options mentioned in decision II to the 33rd Session of the Panel, with a view to taking a decision.*

With relation to The IPCC Secretariat, delegates discussed the IAC Review recommendation to “elect an Executive Director to lead the Secretariat and handle day-to-day operations of the organization. The term of this senior scientist should be limited to the time frame of one assessment.”

Different views were expressed in the contact group on the need for such a position and the possible functions and profile of an Executive Director and the relationship with UNEP, WMO and the broader UN system. Concern was expressed about creating confusion by using the term “Executive Director,” which is normally used in larger international organizations, such as UNEP. Several countries proposed changing the Secretary title to Executive Secretary to raise the image and prestige of the Panel and the Secretariat.

In the context of the IAC recommendation to “redefine the responsibilities of key Secretariat positions both to improve efficiency and to allow for any future senior appointments”, delegates noted the importance of understanding what the IPCC as a whole needs in terms of management and administration regarding a possible term limit, it was recalled that the Secretariat plays a critical role in maintaining institutional memory. It was also proposed that the Secretariat prepare and work on the basis of a yearly work plan approved by the proposed Executive Committee and presented to the Panel. Some delegations said the exact roles and responsibilities of those currently in the Secretariat should be evaluated before redefining functions or hiring new staff. It was noted that there was a need to strengthen the linkage between the Secretariat and the TSUs. Reinforcing cooperation between the head of the Secretariat and the Chair, and the other Bureau members was also mentioned.

In the closing Plenary, it was raised that IPCC member countries would like to see an overall evaluation of the Secretariat in the framework of the review of the IPCC processes and procedures in relation to all other elements of the IPCC organization.

The Panel agreed on the following decision text addressing the IAC Review recommendations with regard to the Secretariat:

- I. Requested the Task Group to examine the role of the Secretariat in its relation with WMO, UNEP, the IPCC-Chair, the Vice-Chairs, Co-Chairs of the WGs and the TFI, and Technical Support Units. The Task Group is requested to review the responsibilities of key Secretariat positions and consider the issues associated with it and to make recommendations to the Panel at its 33rd Session. It is also requested to consider issues associated with the potential creation of a new post of an “Executive Director” to lead the Secretariat.*

On the Terms of Office for the Chair and the Working Group Co-Chairs:

The IAC Report had recommended that the term of the IPCC Chair and of the Working Group Co-Chairs should be limited to the timeframe of one assessment.

In the contact group, delegates underscored the importance of continuity between assessments and carryover of the Chair's knowledge and experience when he or she steps down, regardless of whether one or two terms are served. Other countries noted also the need for ensuring growth, dynamism and the ability to respond to change. One delegate said that although in other organizations it is common to serve two terms, 12 or more years is too long for the context in which the IPCC operates. Another country clearly stated that current terms are appropriate, and preferred not to limit the term of office to one term. It was also noted that the term limit should not apply retroactively, given that the IPCC is now in the middle of an assessment cycle.

Furthermore, in the discussion some governments suggested that the terms of office should be slightly overlapping to allow the Chair and Working Group Co-Chairs to be involved in the work of dissemination and providing feedback on the process, or to have an IPCC Chair and Chair-elect working together. Another delegation noted the possibility of extending some functions into the next assessment period, and two countries said more discussion on this issue could be useful.

In the contact group on Thursday, delegates forwarded decision text to the Plenary and the decision was adopted at the closing Plenary Session. The Chair recused himself during the discussion on this issue and the debate on this decision during Plenary was chaired by Vice-Chair Mr Hoesung Lee (Republic of Korea).

The Panel decided to take the following decisions with regard to this issue:

- I. Requested the Task Group to consider issues related to the IAC recommendations on the term of the IPCC Chair and working group Co-Chairs, including continuity issues.*
- II. Noted that any amendments to the existing IPCC Rules of Procedure for Elections could be applied only to subsequent elections.*
- III. Requested the Task Group to report their recommendations to the 33rd Session for decision.*

On the IPCC's Conflict of Interest Policy, the IAC Report recommended that the IPCC "develop and adopt a rigorous conflict of interest policy that applies to all individuals directly involved in the preparation of IPCC reports, including senior IPCC leadership (IPCC Chair and Vice Chairs), authors with responsibilities for report content (i.e., WG Co-Chairs, coordinating lead authors (CLAs), and lead authors (LAs), Review Editors (REs), and technical staff directly involved in report preparation (e.g., staff of the TSUs and the IPCC Secretariat)."

This issue was first addressed in the contact group on governance and management. Recognizing that such a policy is already applied to the employees of the IPCC Secretariat, but not to other IPCC officials, authors of reports, or Technical Support Unit staff, delegates agreed that a conflict of interest policy should be developed by the IPCC, with some proposing the formation of a Task Group to address this issue with a view to adopting such a policy at the 33rd Session.

Delegates noted that addressing this issue is critical to improving the image and integrity of the IPCC, recommended establishing a process to define conflict of interest, suggested looking at models in other international organizations, and discussed the need to differentiate between the various levels of IPCC members. One delegate stressed that the IPCC is composed of volunteers and noted the importance of not excluding people who could make a valuable contribution while addressing the issue of bias and creating transparency. Overall, there was broad agreement in the contact group on the importance of adopting a conflict of interest policy and proposed text on how to develop this policy was forwarded to the Plenary where it was adopted with limited discussion.

The Panel at its 32nd Session:

- I. Agreed with this IAC recommendation.*
- II. Decided to implement a rigorous conflict of interest policy, taking into consideration the specific circumstances related to participation in IPCC activities.*
- III. Established a Task Group on Conflict of Interest Policy to propose options for such a policy, consulting with relevant organizations, for its decision at the 33rd Session.*

The issue of the qualifications of IPCC Bureau members was first addressed by the contact group on governance and management and further elaborated on in a drafting group. In the contact group, delegates took up discussion of the IAC recommendation to “develop and adopt formal qualifications and formally articulate the roles and responsibilities for all Bureau members, including the IPCC Chair, to ensure that they have both the highest scholarly qualifications and proven leadership skills.”

In this contact group, some countries noted that the current IPCC procedure for the selection of Bureau members is clear and opposed the second part of the recommendation on ensuring the highest scholarly qualifications and proven leadership skills. However, a number of other countries agreed with the recommendation and called on the IPCC to adopt it in its entirety, as the current formulation in Rule 19 of Appendix C to the Principles Governing IPCC Work only says Bureau members should have “relevant scientific expertise”. Discussion on this issue continued in a drafting group. The drafting group was unable to resolve the differences on qualifications and leadership skills and felt that the recommendation warranted further discussion. Decision text on this issue was forwarded by the contact group to the Plenary, where it was adopted without debate.

The Panel at its 32nd Session:

- I. Decided to refer this issue to the relevant Task Groups with a particular focus on roles and responsibilities for all Bureau members, including the IPCC Chair.*
- II. The Task Group on Governance and Management should report back to the Panel at the 33rd Session.*

It was agreed to establish two Task Groups: one on Governance and Management and one on Conflict of Interest Policy to prepare recommendations for consideration at the 33rd Session of the IPCC. Since time at the final Plenary meeting did not permit consideration of the terms of reference for the Task Groups, Chairman Pachauri suggested that the Terms of Reference would be elaborated on in the report of the Session and that it would follow closely the Terms of Reference of the Task Group on Procedures. The decisions taken by the Panel including Terms of Reference for the Task Groups can be found in **Annex 3**.

5.2 IPCC Procedures

The IAC Review recommendations on the IPCC's assessment processes (IAC Chapter 2, document IPCC-XXXII/Doc.7) and IPCC's evaluation of evidence and treatment of uncertainty (IAC Chapter 3, document IPCC-XXXII/Doc.7) were taken up in a contact group Co-Chaired by Eduardo Calvo Buendía (Peru) and Øyvind Christopherson (Norway). Susanna Kahm Ribiero (Brazil) acted as Rapporteur.

The contact group met five times, to consider the IPCC's procedures for evaluating evidence and treating uncertainty; handling a full range of views; author selection; sources of data and literature; the review process; procedures regarding the preparation and approval of the SPM; and handling potential errors identified after the approval of IPCC Reports. A drafting group was also established to prepare text for consideration by the Panel.

The following text summarizes the discussions in this contact group and the Plenary, as well as the relevant decisions made by the Panel at its 32nd Session:

On the use of grey literature (or non-journal based sources of data and literature): On the General Guidance on the Use of Literature in IPCC Reports (see document IPCC-XXXII/INF.4), Mr Thomas Stocker, WG I Co-Chair, reported on the current use of this guidance note by authors of the two IPCC Special Reports that are currently underway. He noted that it provides authors with a series of questions that would help them determine if a source can be used in an IPCC report and identifies what documentation must be provided to the reviewers of the report. He said these questions should sensitize the authors on the credibility of the source, including authorship, and how the source arrives at its conclusions. To further improve this guidance and fulfill all of the IAC Review's recommendations, he noted that the WG Co-Chairs would consult with the Heads of the TSUs to prepare text on unacceptable sources of information, which would point to blogs, social networking sites, news reports on the internet, visual media and personal communication. He highlighted possible options to flag non-peer-reviewed or unpublished literature through either electronic flags in the PDF version or adding lines of reference in the text.

Issues raised in the discussion were: that grey literature must be assessed as critically as peer-reviewed journals, that authors must make a judgment on the quality of a source, and that the scope of IPCC reports has been broadened into fields that are likely to draw heavily on grey literature, such as adaptation. Countries also noted that grey literature is more easily accessible, as peer-reviewed literature is often quite expensive, that local sources of information should be taken into account, and that focal points should help identify this literature.

Delegates underscored the importance of explicit guidance on the inclusion of grey literature and for it to be implemented effectively. Several countries also noted that as the IPCC already has procedures on these issues, it should be clear to the outside world that the IPCC is now strengthens and enforces the existing procedures on the use of grey literature. One delegate also mentioned that the existing procedures do not reflect that in many cases grey literature has been extensively reviewed, noting government reports and works from the engineering field.

The Panel at its 32nd Session:

Noted that in its Report the IAC has recommended:

“The IPCC should strengthen and enforce its procedure for the use of unpublished and non-peer-reviewed literature, including providing more specific guidance on how to evaluate such information, adding guidelines on what types of literature are

unacceptable, and ensuring that unpublished and non-peer-reviewed literature is appropriately flagged in the report.”

The Panel agreed with this recommendation. The Panel decided to strengthen the application of its procedures on the use of unpublished and non-peer reviewed literature. It decided to implement this recommendation and further key elements through its procedures and guidance notes. The Panel noted the General Guidance on the Use of Literature in IPCC Reports (contained in IPCC-XXXII/INF.4) as revised in General Guidance on the Use of Literature in IPCC Reports which addresses the related aspects in the IAC recommendations and decided to endorse them as a Guidance Note. The Panel urges the Co-Chairs of Working Group I, II, III and TFI to take any necessary steps to ensure that this guidance note is applied in the development of IPCC reports.

On the handling of potential errors identified after approval of IPCC reports:

Delegates noted that this issue was addressed in the IAC Review, which included analysis of the Himalayan glacier error, but did not result in an explicit IAC Review recommendation. There was broad consensus that a procedure was essential to address errors identified after approval. While emphasizing the need to minimize errors and noting that current procedures are designed to do just that, many agreed that errors are bound to occur in a process as large and as complex as the IPCC reports. Delegates noted the proposed IPCC protocol for addressing errors in previous assessment reports (IPCC-XXXII/INF.8) and noted the need to avoid bias and to address errors as rapidly as possible after they have been identified.

The Panel at its 32nd Session:

- I. Agreed on the need to establish a process for evaluating, addressing and correcting, if necessary, potential errors and further developing errata as appropriate.*
- II. The Panel noted the “Proposed IPCC Protocol for Addressing Errors in Previous Assessment Reports” which describes a clear decision tree, based on the nature of the material and the steps necessary to avoid bias, so that potential errors could be addressed as rapidly as practical.*
- III. The Panel urges the IPCC Chair, the IPCC Vice-Chairs, the Co-Chairs of Working Group I, II, III and TFI to take any necessary steps to ensure that this protocol is finalized and then used for evaluation of potential errors and developing errata as appropriate. Further analysis is to be considered by the Task Group on Procedures with the view to submit a proposal for a decision at the next Session (IPCC-XXXIII).*

On report review:

The Panel at its 32nd Session:

Noted that in its Report the IAC has recommended:

“The IPCC should adopt a more targeted and effective process for responding to reviewer comments. In such a process, Review Editors would prepare a written summary of the most significant issues raised by reviewers shortly after review comments have been received. Authors would be required to provide detailed written responses to the most significant review issues identified by the Review Editors, abbreviated responses to all non-editorial comments, and no written responses to editorial comments.”

In its decision text, *the Panel agreed with this recommendation in principle.*

It agreed that:

Implementation options to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII).

The Panel noted that in its Report the IAC has recommended:

“The IPCC should encourage Review Editors to fully exercise their authority to ensure that reviewers’ comments are adequately considered by the authors and that genuine controversies are adequately reflected in the report.”

The Panel agreed with this recommendation.

The Panel decided to strengthen its application of procedures, and amend them where necessary, to enable Review Editors to fully exercise their role. The Panel noted the new Guidance Note on the Role of Review Editors which addresses the related aspects in the IAC recommendations. The Panel urges the Co-Chairs of Working Group I, II, III and TFI to take steps to ensure that this guidance note is implemented in the development of its work.

On the IPCC’s evaluation of evidence and treatment of uncertainty:

Delegates addressed the IAC Review recommendations on the handling of uncertainty in IPCC reports. For the full set of recommendations see: IAC Review Chapter 3, in document IPCC-XXXII/Doc.7.

Delegates first addressed uncertainty in a contact group on Tuesday. WG II Co-Chair Christopher Field provided an overview of the draft guidance note for AR5 Lead Authors on consistent treatment of uncertainties. This guidance note is being developed by the three Working Groups (document IPCC-XXXII/INF.9), and, as such, was submitted by the Co-Chairs of the Working Groups. He noted the uncertainty guidance was under development before the IAC Review and that most of the IAC Review recommendations had already been addressed. He noted the new guidance builds on the guidance that was available to authors for the AR4 but that it is clearer, facilitates consistent application, and harmonizes implementation across Working Groups. It also addresses new dimensions and challenges. Authors will be asked to use the calibrated language to describe their certainty in “key” findings, and traceable accounts should be provided to describe evaluations of evidence and agreement.

In the discussion, governments recognized that the guidance note addresses the IAC Review recommendations, but asked for further clarification on whether the WG Co-Chairs accepted the IAC Review recommendations, and how the Co-Chairs would ensure that authors have full access to these guidelines. WG I Co-Chair Thomas Stocker reiterated that the guidance note covers most of the IAC Review recommendations, noting that five of the six recommendations have already been addressed. On the qualitative scale recommendation, he said the guidance note goes further than the IAC Review recommendation. On traceable accounting, he said the Lead Authors should be able to clearly describe how they reached conclusions. On quantitative probabilities, he said the likelihood scale worked well. Regarding the confidence scale, he noted ill-defined outcomes are flagged in the IAC Review recommendation and are addressed in the guidance note. On the likelihood scale, he said using words, in addition to probabilities, would ensure that results are more easily understood. WG III Co-Chair Ottmar Edenhofer emphasized that “confidence” is a way to synthesize evidence and agreement and stated that the guidance

note provides a clear understanding and procedure on how to aggregate evidence and agreement into confidence scales.

Governments raised a number of questions: how to deal with the issue of expert judgment; how to link this guidance note to the tasks of Review Editors; and who should ensure that the calibrated uncertainty language is used properly and in a consistent manner throughout the report. Some delegates noted that further work would be required on the traceable account of uncertainty. They asked that the guidance notes be finalized and that clear reference to the Working Group's treatment of the IAC Review recommendations should be made. One delegate noted that the uncertainty guidelines are useful but could still lead to a variety of interpretations, and called for seeking the views of Coordinating Lead Authors (CLAs), Lead Authors (LAs) and Review Editors (REs). This issue was addressed further in a drafting group and text was forwarded by the contact group to the Plenary for adoption.

The Panel at its 32nd Session:

Noted that in its Report the IAC has made several recommendations:

“All Working Groups should use the qualitative level-of-understanding scale in their Summary for Policymakers and Technical Summary, as suggested in IPCC’s uncertainty guidance for the Fourth Assessment Report. This scale may be supplemented by a quantitative probability scale, if appropriate.”

“Chapter Lead Authors should provide a traceable account of how they arrived at their ratings for level of scientific understanding and likelihood that an outcome will occur.”

“Quantitative probabilities (as in the likelihood scale) should be used to describe the probability of well-defined outcomes only when there is sufficient evidence. Authors should indicate the basis for assigning a probability to an outcome or event (e.g., based on measurement, expert judgment, and/or model runs).”

“The confidence scale should not be used to assign subjective probabilities to ill-defined outcomes.”

“The likelihood scale should be stated in terms of probabilities (numbers) in addition to words to improve understanding of uncertainty.”

“Where practical, formal expert elicitation procedures should be used to obtain subjective probabilities for key results.”

The Panel agreed with these recommendations.

The Panel decided to improve the IPCC guidance on evaluation of evidence and treatment of uncertainty. It is implementing the six recommendations in the IAC Review as part of a broader package of updates to procedures and guidance notes. The Panel noted with appreciation the Draft Guidance Note for Lead Authors of the Fifth Assessment Report on Consistent Treatment of Uncertainties and requested the Co-Chairs of Workings Group I, II and III to present the final document to the Panel at its next Session. The final document should provide more detail on traceable accounts, the evolution of the guidance since AR4 and explain how each of the six recommendations in the IAC review is addressed. The Panel urges the Co-Chairs to take any necessary steps to ensure that the guidance note is implemented in the development of its work.

On handling the full range of views:

This issue was *also* dealt with in the context of the guidance on handling uncertainty (see above).

The Panel at its 32nd Session:

Noted that in its Report the IAC has recommended:

“Lead Authors should explicitly document that a range of scientific viewpoints has been considered, and Coordinating Lead Authors and Review Editors should satisfy themselves that due consideration was given to properly documented alternative views.”

In its decision text, the Panel agreed with this recommendation. The Panel emphasized that handling the full range of scientific views is a core principle of the IPCC. Its procedures clearly require the representation of differing scientific viewpoints and encourages rigorous adherence by the CLAs, LAs, and REs. The Panel urged the IPCC Chair, the Co-Chairs of the Working Groups and TFI to take any necessary steps to ensure that this principle continues to be applied in the development of IPCC reports. Further implementation is to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII).

On Scoping:

The Panel at its 32nd Session:

Noted that in its Report the IAC has recommended:

“The IPCC should make the process and criteria for selecting participants for scoping meetings more transparent.”

The Panel agreed with this recommendation. Implementation plan to be determined by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII).

It was understood that as the scoping processes are now completed for the AR5, the ongoing Special Reports, and for the Synthesis Report of the AR5, these recommendations would be implemented for future scoping processes.

On Author Selection:

The Panel at its 32nd Session:

Noted that in its Report the IAC has recommended:

“The IPCC should establish a formal set of criteria and processes for selecting Coordinating Lead Authors and Lead Authors.”

The Panel agreed with this recommendation. Formal criteria are included in the existing procedures. Enhanced implementation and transparency as well as potential additional criteria and procedures to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII) for future work.

The Panel noted that in its report the IAC has recommended: “The IPCC should make every effort to engage local experts on the author teams of the regional chapters of the Working Group II report, but should also engage experts from countries outside of the region when they can provide an essential contribution to the assessment.”

The Panel agreed with this recommendation. This is already implemented for AR5. Further implementation to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII) for future work.

On the Summary for Policymakers:

The Panel at its 32nd Session:

Noted that in its Report the IAC has recommended: “The IPCC should revise its process for the approval of the Summary for Policymakers so that governments provide written comments prior to the Plenary.”

The Panel acknowledges the importance of both written comments and inputs from the floor, both of which are current practice. No revision to the process is required.

The IPCC established a Task Group on Procedures to develop proposals on further implementation of the recommendations by 31 January 2011. Governments will be invited to comment on the proposals by 28 February 2011 to allow preparation of revised drafts for consideration by the Panel at its 33rd Session.

The full set of final Panel decisions on IPCC procedures and processes, the full Terms of Reference for the Task Group on Procedures, as well as related Appendices are included in **Annex 3**.

5.3 IPCC Communications Strategy

Delegates discussed communications in the context of the IAC Review recommendation to “complete and implement a communications strategy that emphasizes transparency, rapid and thoughtful responses and relevance to stakeholders, and includes guidelines about who can speak on behalf of the IPCC and how to represent the organization appropriately.”

After a presentation by Ms Renate Christ, IPCC Secretary, on the progress report and draft communications strategy (see section 9), and a first Plenary discussion on this topic, it was agreed that a Task Group on Communications be established to consider how to include the communications strategy in the broader perspective of the IAC Review recommendations.

In the discussions, Governments highlighted the need for the IPCC communications strategy to focus on the work of the authors, experts and the institution. Words of caution were expressed about focusing on derivative products and outreach activities related to a given IPCC report before the completion, approval and publication of such a report. The Chairman highlighted the need for proactive plans based on material that is already approved (for example the reports of the Fourth Assessment Report and upcoming Special Reports) and that the IPCC needed some additional capacity in order to react to urgent demands. Furthermore, the names of the main consulting firms (Resource Media, European Climate Foundation (ECF), New Century Media, Bell Pottinger, and Sitrick and Company) that had helped the IPCC during peak periods in the last year were provided by the Chairman.

Further discussions were taken up in a contact group, Co-Chaired by Ms Nirivololona Raholijao (Madagascar) and Mr Darren Goetze (Canada). The contact group addressed the short-term task of developing a statement of the Panel to communicate to the world what happened at this session, noting the longer-term task of developing a communications strategy for the IPCC may not be completed at this session.

Delegates also discussed who should speak on behalf of the IPCC (who should be the designated IPCC spokespeople), with the suggestion that this could be the IPCC Chair, the IPCC Vice-Chairs, the WG Co-Chairs and the TFI Co-Chairs.

Participants also raised issues related to specific guidelines developed for spokespeople. They noted that IPCC officials should not advocate particular political positions and there should be clarity on what they can discuss. Participants also stressed the need for a process to manage information requests, and the identification of spokespeople.

The group proposed that a Task Group to guide the development of the long-term communications strategy should be established.

Co-Chair Goetze reported outcomes of the contact group on Communications to Plenary, which included a draft preamble, draft decision and ToR for the Task Group established to guide the development of the communications strategy. WG I Co-Chair Thomas Stocker suggested adding to the ToR that the Task Group will seek the advice of the IPCC Chair, the IPCC Vice-Chairs, WG and TFI Co-Chairs, and the Secretariat, in order to be consistent with the ToRs of the other three Task Groups. It was decided that the work of the Task Group will be supported by the Communications team within the Secretariat. Regarding the draft preamble, it was requested to add that the assessment process is robust, and reflecting that the Panel's work rests on the contribution of thousands of scientists who contribute to it (France asked that the ToR mention that communication is required in many languages).

The final approved decision text on this topic is shown below.

The Panel at its 32nd Session:

Noted that in its report the IAC has recommended:

“The IPCC should complete and implement a communications strategy that emphasizes transparency, rapid and thoughtful responses, and relevance to stakeholders, and which includes guidelines about who can speak on behalf of IPCC and how to represent the organization appropriately.”

The Panel accepts the recommendation to develop a communication strategy. Taking into account the core products of the organization, the Strategy will clarify the scope and objectives of IPCC communication, with clear guidelines on authority, representation and identification of spokespeople.

The Panel decided to establish a Task Group to guide the development of the Communications Strategy. The first draft should be presented to the IPCC Bureau at its next Session with a view to adopting the Communication Strategy at the 33rd Session of the Panel.

The full set of final Panel decisions on the IPCC Communications Strategy and the full Terms of Reference for the Task Group on a Communications Strategy are included in **Annex 3**.

5.4 The composition of the four Task Groups

In the final Plenary session, the Panel agreed on the establishment of the following four Task Groups to further develop and implement the IAC Review's recommendations: 1) Procedures, 2) Governance and Management, 3) Conflict of Interest Policy and 4) Communications Strategy (see also item 9). These Task Groups will prepare draft decisions with regard to the IAC Review recommendations with a view to completion of their tasks at the 33rd Panel Session.

The Chairman stressed the importance of geographical balance and noted that while being open ended for operational purposes these groups should not be too large. He asked governments to raise their flags to indicate in which group(s) they wanted to participate. Given the enthusiastic response for all of the groups, the Chairman asked for the approval from the IPCC Trust Fund of 25 journeys to allow for travel of participants from developing countries and countries with economies in transition for a limited number of meetings of the four groups. Please see **Annex 3** for the Task Groups' composition (as of 17 December 2010).

The Government representative of Switzerland noted that, since the Panel now finished addressing the IAC Review and moved forward to implement the recommendations, it would be appreciated if the Chairman could send a letter to the United Nations Secretary-General, Mr Ban Ki-moon, on behalf of the Panel, explaining what steps have been taken by the IPCC thus far to improve its processes and procedures.

6. ADMISSION OF OBSERVER ORGANIZATIONS

Document: IPCC-XXXII/Doc. 6

Ms Renate Christ introduced document IPCC-XXXII/Doc. 6 and noted that eight applications of organizations for observer status with the IPCC had been reviewed by the Bureau at its 41st (Geneva, May 2010) and 42nd Session (Busan, October 2010) which met the requirements of the IPCC Policy and Process for Admitting Observer Organizations, namely: Humane Society International (HSI), New World Hope Organization, Transparency International (TI), the Preparatory Commission for the International Renewable Energy Agency (IRENA), the International Institute for Environment and Development (IIED), the Ecology Center, Gender CC – Women for Climate Justice, and the College of the Atlantic. Without objection the Panel formally accepted these organizations as observers of the IPCC.

The application from the Industrial Technology Research Institute (ITRI), which was submitted to the 30th Session of the Panel, is still pending due to reservations expressed by the Focal Point from China.

An application for observer status was also received from the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations, by letter of 23 July 2010. It was proposed to consider WIPO as a participating organization of the IPCC in compliance with rule I.4 of the IPCC policy for observer organizations.

7. RULES OF PROCEDURES FOR THE ELECTION OF THE IPCC BUREAU AND ANY TASK FORCE BUREAU

Document: IPCC-XXXII/Doc. 18

The Chairman referred to document IPCC-XXXII/Doc. 18 and proposed to discuss the issue of a possible revision of the Rules of Procedures for the Election of the IPCC Bureau and Any Task Force Bureau at the 33rd Panel Session, since elements of these rules may be

affected by actions to be undertaken in relation to the implementation of the IAC Review recommendations. The Panel agreed with that proposal.

8. REPLACEMENT OF MEMBERS OF THE IPCC BUREAU

Documents: IPCC-XXXII/Doc. 19; IPCC-XXXII/Doc. 19, Add. 1

The Chairman introduced documents IPCC-XXXII/Doc. 19 and Add.1 and informed the Panel that following the resignation of Mr Ogunlade Davidson (Sierra Leone) as IPCC Vice-Chair, the Government of Sierra Leone had nominated Mr. Ismail Elgizouli from Sudan to replace him. By letter dated 2 February 2010 the Secretary had sought the opinion and consent of the IPCC Members to accept the nomination of Mr Elgizouli as Acting Vice-Chair, in addition to his duties as Vice-Chair of Working Group III. By letter dated 12 April 2010 the Secretary of the IPCC informed the Members that no objections were received and that Mr Elgizouli would be Acting Vice-Chair until elections were held at the 32nd Plenary Session. In compliance with Rule 12 of the Rules of Procedures for the Election of the IPCC Bureau and Any Task Force Bureau (hereafter: the Election Rules) Mr Elgizouli had to be confirmed in his position and needed to be elected by simple majority by the Plenary for the remainder of the term of the Bureau. Since there were no other candidates for the position, Mr Elgizouli was elected without voting in accordance with Rule 16 of the Election Rules. The Panel joined the Chairman in congratulating Mr Elgizouli for his election as IPCC Vice-Chair.

By letter dated 5 June 2010 the Secretary had informed the IPCC Members that if Mr Elgizouli would be elected as Vice-Chair of the IPCC, his position of Vice-Chair of Working Group III needed to be filled. In line with Rule 7 of the Election Rules pertaining to the need for a balanced geographic representation in the composition of the Bureau and Annex B to the Election Rules, indicating that the Bureau will include 5 representatives of Africa (Region I), the IPCC Members were invited to submit nominations. In accordance with Rule 24 a nominee may be elected without voting when there is consensus support from a region for the nominees proposed by that region. Following a meeting of the African Region, Mr Francis Yamba from Zambia was nominated for the Bureau position. He was elected without voting by the Panel as Vice-Chair of Working Group III. The Panel joined the Chairman in congratulating Mr Yamba for his Bureau election.

9. COMMUNICATIONS STRATEGY

Document: IPCC-XXXII/Doc. 21

Ms Renate Christ, IPCC Secretary, introduced the progress report and draft communications strategy (document IPCC-XXXII/Doc. 21), and noted that in 2005 the IPCC Secretariat commissioned a consulting firm – Communications & Network Consulting (CNC) - to collect Panel members' views and produce a communications strategy (document IPCC-XXIV/INF. 3) which led to the recruitment of the IPCC's first communications officer in 2006. Ms Christ highlighted the importance of IPCC communications and outreach activities, and she introduced the current temporary communications officer and three external consultants that were present at the meeting.

She explained that regular communications activities have been reported to the Panel in the form of outreach progress reports in previous years and that the Panel's input to these reports at the IPCC's Plenary sessions has been the basis for the IPCC's planned communications and outreach activities since. She highlighted ongoing activities, including participation in the UN communications group on climate change, arranging for speakers at events and conferences, and redesign of the IPCC website, and noted additional communication needs in light of recent events, in particular needs related to peak periods of

attention to allow the IPCC to react quickly to emerging issues and events. She said there was a need for more proactive media work. She also said the IPCC should continue participating in seminars on specific subject areas such as the Special Reports, and side events at meetings hosted by UN agencies or other organizations. She noted the need to consider the use of frequently asked questions and interactive graphics, as well as a more active outreach role in the regions, and on-going efforts to support media training for IPCC experts and authors.

Further consultations on communication matters are described under 5.3.

10. MATTERS RELATED TO UNFCCC

Document: IPCC-XXXII/INF.1

Delegates took note of the information in document IPCC-XXXII/INF.1 provided by the UNFCCC Secretariat on items under consideration by the subsidiary bodies of the UNFCCC.

11. OTHER PROGRESS REPORTS

Documents: IPCC-XXXII/Doc.10; IPCC-XXXII/Doc.13; IPCC-XXXII/Doc.14; IPCC-XXXII/Doc.16; IPCC-XXXII/Doc.17; IPCC-XXXII/Doc. 23

11.1 Special Report on Renewable Energy Sources and Climate Change Mitigation (SRREN)

Mr Ottmar Edenhofer, Co-Chair of Working Group III, introduced document IPCC-XXXII/Doc.23 and informed the Panel that in order to enhance the cross-chapter consistency and quality of the SRREN, the Working Group III Co-Chairs and Vice-Chairs, as well as the Coordinating Lead Authors (CLA's) and Lead Authors (LA's), present at the 4th LA meeting which took place in Mexico City from 21-24 September 2010, had agreed to hold an extra drafting meeting. This would result in the postponement of the approval/acceptance of the report by approximately three months to late April/early May 2011.

He announced that Working Group III will do an "additional voluntary Government review" of chapter 9 for approximately 4 weeks and a "targeted expert review". In order to be able to handle the expert review comments within the tight timeline Working Group III will not send the revised Chapter 9 to all experts who had previously commented on Chapter 9 but only to a few experts.

11.2 Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)

Mr Christopher Field, Co-Chair of Working Group II, introduced document IPCC-XXXII/Doc.10 and noted that the activities for the report are well under way and that the Third Lead Authors meeting would be held at WMO Headquarters in Geneva, Switzerland, from 25-28 October 2010. The agenda accommodates the first session of the SREX Summary for Policymakers' (SPM) core writing team. Furthermore two additional events will take place: (i) SREX Glossary Editorial Team Meeting and (ii) SREX Cross-Chapter Meeting. It is envisaged to hold the SREX approval/acceptance session from 14-17 November 2011.

11.3 Task Force on National Greenhouse Gas Inventories (TFI)

Ms Thelma Krug, Co-Chair of the TFI Bureau, gave an update on the activities of TFI. She mentioned that an Expert Meeting on Software for the IPCC 2006 Guidelines was held from 18-20 November 2009 in Geneva, Switzerland. Furthermore there had been an Expert Meeting on National Forest GHG Inventories from 23–25 February 2010 in Yokohama, Japan, an IPCC Expert Meeting on Uncertainty and Validation of Emission Inventories from 23–25 March 2010 in Utrecht, the Netherlands, and an IPCC Expert Meeting on Use of Models and Measurements in GHG Inventories from 9–11 August 2010 in Sydney, Australia. She informed the Panel that at the 32nd Session of SBSTA in June 2010 in Bonn, Germany, two decisions were taken that directly affect the TFI. Firstly, FCCC/SBSTA/2010/L.12 “Revision of the UNFCCC reporting guidelines on annual inventories to parties included in Annex I to the Convention” and secondly FCCC/SBSTA/2010/L.2 “Reducing emissions from deforestation in developing countries: approaches to stimulate action” which asks the UNFCCC Secretariat to work with the IPCC on promoting the use of the IPCC Emission Factor Database (EFDB), and report to the SBSTA at its 34th session. The TFI Co-Chairs and the TSU intend to work with the UNFCCC Secretariat in promoting the EFDB.

11.4 Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA)

The Panel took note of document IPCC-XXXII/Doc. 14 as submitted by Mr Richard Moss and Mr Jose Marengo-Orsini, Co-Chairs of the TGICA. This report highlights conclusions of the task group related to the operation of the Data Distribution Center (DDC), review and preparation of guidelines, and initiatives to promote capacity building.

11.5 Development of new scenarios

The Panel took note of the Progress Report on Scenario development and coordination with the scientific community (document IPCC-XXXII/Doc.16), submitted by Working Group Co-Chairs Christopher Field, Ottmar Edenhofer, and Qin Dahe. The Draft Memorandum of Understanding between the Integrated Assessment Modeling Consortium (IAMC) and IPCC Working Groups II and III (document IPCC-XXXII/INF. 10) was also presented. Mr Christopher Field, Working Group II Co-Chair, confirmed that the catalytic group had agreed to disband. The link between IPCC and the scientific community on the scenario development process continues through the Co-Chairs of the Working Groups.

11.6 IPCC Scholarship Programme

Ms Renate Christ, Secretary of the IPCC, presented the progress report on the IPCC Scholarship Programme (document IPCC-XXXII/Doc. 17). She noted the impressive response to the Call for Proposals and that more than 1000 candidates fulfilled the eligibility requirements for the pilot phase of the Scholarship Programme. She called on delegates to help the Science Board and Board of Trustees in identifying potential funding partners for the programme. She noted that Ms Brenda Abrar would no longer serve the Scholarship Programme due to administrative restrictions. She asked the Plenary to agree to hire at least one staff member to manage the Scholarship Programme on a temporary basis. She indicated that the Scholarship Programme is intended to become self-financing in terms of its management.

Within the Panel, there was concern about whether the IPCC should be in the business of administering scholarships. The Chair of the IPCC noted his desire to make the most of the Nobel Peace Prize Award and use the funds for the original purpose, and said it would be disappointing to not go to the fullest extent in efforts to raise enough resources for the Scholarship Programme. He said the Programme will have huge indirect benefits for the IPCC.

Several developing countries supported the programme and stressed the importance to Least Developed Countries to help build capacity and support a new generation of scholars and scientists in these countries.

The Panel did not support financing additional human resources for the Scholarship Programme from the IPCC Trust Fund. It further suggested that the Chair explore partnering with other organizations on the administration of the Programme.

11.7 Implementation of decisions taken at the 30th Session

There was no further discussion under this agenda item.

11.8 Any other progress reports

No other progress reports were discussed under this agenda item.

12. OTHER BUSINESS

There was no other business to be discussed under this agenda item.

13. TIME AND PLACE OF THE NEXT SESSION

The 33rd Session will be held at the end of April/beginning of May 2011 in Abu Dhabi, at the kind invitation of the Government of the United Arab Emirates. This offer was accepted by the Panel with thanks.

14. CLOSING OF THE SESSION

On behalf of the Panel the Chairman expressed his sincere thanks to the Government of the Republic of Korea for hosting the Session. The 32nd Session was closed by the Chairman at 19:00 on 14 October 2010.

PROVISIONAL AGENDA

- 1. OPENING OF THE SESSION**
- 2. APPROVAL OF THE DRAFT REPORT OF THE 31st SESSION**
- 3. IPCC PROGRAMME AND BUDGET FOR 2010-2014**
- 4. THE IPCC 5TH ASSESSMENT REPORT (AR5)**
 - 4.1 Scope, content and process for the preparation of the AR5 Synthesis Report
 - 4.2 Progress reports and schedule of AR5 related activities
- 5. REVIEW OF THE IPCC PROCESSES AND PROCEDURES: REPORT BY THE INTER ACADEMY COUNCIL**
- 6. ADMISSION OF OBSERVER ORGANIZATIONS**
- 7. RULES OF PROCEDURES FOR THE ELECTION OF THE IPCC BUREAU AND ANY TASK FORCE BUREAU**
- 8. REPLACEMENT OF MEMBERS OF THE IPCC BUREAU**
- 9. COMMUNICATIONS STRATEGY**
- 10. MATTERS RELATED TO UNFCCC**
- 11. OTHER PROGRESS REPORTS**
 - 11.1 Special Report on Renewable Energy Sources and Climate Change Mitigation
 - 11.2 Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
 - 11.3 Task Force on National Greenhouse Gas Inventories
 - 11.4 Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA)
 - 11.5 Development of new scenarios
 - 11.6 IPCC Scholarship Programme
 - 11.7 Implementation of decisions taken at the 30th Session
 - 11.8 Any other progress reports
- 12. OTHER BUSINESS**
- 13. TIME AND PLACE OF THE NEXT SESSION**
- 14. CLOSING OF THE SESSION**

**REPORT OF THE 31ST SESSION OF THE IPCC
IS POSTED SEPARATLY**

Decisions taken by the Panel at its 32nd Session

With regards to the Recommendations resulting from the
Review of the IPCC Processes and Procedures by the InterAcademy Council (IAC)

Busan, Republic of Korea, 11-14 October 2010

Preamble:

The IPCC welcomes the IAC's review. Its recommendations will be important to improve the way the IPCC works and how it is governed on behalf of the thousands of scientists who conduct careful, thorough assessments on all aspects of climate change and on behalf of the global community that utilizes its work.

The IPCC is taking decisive action to respond to these recommendations in a way that is transparent and open, and ensures that the highest quality assessments are produced and made available to the international community.

At its 32nd Session, the Panel agreed to immediately implement many of the recommendations. On others, the Panel has formed Task Groups to undertake further work with a view to completion at its next Session, in line with guidance from the IAC.

The IAC review highlights the contribution the IPCC has made to improve the understanding of the scientific, technical and socio-economic aspects of climate change, and the commitment of the world's leading scientists and other experts to a robust assessment process.

The work of preparing the Fifth Assessment Report (AR5) remains on course and will benefit from the Panel's decisions on the IAC recommendations.

Contents

This document presents the Panel's decisions relevant to the IAC's Review of the Processes and Procedures of the IPCC and terms of reference (TOR) and work plan for the Task Groups established to consider issues further and prepare proposals for consideration and decision by the Panel at its next Session (IPCC-XXXIII) scheduled to be held in the first half of 2011.

- 1 **Decisions by the Panel on Procedures** relevant to the IAC's Review and their recommendations in
 - Chapter 2 "Evaluation of IPCC's Assessment Processes" and
 - Chapter 3 "IPCC's Evaluation of Evidence and Treatment of Uncertainty"
 - TOR for the Task Group on Procedures
- 2 **Decisions by the Panel on Governance and Management** relevant to the IAC's Review and their recommendations in Chapter 4 "Governance and Management"
 - TOR for the Task Group on Governance and Management
 - TOR for the Task Group on Conflict of Interest Policy
- 3 **Decisions by the Panel on a Communications Strategy** as relevant to the IAC's Review and their recommendations in Chapter 4 "Governance and Management"
 - TOR for the Task Group on a Communications Strategy
- 4 **The Task Groups and their Composition**

Appendices

1. "General Guidance on the Use of Literature in IPCC Reports"
2. "General Guidance on the Role of Review Editors"
3. "Proposed IPCC Protocol for Addressing Errors in Previous Assessment Reports"
4. "Draft Guidance Note for Lead Authors of the Fifth Assessment Report on Consistent Treatment of Uncertainties"

1 DECISIONS BY THE PANEL ON PROCEDURES

The Panel welcomed and acknowledged the recommendations and suggestions by the IAC on the IPCC's assessment process (Chapter 2 and 3 of the IAC Report), and made the following specific decisions:

Scoping

The Panel noted that in its report the IAC has recommended:

“The IPCC should make the process and criteria for selecting participants for scoping meetings more transparent.”

The Panel agreed with this recommendation
Implementation plan to be determined by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII).

Author Selection

The Panel noted that in its report the IAC has recommended:

“The IPCC should establish a formal set of criteria and processes for selecting Coordinating Lead Authors and Lead Authors.”

The Panel agreed with this recommendation
Formal criteria are included in the existing procedures. Enhanced implementation and transparency as well as potential additional criteria and procedures to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII) for future work.

The Panel noted that in its report the IAC has recommended:

“The IPCC should make every effort to engage local experts on the author teams of the regional chapters of the Working Group II report, but should also engage experts from countries outside of the region when they can provide an essential contribution to the assessment.”

The Panel agreed with this recommendation
This is already implemented for AR5. Further implementation to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII) for future work.

Sources of Data and Literature

The Panel noted that in its report the IAC has recommended:

“The IPCC should strengthen and enforce its procedure for the use of unpublished and non-peer-reviewed literature, including providing more specific guidance on how to evaluate such information, adding guidelines on what types of literature are unacceptable, and ensuring that unpublished and non-peer-reviewed literature is appropriately flagged in the report.”

The Panel agreed with this recommendation
The Panel decided to strengthen the application of its procedures on the use of unpublished and non-peer reviewed literature. It decided to implement this recommendation and further key elements through its procedures and guidance notes. The Panel noted the General Guidance on the Use of Literature in IPCC Reports (contained in IPCC-XXXII/INF.4) as revised in General Guidance on the Use of Literature in IPCC Reports (**Appendix 1**) which addresses the related aspects in the IAC recommendations and decided to endorse them as a Guidance Note. The Panel

urges the Co-Chairs of Working Group I, II, III and TFI to take any necessary steps to ensure that this guidance note is applied in the development of IPCC reports.

Handling the Full Range of Views

The Panel noted that in its report the IAC has recommended:

“Lead Authors should explicitly document that a range of scientific viewpoints has been considered, and Coordinating Lead Authors and Review Editors should satisfy themselves that due consideration was given to properly documented alternative views.”

The Panel agreed with this recommendation

The Panel emphasizes that handling the full range of scientific views is a core principle of the IPCC. Its procedures clearly require the representation of differing scientific viewpoints and encourages rigorous adherence by the CLAs, LAs, and REs. The Panel urges the IPCC Chair, the Co-Chairs of the Working Groups and TFI to take any necessary steps to ensure that this principle continues to be applied in the development of IPCC reports. Further implementation to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII).

Report Review

The Panel noted that in its report the IAC has recommended:

“The IPCC should adopt a more targeted and effective process for responding to reviewer comments. In such a process, Review Editors would prepare a written summary of the most significant issues raised by reviewers shortly after review comments have been received. Authors would be required to provide detailed written responses to the most significant review issues identified by the Review Editors, abbreviated responses to all non-editorial comments, and no written responses to editorial comments.”

The Panel agreed with this recommendation in principle

Implementation options to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-XXXIII).

The Panel noted that in its report the IAC has recommended:

“The IPCC should encourage Review Editors to fully exercise their authority to ensure that reviewers’ comments are adequately considered by the authors and that genuine controversies are adequately reflected in the report.”

The Panel agreed with this recommendation

The Panel decided to strengthen its application of procedures, and amend them where necessary, to enable Review Editors to fully exercise their role. The Panel noted the new Guidance Note on the Role of Review Editors (**Appendix 2**) which addresses the related aspects in the IAC recommendations. The Panel urges the Co-Chairs of Working Group I, II, III and TFI to take steps to ensure that this guidance note is implemented in the development of its work.

Summary for Policymakers

The Panel noted that in its report the IAC has recommended:

“The IPCC should revise its process for the approval of the Summary for Policymakers so that governments provide written comments prior to the Plenary.”

The Panel acknowledges the importance of both written comments and inputs from the floor, which are current practice. No revision to the process is required.

Procedure for the handling of potential errors identified after approval of IPCC reports

IAC discussion and suggestion in the Box analyzing the Himalayan glacier error (IAC Report page 22). Discussion of time required for a response on Himalayan glacier error (IAC Report page 54).

The Panel agreed on the need to establish a process for evaluating, addressing and correcting, if necessary, potential errors and further developing errata as appropriate.

The Panel noted the “Proposed IPCC Protocol for Addressing Errors in Previous Assessment Reports” (**Appendix 3**) which describes a clear decision tree, based on the nature of the material and the steps necessary to avoid bias, so that potential errors could be addressed as rapidly as practical.

The Panel urges the IPCC Chair, the IPCC Vice-Chairs, the Co-Chairs of Working Group I, II, III and TFI to take any necessary steps to ensure that this protocol is finalized and then used for evaluation of potential errors and developing errata as appropriate. Further analysis to be considered by the Task Group on Procedures with the view to submit a proposal for a decision at the next Session (IPCC-XXXIII).

IPCC’s Evaluation of Evidence and Treatment of Uncertainty

The Panel noted that in its report the IAC has made several recommendations:

“All Working Groups should use the qualitative level-of-understanding scale in their Summary for Policymakers and Technical Summary, as suggested in IPCC’s uncertainty guidance for the Fourth Assessment Report. This scale may be supplemented by a quantitative probability scale, if appropriate.”

“Chapter Lead Authors should provide a traceable account of how they arrived at their ratings for level of scientific understanding and likelihood that an outcome will occur.”

“Quantitative probabilities (as in the likelihood scale) should be used to describe the probability of well-defined outcomes only when there is sufficient evidence. Authors should indicate the basis for assigning a probability to an outcome or event (e.g., based on measurement, expert judgment, and/or model runs).”

“The confidence scale should not be used to assign subjective probabilities to ill-defined outcomes.”

“The likelihood scale should be stated in terms of probabilities (numbers) in addition to words to improve understanding of uncertainty.”

“Where practical, formal expert elicitation procedures should be used to obtain subjective probabilities for key results.”

The Panel agreed with these recommendations

The Panel decided to improve the IPCC guidance on evaluation of evidence and treatment of uncertainty. It is implementing the six recommendations in the IAC Review as part of a broader package of updates to procedures and guidance notes. The Panel noted with appreciation the Draft Guidance Note for Lead Authors of the Fifth Assessment Report on Consistent Treatment of Uncertainties (**Appendix 4**) and requested the Co-Chairs of Working Group I, II and III to present the final document to the Panel at its next Session. The final document should provide more detail on traceable accounts, the evolution of the guidance since AR4 and explain how each of the six recommendations in the IAC review is addressed. The Panel urges the Co-Chairs to take any necessary steps to ensure that the guidance note is implemented in the development of its work.

Terms of reference for a Task Group on Procedures

The Panel welcomed and acknowledged the recommendations and suggestions by the IAC on the IPCC's assessment process (Chapters 2 and 3 of the IAC Report) and decided to establish an inter-sessional Task Group on Procedures to develop proposals on further implementation of the recommendations. The Task Group is specifically requested to address, inter alia, the issues listed in Annex I to this decision and propose amendments, including Appendix A to the Principles Governing IPCC work and relevant Guidance Documents, if necessary, by *31 January 2011*. Governments will then be invited to provide comments on the proposals *by 28 February 2011* to allow preparation of a revised draft for consideration and decisions by the Panel at its next Session (IPCC-XXXIII).

The Task Group on Procedures is open to participation by the members of the IPCC and consists of Australia, Bolivia, Brazil, Canada, Chile, Germany, India, Iran, Maldives, Netherlands, New Zealand, Niger, Norway, Peru, Saudi Arabia, South Africa, Swaziland, Switzerland, Thailand, and USA. The Task Group will elect Co-Chairs to coordinate its work.

The Task Group will seek the advice of the IPCC Chair, the IPCC Vice-Chairs, Working Group and TFI Co-Chairs and the Secretary. The duration of the Task Group is until the IPCC's 33rd Session unless decided otherwise.

Annex I

The Task Group should address the issues listed below as mentioned in the IAC recommendations (Chapters 2 and 3), IPCC responses at its 32nd Session and IPCC-XXXII/Doc. 22. For each of the issues the Task Group should establish a timetable for action, consider resource implications and identify responsibilities for implementation. It should propose amendments to the Appendix A to the Principles Governing IPCC Work and relevant guidance documents if needed taking into account decisions made at IPCC-XXXII.

Chapter 2: Evaluation of IPCC's Assessment Process

Scoping

1. Recommendation: The IPCC should make the process and criteria for selecting participants for scoping meetings more transparent.

Author Selection

2. Recommendation: The IPCC should establish a formal set of criteria and processes for selecting Coordinating Lead Authors and Lead Authors.

3. Recommendation: The IPCC should make every effort to engage local experts on the author teams of the regional chapters of the Working Group II report, but should also engage experts from countries outside of the region when they can provide an essential contribution to the assessment.

Sources of Data and Literature

4. Recommendation: The IPCC should strengthen and enforce its procedure for the use of unpublished and non-peer-reviewed literature, including providing more specific guidance on how to evaluate such information, adding guidelines on what types of literature are unacceptable, and ensuring that unpublished and non-peer-reviewed literature is appropriately flagged in the report.

Handling the Full Range of Views

5. Recommendation: Lead Authors should explicitly document that a range of scientific viewpoints has been considered, and Coordinating Lead Authors and Review Editors should satisfy themselves that due consideration was given to properly documented alternative views.

Report Review

6. Recommendation: The IPCC should adopt a more targeted and effective process for responding to reviewer comments. In such a process, Review Editors would prepare a written summary of the most significant issues raised by reviewers shortly after review comments have been received. Authors would be required to provide detailed written responses to the most significant review issues identified by the Review Editors, abbreviated responses to all non-editorial comments, and no written responses to editorial comments.

7. Recommendation: The IPCC should encourage Review Editors to fully exercise their authority to ensure that reviewers' comments are adequately considered by the authors and that genuine controversies are adequately reflected in the report.

Summary for Policymakers

8. Recommendation: The IPCC should revise its process for the approval of the Summary for Policymakers so that governments provide written comments prior to the Plenary.

Procedure for the handling of potential errors identified after approval of IPCC reports

IAC discussion and suggestion: Box analyzing of Himalayan glacier error (IAC Report page 22).
Discussion of time required for a response on Himalayan glacier error (IAC Report page 54).

Chapter 3: IPCC's Evaluation of Evidence and Treatment of Uncertainty

9. Recommendation: All Working Groups should use the qualitative level-of-understanding scale in their Summary for Policymakers and Technical Summary, as suggested in IPCC's uncertainty guidance for the Fourth Assessment Report. This scale may be supplemented by a quantitative probability scale, if appropriate.

10. Recommendation: Chapter Lead Authors should provide a traceable account of how they arrived at their ratings for level of scientific understanding and likelihood that an outcome will occur.

11. Recommendation: Quantitative probabilities (as in the likelihood scale) should be used to describe the probability of well-defined outcomes only when there is sufficient evidence. Authors should indicate the basis for assigning a probability to an outcome or event (e.g. based on measurement, expert judgment, and/or model runs).

12. Recommendation: The confidence scale should not be used to assign subjective probabilities to ill-defined outcomes.

13. Recommendation: The likelihood scale should be stated in terms of probabilities (numbers) in addition to words to improve understanding of uncertainty.

14. Recommendation: Where practical, formal expert elicitation procedures should be used to obtain subjective probabilities for key results.

2 DECISIONS BY THE PANEL ON GOVERNANCE AND MANAGEMENT

The Panel

The Panel noted that in its report the IAC has recommended:

“The IPCC should establish an Executive Committee to act on its behalf between Plenary sessions. The membership of the Committee should include the IPCC Chair, the Working Group Co-Chairs, the senior member of the Secretariat, and 3 independent members, including some from outside of the climate community. Members would be elected by the Plenary and serve until their successors are in place.”

The Panel at its 32nd Session:

- I. Agreed to work toward establishing a formal body to provide governance functions that are necessary between sessions of the panel, strengthen coordination activities, and have oversight of the organisation’s administration and communications; according to the mandate to be agreed in the 33rd Session.
- II. The Task Group should consider options for the implementation of the decision concerning the recommendation mentioning the establishment of an Executive Committee. These options include those for the mandate, size, composition, functions and reporting of the body referred to in this recommendation.
- III. The Task Group shall make recommendations on the options mentioned in decision II to the 33rd Session of the Panel, with a view to taking a decision.

The Secretariat

The Panel noted that in its report the IAC has recommended:

“The IPCC should redefine the responsibilities of key Secretariat positions both to improve efficiency and to allow for any future senior appointments.”

“The IPCC should elect an Executive Director to lead the Secretariat and handle day-to-day operations of the organization. The term of this senior scientist should be limited to the timeframe of one assessment.”

The Panel at its 32nd Session:

- I. Requested the Task Group to examine the role of the Secretariat in its relation with WMO, UNEP, the IPCC-Chair, the Vice-Chairs, Co-Chairs of the WGs and the TFI, and Technical Support Units. The Task Group is requested to review the responsibilities of key Secretariat positions and consider the issues associated with it and to make recommendations to the Panel at its 33rd Session. It is also requested to consider issues associated with the potential creation of a new post of an “Executive Director” to lead the Secretariat.

The IPCC Chair; Working Group Co-Chairs

The Panel noted that in its report the IAC has recommended:

“The term of the IPCC Chair should be limited to the timeframe of one assessment.”
“The terms of the Working Group Co-Chairs should be limited to the timeframe of one assessment.”

The Panel at its 32nd Session:

- I. Requested the Task Group to consider issues related to the IAC recommendations on the term of the IPCC Chair and working group Co-Chairs, including continuity issues.
- II. Noted that any amendments to the existing IPCC Rules of Procedure for Elections could be applied only to subsequent elections.
- III. Requested the Task Group to report their recommendations to the 33rd Session for decision.

Conflict of Interest Policy

The Panel noted that in its report the IAC has recommended:

“The IPCC should develop and adopt a rigorous conflict of interest policy that applies to all individuals directly involved in the preparation of IPCC reports, including senior IPCC leadership (IPCC Chair and Vice Chairs), authors with responsibilities for report content (i.e., Working Group Co-Chairs, Coordinating Lead Authors, and Lead Authors), Review Editors, and technical staff directly involved in report preparation (e.g., staff of Technical Support Units and the IPCC Secretariat).”

The Panel at its 32nd Session:

- I. Agreed with this IAC recommendation.
- II. Decided to implement a rigorous conflict of interest policy, taking into consideration the specific circumstances related to participation in IPCC activities.
- III. Established a Task Group on Conflict of Interest Policy to propose options for such a policy, consulting with relevant organisations, for its decision at the 33rd Session.

The IPCC Bureau

The Panel noted that in its report the IAC has recommended:

“The IPCC should develop and adopt formal qualifications and formally articulate the roles and responsibilities for all Bureau members, including the IPCC Chair, to ensure that they have both the highest scholarly qualifications and proven leadership skills.”

The Panel at its 32nd Session:

- I. Decided to refer this issue to the relevant Task Groups with a particular focus on roles and responsibilities for all Bureau members, including the IPCC Chair.
- II. The Task Group on Governance and Management should report back to the Panel at the 33rd Session.

Terms of reference for a Task Group on Governance and Management

The Panel welcomed and acknowledged the recommendations and suggestions by the IAC on the IPCC's governance and management (Chapter 4 of the IAC Report) and decided to establish an inter-sessional Task Group on Governance and Management to develop proposals related to the recommendations by the IAC and the decisions taken at the 32nd Session as listed above. The Task Group is specifically requested to address, inter alia, the issues listed in Annex II to this decision and propose amendments, including to the Principles Governing IPCC Work, and its Appendices, and other relevant documents, if necessary, by *31 January 2011*. Governments will then be invited to provide comments on the proposals *by 28 February 2011* to allow preparation of a revised draft for consideration and decisions by the Panel at its next Session (IPCC-XXXIII). Matters related to conflict of interest policy will be addressed by a dedicated "Task Group on Conflict of Interest Policy" as described below.

The Task Group on Governance and Management (*) is open to participation by the members of the IPCC and consists of Belgium, Canada, China, Cuba, France, Germany, India, Iran, Korea, Lesotho, Maldives, Mali, New Zealand, Norway, Peru, Russia, Saudi Arabia, Slovenia, South Africa, Spain, Sweden, UK, and USA. The Task Group will elect its Co-Chairs to coordinate its work.

The Task Group will seek the advice of the IPCC Chair, the IPCC Vice-Chairs, Working Group and TFI Co-Chairs, and the Secretary. The duration of the Task Group is until the IPCC's 33rd Session unless decided otherwise.

(*) Correction on 26.10.2010: Norway and Spain have been added as they indicated their willingness to participate in the Task Group on Governance and Management (also corrected on Page 15, List of Task Groups formed at IPCC-XXXII and Composition).

Annex II

The Task Group on Governance and Management should address the issues listed below as mentioned in the IAC recommendations (Chapter 4 of the IAC Report), IPCC responses at its 32nd Session and IPCC-XXXII/Doc. 22. For each of the issues the Task Group should establish a timetable for action, consider resource implications and identify responsibilities for implementation. It should propose amendments to the Principles Governing IPCC Work, its Appendices, and other relevant documents if needed taking into account decisions made at IPCC-XXXII.

Chapter 4: Governance and Management

The Panel

1. Recommendation: The IPCC should establish an Executive Committee to act on its behalf between Plenary sessions. The membership of the Committee should include the IPCC Chair, the Working Group Co-chairs, the senior member of the Secretariat, and 3 independent members, including some from outside of the climate community. Members would be elected by the Plenary and serve until their successors are in place.

The IPCC Chair

2. Recommendation: The term of the IPCC Chair should be limited to the timeframe of one assessment.

The IPCC Bureau

3. Recommendation: The IPCC should develop and adopt formal qualifications and formally articulate the roles and responsibilities for all Bureau members, including the IPCC Chair, to ensure that they have both the highest scholarly qualifications and proven leadership skills.

4. Recommendation: The terms of the Working Group Co-chairs should be limited to the timeframe of one assessment.

The Secretariat

5. Recommendation: The IPCC should redefine the responsibilities of key Secretariat positions both to improve efficiency and to allow for any future senior appointments.

6. Recommendation: The IPCC should elect an Executive Director to lead the Secretariat and handle day-to-day operations of the organization. The term of this senior scientist should be limited to the timeframe of one assessment.

Terms of reference for a Task Group on Conflict of Interest Policy

The Panel welcomed and acknowledged the recommendations and suggestions by the IAC on the IPCC's conflict of interest policy (as discussed in Chapter 4 of the IAC Report) and decided to establish an inter-sessional Task Group on Conflict of Interest Policy as discussed in Chapter 4 of the IAC Report to develop proposals on further implementation of the IAC recommendations and decision taken by the Panel at its 32nd Session. The Task Group is specifically requested to address, inter alia, the issues listed in Annex III to this decision and propose amendments, including to the Principles Governing IPCC Work and relevant documents, if necessary, by 31 January 2011. Governments will then be invited to provide comments on the proposals by 28 February 2011 to allow preparation of a revised draft for consideration and decisions by the Panel at its next Session (IPCC-XXXIII).

The Task Group is open to participation by the members of the IPCC and consists of: Bangladesh, China, Malaysia, New Zealand, Slovenia, Sudan, UK and USA. The Task Group will elect its Co-Chairs to coordinate its work.

The Task Group will seek the advice of the IPCC Chair, the IPCC Vice-Chairs, Working Group and TFI Co-Chairs and the Secretary. The duration of the Task Group is until the IPCC's 33rd Session unless decided otherwise.

Annex III

The Task Group should address the issues listed below as mentioned in the IAC recommendations (Chapter 4), IPCC responses at its 32nd Session and IPCC-XXXII/Doc. 22. For each of the issues the Task Group should establish a timetable for action, consider resource implications and identify responsibilities for implementation. It should propose amendments to the Principles Governing IPCC work and relevant documents if needed taking into account decisions made at IPCC-XXXII.

Chapter 4: Governance and Management

Conflict of Interest Policy

1. Recommendation: The IPCC should develop and adopt a rigorous conflict of interest policy that applies to all individuals directly involved in the preparation of IPCC reports, including senior IPCC leadership (IPCC Chair and Vice Chairs), authors with responsibilities for report content (i.e., Working Group Co-Chairs, Coordinating Lead Authors, and Lead Authors), Review Editors, and technical staff directly involved in report preparation (e.g., staff of Technical Support Units and the IPCC Secretariat).

3 DECISIONS BY THE PANEL ON A COMMUNICATIONS STRATEGY

The Panel noted that in its report the IAC has recommended:

“The IPCC should complete and implement a communications strategy that emphasizes transparency, rapid and thoughtful responses, and relevance to stakeholders, and which includes guidelines about who can speak on behalf of IPCC and how to represent the organization appropriately.”

The Panel accepts the recommendation to develop a communication strategy.

Taking into account the core products of the organization, the Strategy will clarify the scope and objectives of IPCC communication, with clear guidelines on authority, representation and identification of spokespeople.

The Panel decided to establish a Task Group to guide the development of the Communications Strategy. The first draft should be presented to the IPCC Bureau at its next Session with a view to adopting the Communication Strategy at the 33rd Session of the Panel.

Terms of reference for a Task Group on a Communications Strategy

The Task Group on the IPCC Communications Strategy will, taking into account the core scientific review and assessment role of the IPCC and its scientific and intergovernmental nature, guide the development of a comprehensive and concise communications strategy that:

- Defines the scope of IPCC communications, including about (a) the results and products of assessments, (b) errors, corrections and other issues arising from the work of IPCC, and (c) improving understanding of the processes and governance of IPCC;
- Provides guidance regarding whether balanced communications materials derived from IPCC products that have been approved or accepted by the Panel should be developed, and under what circumstances;
- Articulates a set of general objectives for IPCC communications, including its website, emphasizing transparency, rapid and thoughtful responses, political neutrality, and relevance to stakeholders;
- Identifies targeted audiences and stakeholders, recognizing their diversity of languages;
- Includes guidelines on who can speak on behalf of IPCC and how and when authorized spokespersons should represent the organization appropriately, as well as how communication materials will be authorized; and
- Addresses any potential conflicts of interest regarding communications.

The Task Group will seek the advice of the IPCC Chair, the IPCC Vice-Chairs, Working Group and TFI Co-Chairs and the Secretary. The Task Group membership is open to representatives of governments that are members of the IPCC. The Task Group consists of Belgium, Canada, Gambia, Germany, Iran, Japan, Madagascar, Mexico, Netherlands, Norway, Saudi Arabia, Senegal, UK, USA, and Zambia. The Task Group will elect its Co-Chairs to coordinate its work.

The work of the Task Group will be supported by the Communications team within the Secretariat.

The Task Group will produce a first draft of the Strategy for consideration at the first Bureau meeting in 2011, with a view to the Panel adopting the Strategy at its 33rd Session.

4 THE TASK GROUPS

The Task Groups are open to participation by the members of the IPCC. Via a show of hands at the closing Plenary Session, country participation of the four Task Groups dealing with a) Procedures, b) Governance and Management, c) Conflict of Interest Policy and d) Communications Strategy was agreed, and is provided below.

The Task Groups will elect their Co-Chairs in due-time.

To facilitate the work of the Task Groups, the Panel decided on the 14th of October, 2010 that 25 trips would be allocated from the IPCC Trust Fund budget for travel to any necessary meetings for the four established groups.

The four Task Groups will report back to the Panel at its 33rd Session. The duration of the Task Groups' mandates is until the IPCC's 33rd Session, unless decided otherwise.

List of Task Groups formed at IPCC-XXXII and Composition

Task Group on Procedures

Australia, Bolivia, Brazil, Canada, Chile, Germany, India, Iran, Maldives, Netherlands, New Zealand, Niger, Norway, Peru, Saudi Arabia, South Africa, Swaziland, Switzerland, Thailand, and USA

Task Group on Governance and Management (*)

Belgium, Canada, China, Cuba, France, Germany, India, Iran, Korea, Lesotho, Maldives, Mali, New Zealand, Norway, Peru, Russia, Saudi Arabia, Slovenia, South Africa, Spain, Sweden, UK, and USA

Task Group on Conflict of Interest Policy

Bangladesh, China, Malaysia, New Zealand, Slovenia, Sudan, UK and USA

Task Group on Communications Strategy

Belgium, Canada, Gambia, Germany, Iran, Japan, Madagascar, Mexico, Netherlands, Norway, Saudi Arabia, Senegal, UK, USA, and Zambia

(*) Correction on 26.10.2010: Norway and Spain have been added as they indicated their willingness to participate in the Task Group on Governance and Management (also corrected on Page 11, Terms of reference for a Task Group on Governance and Management).

General Guidance on the Use of Literature in IPCC Reports

Introduction

The Technical Support Units (TSUs) of the three IPCC Working Groups drafted this guidance document to recall the Principles Governing IPCC Work, particularly the "Procedure for using non-published/non-peer-reviewed sources in IPCC Reports", and to enhance implementation of the underlying principles by posing questions whose answers will help ensure that the requirements are met. Following these principles will ensure that all relevant statements and lines of discussion are properly substantiated by adequate literature, and that all relevant text undergoes appropriate review. These guidelines will be presented and discussed at Lead Author meetings and backed up by further training as needed.

Guidance on the use of non-published/non-peer-reviewed ("grey") literature

1. Overview of current Principles Governing IPCC Work

Appendix A, Section 4.2.3, to the Principles Governing IPCC Work states

Contributions should be supported as far as possible with references from the peer-reviewed and internationally available literature

Extract from Annex 2 of Appendix A to the Principles Governing IPCC Work:

Procedure for using non-published/non-peer-reviewed sources in IPCC Reports

Because it is increasingly apparent that materials relevant to IPCC Reports, in particular, information about the experience and practice of the private sector in mitigation and adaptation activities, are found in sources that have not been published or peer-reviewed (e.g., industry journals, internal organisational publications, non-peer reviewed reports or working papers of research institutions, proceedings of workshops etc) the following additional procedures are provided. These have been designed to make all references used in IPCC Reports easily accessible and to ensure that the IPCC process remains open and transparent.

1. Responsibilities of Coordinating, Lead and Contributing Authors

Authors who wish to include information from a non-published/non-peer-reviewed source are requested to

- a. Critically assess any source that they wish to include. This option may be used for instance to obtain case study materials from private sector sources for assessment of adaptation and mitigation options. Each chapter team should review the quality and validity of each source before incorporating results from the source into an IPCC Report.*
- b. Send the following materials to the Working Group/Task Force Bureau Co-Chairs who are coordinating the Report:*
 - One copy of each unpublished source to be used in the IPCC Report*
 - The following information for each source:*
 - Title*
 - Author(s)*
 - Name of journal or other publication in which it appears, if applicable*
 - Information on the availability of underlying data to the public*
 - English-language executive summary or abstract, if the source is written in a non-English language*
 - Names and contact information for 1-2 people who can be contacted for more information about the source.*

(...)

5. Treatment in IPCC Reports

Non-peer-reviewed sources will be listed in the reference sections of IPCC Reports. These will be integrated with references for the peer-reviewed sources.¹ These will be integrated with references to the peer reviewed sources stating how the material can be accessed, but will be followed by a statement that they are not published.

The two distinct but related principles that are at the core of these procedures are (1) to ensure the quality, robustness and validity of the information assessed and (2) to ensure the accessibility of the sources for reviewers of the report drafts.

2. Questions to help determine the appropriateness of including a non-published/non-peer reviewed reference

Non-published/non-peer-reviewed sources are often called grey literature. Although highly relevant information can be contained in the grey literature, 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. Authors need to be clear why a particular source is used and in some circumstances may need to explain this in the text.

Considering the following questions will help ensure that the principles underlying the IPCC Rules and Procedures are properly implemented.

- a) Who (e.g., what organization) is the source of the grey literature citation?
- b) What information does the citation add to the assessment?
- c) Is the information cited available from a peer-reviewed journal source? If yes, is the citation needed?
- d) Are there lines of evidence from other (peer-reviewed or non-peer-reviewed) sources that support the citation or reach different conclusions? If yes, is the citation needed?
- e) What are the qualifications of the author(s) of the document?
- f) Was there any review of the material presented? If so, how wide or extensive was that review? How credible are the reviewers?
- g) Why was the document written? How was the research funded? Could the researcher and/or publisher of the document be perceived as having a particular bias or agenda? If yes, what caveats are needed?
- h) Why wasn't the information published in a peer-reviewed journal?

3. Acceptability of sources in IPCC Reports

Since the development of the Principles Governing IPCC Work, there has been a rapid growth in new forms of communication and media in which the public finds climate relevant information. The IPCC principles for use of non-published/non-peer reviewed sources do not change with this move to more electronic communication. Blogs, social networking sites (e.g., Twitter, Facebook), and visual media do not currently meet the standards for use in scientific assessments and developing key findings in IPCC Reports, and are therefore **not acceptable** for use. In the absence of other sources, newspapers and magazines may provide limited ancillary information for an assessment, but not for key findings.

Personal communications of scientific results are also **not acceptable sources**.

¹ Non-published sources also will be listed in the reference sections of IPCC Reports.

4. Accessibility of non-published/non-peer reviewed references

Non-published/non-peer-reviewed references need to be accessible by the reviewers at the time of the review. In order to ensure a minimum level of accessibility of all sources used in the report, **authors MUST provide a copy of each source of information that is not publicly available** (preferably as a non-editable electronic document) and the additional information specified in the IPCC principles. These must be received by the TSU by the time that the First Order Draft (**FOD**) and Second Order Draft (**SOD**) respectively are due to the TSU.

5. Guidance on the use of sources going through peer-review and literature cut off dates

After the distribution of the SOD, authors may only include additional literature that further supports statements that have already been substantiated by one or more references. Authors may not introduce new information in the Final Draft (FD) that substantially alters the content and conclusions of the report compared to the SOD.

In order to be included in the respective chapter drafts, literature must meet the following requirements:

- ❖ **For inclusion in the First Order Draft (FOD): submitted** for peer-review and a copy provided to the TSU prior to the date when the **FOD** is due to the TSU;
- ❖ **For inclusion in the Second Order Draft (SOD): submitted** for peer-review and a copy provided to the TSU prior to the date when the **SOD** is due to the TSU;
- ❖ **For inclusion in the Final Draft (FD): accepted** for publication and a copy provided to the TSU prior to the date when the **FD** is due to the TSU. **Acceptance for publication MUST be substantiated by (i) letter from the editor, (ii) DOI-Nr., or (iii) published as accepted on the journal's website.**

The specific cutoff dates will be provided to the authors by the TSU early in the assessment cycle.

Any reference that does not fulfill these criteria will be removed from the draft contribution together with the statement(s) that it supports if there are no other supporting references. It is therefore not advisable to base a line of argument or conclusion on a single, not-yet accepted paper.

Role of Review Editors

Annex I of the IPCC Procedures (Appendix A to the Principles Governing IPCC Work) states that Review Editors (REs) will:

- *Assist the Working Group in identifying reviewers for the expert review process;*
- *Ensure that all substantive expert and government review comments are afforded appropriate consideration;*
- *Advise lead authors on how to handle contentious/controversial issues;*
- *Ensure genuine controversies are reflected adequately in the text of the Report; and*
- *Submit a written report to the Working Group Session. REs also may be requested to attend Sessions of the Working Group.*

REs will need to ensure that where significant differences of opinion on scientific issues remain, such differences are described in an annex to the Report.

REs are not actively engaged in drafting Reports.

Review Editors are critical for achieving the IPCC mandate of producing comprehensive and objective assessments in an open and transparent manner. They also help ensure that IPCC reports are neutral with respect to policy. To achieve these goals, REs undertake a number of activities:

Before the First Order Draft (for review by Experts) and the Second Order Draft (for review by Governments and Experts) are sent for review, the REs should identify possible reviewers for the entire chapter and for sections that reach key conclusions. The Technical Support Unit (TSU) will contact these reviewers. During the review period, the REs should read their Chapter carefully to prepare for the review comments and to identify possible crosscutting issues that will need to be addressed.

It is important to note that REs may not submit a review of their own Chapter but may do so on others. The REs do not rewrite the text – this is the job of the authors.

When the review comments are received, they will be collated by the TSU and sent to the Chapter Coordinating Lead Authors (CLAs) and REs. The REs should read all comments on their Chapter to identify critical issues that will likely require discussion with the Chapter author team. The focus should be on sections where the review comments are inconsistent or contradictory, where considerable rewriting will likely be needed, and where scientific controversies exist. The REs should come prepared to the subsequent Lead Author Meeting to ensure that the author team fully and appropriately addresses the review comments, and that the author team fairly represents the range of scientific opinion.

This process will be repeated for the Second Order Draft.

Important dates for REs include (i) when the review periods begin, i.e., when you get access to your chapter, (ii) when comments are distributed to the CLAs and REs, and (iii) the two Lead Author meetings that you are expected to attend. At the end of the process, the REs will provide a brief written report to the Working Group Co-Chairs. The exact format of the report has yet to be determined. Where appropriate, REs will be requested to attend Sessions of the Working Group and of the IPCC to communicate their findings from the review process and to assist in finalizing the Summary for Policymakers (SPM).

Proposed IPCC Protocol for Addressing Errors in Previous Assessment Reports

Draft

Note: The Panel urges the IPCC Chair, the IPCC Vice-Chairs, the Co-Chairs of the Working Group I, II, III and TFI to take any necessary steps to ensure that this protocol is finalized and then used for evaluation of potential errors and developing errata as appropriate. Further analysis to be considered by the Task Group on Procedures with the view to make a decision at its next Session (IPCC-33).

At its 40th Session (May 2010) the IPCC Bureau discussed a protocol for correcting errors in reports already released. The specific protocol below was prepared by Working Group II (WGII) Co-chairs to assist further consideration of that matter.

This protocol is intended to be used only to correct errors that could have been avoided in the context of the information available at the time the report was written. It should not be used to make changes that reflect new knowledge or scientific information that became available only after the literature cut-off date for the report in question. It should also not be invoked to reflect a change in opinion. Rather, it should be reserved for errors of fact or accuracy in representing the underlying science.

This protocol is intended to address the full range of possible errors from simple typos through complicated issues of sourcing, interpretation, analysis, or assessment. The protocol is intended to be invoked when at least one Co-Chair of the report containing the putative error, one Coordinating Lead Author (CLA) of the chapter containing the putative error, or one member of the current Bureau requests evaluation of a putative error.

The protocol is presented as a dichotomous tree (if condition n (where n is 1-9) is met), follow the tree below the condition. If condition n is not met, go to option a, with the same number value. For example, if statement 1 is correct, go to statement 2. If statement 2 is incorrect, go to statement 2a, etc.

Proposed protocol

- 1) If the putative error is in a working Group (WG) report, the CLAs of the relevant chapter are approached and asked whether they agree that there is an error.
- 2) If the CLAs agree that there is an error, then they are asked to decide whether the fix requires a simple erratum or a more thorough evaluation.
 - 3) If the fix is a simple erratum, then one is constructed by the CLAs and submitted to the current WG Bureau for approval.
 - 3a) If a more complicated evaluation is required, then the current Chair appoints a Review Team containing, as a minimum, two experts who were not involved in drafting the chapter, plus at least one CLA or Lead Author (LA) from the chapter with the error, and charges that Review Team with proposing, within one month's time, a simple erratum statement. The Chair then submits this to the relevant WG Bureau for approval.
- 2a) If the CLAs of the chapter containing the putative error feel there is no error, then the current Chair appoints, within two weeks, an Initial Review Group of three Bureau members and/or CLAs/LAs from the current assessment to analyze the text in question and see if they agree with the CLAs of the chapter with the putative error. The response from the Initial Review Group is due in two weeks.
- 4) If the Initial Review Group agrees that there was no error, then the CLAs of the chapter with the putative error are tasked with preparing, within two weeks, a brief document, to be posted on the IPCC and WG web sites, explaining why the text in question was in fact not an error.

- 4a) If the Initial Review Group feels there is an error, they ask the current Chair to appoint, within one month, an Independent Review Committee. This committee should consist of at least three experts not involved in drafting the chapter with the putative error and not involved as a Bureau Member, CLA, or LA on the assessment with the putative error or the current assessment.
 - 5) If the Independent Review Committee decides there is no error, then the CLAs of the chapter with the putative error are tasked with preparing, within two weeks, a brief document, to be posted on the IPCC and WG web sites, explaining why the text in question was in fact not an error.
 - 5a) If the Independent Review Committee decides that there is an error, they are tasked with providing, within one month, an erratum statement. If the erratum is approved by the current WG bureau, Co-chairs, and Chair, then the Chair makes a decision on whether the erratum can be posted at that point or needs to be approved by the plenary.
- 1a) If the putative error is in a Synthesis Report, then the Chair and Co-chairs (from the assessment cycle with the putative error) and CLAs of the chapter that was the source of the underlying information are approached and asked whether they agree that there is an error.
 - 6) If all agree that there is an error, then the Chair (from the assessment cycle with the putative error) is asked to decide whether the fix requires a simple erratum or a more thorough evaluation
 - 7) If the fix is a simple erratum, then one is constructed by the Chair (from the assessment cycle with the putative error) and submitted to the current Bureau for approval.
 - 7a) If a more complicated evaluation is required, then the current Chair appoints a Review Team containing, as a minimum, two experts who were not involved in drafting the chapter, plus at least one CLA or LA from the chapter with the underlying information, and charges that review team with proposing, within one month's time, a simple erratum statement. The current Chair then submits this to the current Bureau for approval.
 - 6a) If any of the Chair and Co-chairs (from the assessment cycle with the putative error), and the CLAs of the chapter that was the source of the underlying information feel there is no error, then the current Chair appoints, within two weeks, an Initial Review Group of three Bureau members and/or CLAs/LAs from the current assessment to analyze the text in question and see if they agree that there was no error. The response from the Initial Review Group is due in two weeks.
 - 8) If the Initial Review Group agrees that there was no error, then the Chair (from the assessment cycle with the putative error) is tasked with preparing, within two weeks, a brief document, to be posted on the IPCC and WG web sites, explaining why the text in question was in fact not an error.
 - 8a) If the Initial Review Group feels there is an error, they ask the current Chair to appoint, within one month, an Independent Review Committee. This committee should consist of at least three experts not involved in drafting the chapter with the putative error and not involved as a Bureau Member, CLA, or LA on the assessment with the putative error or the current assessment.
 - 9) If the Independent Review Committee decides there is no error, then the Chair (from the assessment cycle with the putative error) is tasked with preparing, within two weeks, a brief document, to be posted on the IPCC and WG web sites, explaining why the text in question was in fact not an error.
 - 9a) If the Independent Review Committee decides that there is an error, they are tasked with providing, within one month, an erratum statement. If the erratum is approved by the current WG bureau, Co-chairs, and Chair, then the current Chair makes a decision on whether the erratum can be posted at that point or needs to be approved by the plenary.

If any of the individuals identified as playing leading roles on behalf of author teams of previous reports are not available, then the current Chair will identify an individual or individuals best qualified to play those roles.

Guidance Notes for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties

Draft

The Panel requested the Co-Chairs of Working Group I, II and III to present the final document to the Panel at its next Session.

These guidance notes are intended to assist Lead Authors of the Fifth Assessment Report (AR5) in the consistent treatment of uncertainties across all three Working Groups. These notes define a common approach and calibrated language that can be used broadly for developing expert judgments and for evaluating and communicating the degree of certainty in findings of the assessment process. These notes refine background material provided to support the Third and Fourth Assessment Reports [1] and [2]; they represent the results of discussions at a Cross-Working Group Meeting on Consistent Treatment of Uncertainties convened in July of 2010 [3]. They also address key elements of the recommendations made by the 2010 independent review of the IPCC by the InterAcademy Council [4]. Alternative approaches in the literature can be used, but should be related to the approach outlined here. Each Working Group will supplement these notes with more specific guidance on particular issues consistent with the common approach given here.

The AR5 will rely on two metrics for communicating the degree of certainty in key findings:

- Confidence in the validity of a finding, based on the type, amount, quality, and consistency of evidence (e.g., mechanistic understanding, theory, data, models, expert judgment), and the degree of agreement. Confidence is expressed qualitatively.
- Quantified measures of uncertainty in a finding expressed probabilistically (based on statistical analysis of observations or model results, or expert judgment).

In order to develop their key findings, author teams should evaluate the associated evidence and agreement. Depending on the nature of the evidence evaluated, teams have the option to quantify the uncertainty in the finding probabilistically. In most cases, author teams will present either a quantified measure of uncertainty or an assigned level of confidence. It is important for author teams to develop findings that are general enough to reflect the underlying evidence but not so general that they lose substantive meaning. For findings (effects) that are conditional on other findings (causes), consider independently evaluating the degrees of certainty in both causes and effects, with the understanding that the degree of certainty in the causes may be low. In particular, this approach may be appropriate for high-consequence conditional outcomes with a high degree of certainty.

Sound decision making that anticipates, prepares for, and responds to climate change depends on information about the full range of possible consequences and associated probabilities. Such decisions often include a risk management perspective. Because risk is a function of probability and consequence, information on the tails of the distribution of outcomes can be especially important. Low-probability outcomes can have significant impacts, particularly when characterized by large magnitude, long persistence, broad prevalence, and/or irreversibility. Author teams are therefore encouraged to provide information on the tails of distributions of key

1 variables, reporting quantitative estimates when possible and supplying qualitative assessments
2 and evaluations when appropriate.

5 **Treat issues of uncertainty**

- 7 1. At an early stage, consider approaches to communicating the degree of certainty in key
8 findings in your chapter. Identify key findings as they emerge and give attention to
9 evaluating confidence and quantifying uncertainties in them. Determine the areas in your
10 chapter where a range of views may need to be described, and those where the author team
11 may need to develop a finding representing a collective view. Agree on a carefully
12 moderated and balanced process for doing this well in advance of actually confronting these
13 issues in a specific context.
- 14
15 2. Be prepared to make expert judgments in developing key findings, and explain those
16 judgments by providing a traceable account by describing in the chapter text your evaluation
17 of relevant evidence and agreement. Such a description may include standards of evidence
18 applied, approaches to combining or reconciling multiple lines of evidence, conditional
19 assumptions, and explanation of critical factors. When appropriate, consider using formal
20 elicitation methods to organize and quantify these judgments [5].
- 21
22 3. Be aware of a tendency for a group to converge on an expressed view and become
23 overconfident in it [6]. Views and estimates can also become anchored on previous versions
24 or values to a greater extent than is justified. One possible way to avoid this would be to ask
25 each member of the author team to write down his or her individual assessments of the level
26 of uncertainty before entering into a group discussion. If this is not done before group
27 discussion, important views may be inadequately discussed and assessed ranges of
28 uncertainty may be overly narrow [7]. Recognize when individual views are adjusting as a
29 result of group interactions and allow adequate time for such changes in viewpoint to be
30 reviewed.
- 31
32 4. Be aware that the way in which a statement is framed will have an effect on how it is
33 interpreted [8]. (A 10% chance of dying is interpreted more negatively than a 90% chance of
34 surviving.) Avoid value-laden statements, and consider complementary statements (e.g.,
35 chances of dying and of surviving).
- 36
37 5. Consider that, in some cases, it may be appropriate to describe findings for which the
38 evidence and understanding are overwhelming as statements of fact without using
39 uncertainty qualifiers.
- 40
41

42 **Review the information available**

- 43
44 6. Consider all plausible sources of uncertainty. Experts tend to underestimate structural
45 uncertainty arising from incomplete understanding of or competing conceptual frameworks
46 for relevant systems and processes [6]. Consider previous estimates of ranges, distributions,

1 or other measures of uncertainty, their evolution, and the extent to which they cover all
2 plausible sources of uncertainty.

- 3
4 7. Assess issues of uncertainty and risk to the extent possible. When probabilistic approaches
5 are available, consider ranges of outcomes and their associated probabilities with attention to
6 outcomes of potential high consequence. Additional value can come from information that
7 supports robust decisions for a wide range of climate and socioeconomic futures [9].
8
9

10 **Evaluate and communicate at the appropriate level of precision**

11
12 The following process and language should be applied to evaluate and communicate the degree
13 of certainty in key findings. Paragraph 8 explains the basis of confidence in terms of level of
14 evidence and degree of agreement. Paragraph 9 defines the confidence scale. Paragraph 10
15 discusses quantified measures of uncertainty. Finally, paragraph 11 provides criteria for
16 communication of uncertainty at different levels of precision.
17

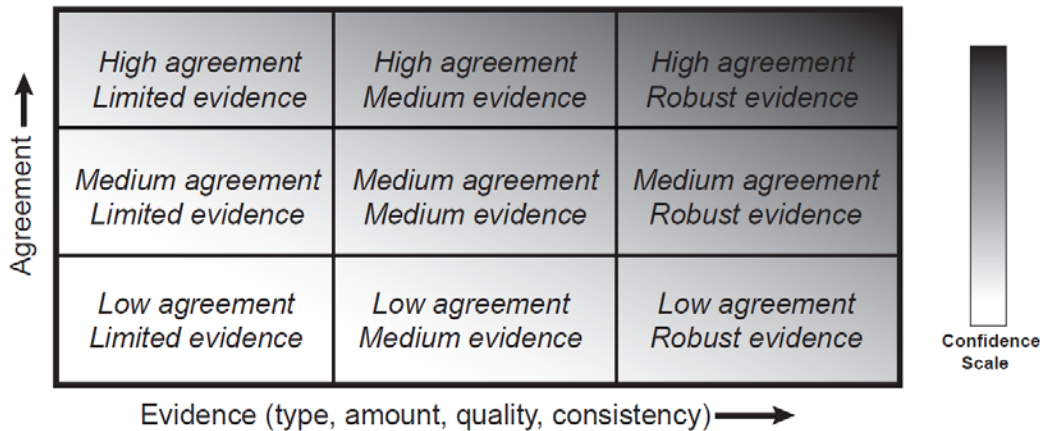
- 18 8. Consider the following dimensions for evaluating the validity of a finding: the type, amount,
19 quality, and consistency of evidence (summary terms: “limited,” “medium,” or “robust”), and
20 the degree of agreement (summary terms: “low,” “medium,” or “high”). Generally, evidence
21 is most robust when there are multiple, consistent independent lines of high-quality evidence.
22 Provide a traceable account describing your evaluation of evidence and agreement in the text
23 of your chapter.
24

- 25 • For findings with high agreement and robust evidence, present a level of confidence or a
26 quantified measure of uncertainty.
27
- 28 • For findings with high agreement or robust evidence, but not both, assign confidence or
29 quantify uncertainty when possible. Otherwise, assign summary terms for your evaluation
30 of evidence and agreement.
31
- 32 • For findings with low agreement and limited evidence, assign summary terms for your
33 evaluation of evidence and agreement.
34
- 35 • In any of these cases, the degree of certainty in findings that are conditional on other
36 findings should be evaluated and reported independently.
37

- 38 9. A level of *confidence* is expressed using five qualifiers “very low,” “low,” “medium,”
39 “high,” and “very high.” It is used to synthesize author teams’ judgments about the validity
40 of findings as determined through evaluation of evidence and agreement. Figure 1 depicts
41 summary statements for evidence and agreement and their relationship to confidence. There
42 is flexibility in this relationship; for a given evidence and agreement statement, different
43 confidence levels could be assigned, but increasing evidence and agreement is correlated
44 with increasing confidence. Confidence cannot necessarily be assigned for all combinations
45 of evidence and agreement in Figure 1 (see paragraph 8). Presentation of findings with “low”
46 and “very low” confidence should be reserved for areas of major concern, and the reasons for

1 their presentation should be carefully explained. Confidence should not be interpreted
 2 probabilistically, and it is distinct from “statistical confidence.” Additionally, a finding that
 3 includes a probabilistic measure of uncertainty does not require explicit mention of the level
 4 of confidence associated with that finding if the level of confidence is “high” or “very high.”

5
6
7



8
9

Figure 1: A depiction of evidence and agreement statements and their relationship to confidence. Confidence increases towards the top-right corner as suggested by the increasing strength of shading.

10
11
12

13
 14 10. *Likelihood*, as defined in Table 1, provides one method of describing quantified uncertainty
 15 with calibrated language. It can be used to express a probabilistic estimate of the occurrence
 16 of a single event or of an outcome, e.g., a climate parameter, observed trend, or projected
 17 change lying in a given range. Likelihood may be based on statistical or modeling analyses,
 18 elicitation of expert views, or other quantitative analyses. The categories defined in this table
 19 can be considered to have “fuzzy” boundaries. A statement that an outcome is “likely” means
 20 that the probability of this outcome can range from ~66% (fuzzy boundaries implied) to
 21 100% probability. This implies that all alternative outcomes are “unlikely” (0%-33%
 22 probability). When there is sufficient information, it is preferable to specify the full
 23 probability distribution or a probability range (e.g. 90-95%) without using the terms in Table
 24 1. “About as likely as not” should not be used to express a lack of knowledge – see paragraph
 25 8 for that situation. Additionally, there is evidence that readers may adjust their interpretation
 26 of this likelihood language according to the magnitude of perceived potential consequences
 27 [10].

28
29

Table 1. Likelihood Scale.

Term	Likelihood of the outcome
<i>Virtually certain</i>	99-100% probability
<i>Very likely</i>	90-100% probability
<i>Likely</i>	66-100% probability
<i>About as likely as not</i>	33 to 66% probability
<i>Unlikely</i>	0-33% probability
<i>Very unlikely</i>	0-10% probability
<i>Exceptionally unlikely</i>	0-1% probability

1
2 11. Characterize key findings using calibrated uncertainty language that conveys the most
3 information to the reader, based on the criteria (A-F) below [11]. These criteria provide
4 guidance for selecting among different alternatives for presenting uncertainty, recognizing
5 that in all cases it is important to include a traceable account of relevant evidence and
6 agreement in your chapter text. The criteria given below describe how to report an assessed
7 finding regarding a variable (e.g., a measured, simulated, or derived quantity or its change).

- 8
9 A. *A variable is ambiguous, or the processes determining it are poorly known or not*
10 *amenable to measurement:* Confidence should not be assigned; assign summary terms for
11 evidence and agreement (see paragraph 8). Explain the governing factors, key indicators,
12 and relationships. If a variable could be either positive or negative, describe the pre-
13 conditions or evidence for each.
14
15 B. *The sign of a variable can be identified but the magnitude is poorly known:* Assign
16 confidence when possible; otherwise assign summary terms for evidence and agreement
17 (see paragraphs 8 and 9). Explain the basis for this confidence evaluation and the extent
18 to which opposite changes would not be expected.
19
20 C. *An order of magnitude can be given for a variable:* Assign confidence when possible;
21 otherwise assign summary terms for evidence and agreement (see paragraphs 8 and 9).
22 Explain the basis for estimates and confidence evaluations made, and indicate any
23 assumptions. If the evaluation is particularly sensitive to specific assumptions, then
24 evaluate confidence in those assumptions.
25
26 D. *A range can be given for a variable, based on quantitative analysis or expert judgment:*
27 Assign likelihood or probability for that range when possible; otherwise only assign
28 confidence (see paragraphs 8-10). Explain the basis for the range given, noting factors
29 that determine the outer bounds. State any assumptions made and estimate the role of
30 structural uncertainties. Report likelihood or probability for values or changes outside
31 the range, if appropriate.
32
33 E. *A likelihood or probability can be determined for a variable, for the occurrence of an*
34 *event, or for a range of outcomes, e.g., based on multiple observations, model ensemble*
35 *runs, or expert judgment:* Assign a likelihood for the event or outcomes, for which
36 confidence should be “high” or “very high” (see paragraphs 8-10). In this case, the level
37 of confidence need not be explicitly stated. State any assumptions made and estimate the
38 role of structural uncertainties. Consider characterizing the likelihood or probability of
39 other events or outcomes within the full set of alternatives.
40
41 F. *A probability distribution or a set of distributions can be determined for the variable*
42 *either through statistical analysis or through use of a formal quantitative survey of expert*
43 *views:* Present the probability distribution(s) graphically and/or provide a range of
44 percentiles of the distribution(s), for which confidence should be “high” or “very high”
45 (see paragraphs 8-10). In this case, the level of confidence need not be explicitly stated.

1 Explain the method used to produce the probability distribution(s) and any assumptions
2 made, and estimate the role of structural uncertainties.

3
4 **In summary, communicate uncertainty carefully, using calibrated language for key**
5 **findings, and provide traceable accounts describing your evaluations of evidence and**
6 **agreement in your chapter.**

7 8 9 10 **References**

- 11
- 12 1. Moss, R., and S. Schneider. 2000. Uncertainties, in Guidance Papers on the Cross Cutting Issues
- 13 of the Third Assessment Report of the IPCC, edited by R. Pachauri, T. Taniguchi, and K. Tanaka,
- 14 Intergovernmental Panel on Climate Change (IPCC), Geneva.
- 15 2. IPCC, "Guidance Notes for Lead Authors of the IPCC Fourth Assessment Report on Addressing
- 16 Uncertainties," available at:
- 17 http://www.ipcc.ch/publications_and_data/publications_and_data_supporting_material.htm
- 18 3. Manning, M.R., M. Petit, D. Easterling, J. Murphy, A. Patwardhan, H-H. Rogner, R. Swart, and
- 19 G. Yohe (Eds). 2004. IPCC Workshop on Describing Scientific Uncertainties in Climate Change
- 20 to Support Analysis of Risk and of Options: Workshop report. Intergovernmental Panel on
- 21 Climate Change (IPCC), Geneva.
- 22 4. InterAcademy Council. 2010. Climate Change Assessments, Review of the Processes and
- 23 Procedures of the IPCC, available at: <http://reviewipcc.interacademycouncil.net/>
- 24 5. Morgan, M.G., H. Dowlatabadi, M. Henrion, D. Keith, R. Lempert, S. McBride, M. Small and T.
- 25 Wilbanks. 2009. Best Practice Approaches for Characterizing, Communicating, and Incorporating
- 26 Scientific Uncertainty in Climate Decision Making. U.S. Climate Change Science Program.
- 27 Synthesis and Assessment Product 5.2.
- 28 6. Morgan, M.G., and M. Henrion. 1990. Uncertainty: A Guide to Dealing with Uncertainty in
- 29 Quantitative Risk and Policy Analysis, Cambridge University Press, Cambridge, UK. (*See*
- 30 *particularly chapter 6 "Human judgment about and with uncertainty".*)
- 31 7. Straus, S. G., A.M. Parker, J. B. Bruce and J. W. Dembosky. 2009. The group matters: A review
- 32 of the effect of group interaction on processes and outcomes in analytic teams. RAND Working
- 33 Paper WR-580-USG.
- 34 8. Kahneman, D. and A. Tversky. 1979. Prospect theory: an analysis of decision under risk.
- 35 *Econometrica* **47**, 263-291.
- 36 9. Lempert, R. J., S.W. Popper, and S.C. Bankes. 2003. Shaping the Next One Hundred Years: New
- 37 Methods for Quantitative Long-Term Policy Analysis. RAND Corporation; and Lempert, R. J.
- 38 and M. E. Schlesinger. 2000. Robust strategies for abating climate change. *Climatic Change* **45**,
- 39 387-401.
- 40 10. Patt, A. G. and Schrag, D. 2003. Using specific language to describe risk and probability.
- 41 *Climatic Change* **61**, 17-30 (2003); and Patt, A. G. and S. Dessai. 2004. Communicating
- 42 uncertainty: lessons learned and suggestions for climate change assessment. *Comptes Rendu*
- 43 *Geosciences* **337**, 425-441.
- 44 11. Kandlikar, M., J. Risbey, and S. Dessai. 2005. Representing and Communicating Deep
- 45 Uncertainty in Climate Change Assessments, *Comptes Rendu Geosciences* **337**, 443-451.
- 46

SCOPING DOCUMENT

Scope, Content and Process for the Preparation of the Synthesis Report (SYR) of the IPCC Fifth Assessment Report (AR5)

Background

At its 28th Session, Budapest, 9-11 April 2008 the Panel agreed to do a Synthesis Report and at its 30th Session, Antalya, 21-23 April 2009 agreed that the scoping of the AR5 SYR should start with the first scoping meeting. In line with that decision a broad outline for the AR5 Synthesis Report was developed at the AR5 Scoping Meeting held in Venice, 13-17 July 2009. A dedicated scoping meeting for the Synthesis Report was held in Liège, Belgium from 24-27 August 2010, from which the Liège Scoping Document IPCC-XXXII/Doc. 4 was produced for the 32nd Session of the Panel.

The following scoping document was developed at the 32nd Session from discussions based on the Liège Scoping Document.

I. SCOPE

As defined in the IPCC procedures, the SYR would synthesize and integrate material contained within IPCC Assessment Reports and Special Reports. The SYR would be based exclusively on material contained in the three Working Group Reports and Special Reports produced during the 5th or previous Assessment Cycles. It would be written in a “non-technical style suitable for policymakers and address a broad range of policy-relevant, but policy-neutral questions”. The SYR should be largely self-contained, but guide readers to the underlying material if they wish to look further.

The primary audience for the SYR would be policymakers, in particular from governments, advisors to policymakers, and experts. However, it is recognized that others will also make use of the report.

The proposed SYR would consist of two parts:

1. Summary for Policymakers (SPM): up to 8 pages of text excluding the tables, maps, boxes and figures
2. Longer Report: up to 30 pages of text excluding the tables, maps, boxes and figures

The SYR publication would also contain annexes such as a glossary, list of authors, reviewers, Review Editors, and an index.

The AR5 SYR would be self contained and published as a stand-alone publication in the six official UN languages. It would be accompanied by a DVD, which contains the SYR (SPM and longer report), the contributions of the three IPCC Working Groups to the AR5 in English, and the summaries of these reports (SPM and Technical Summary) in all official UN languages. Automatic hyperlinks to references from the SYR (and its SPM) to the longer Working Group reports will be available on the DVD/off-line version and the web-based version of the reports. There will also be full traceability in the referencing for the AR5 in the hard copies of all the reports, including the SPM of the SYR.

II. CONTENT

The following structure for the AR5 SYR is proposed.

The topic and box headings and the structure for the SYR, outlined here, are agreed. However, flexibility is provided to the SYR writing team in the development of the proposed content (list of bullets) provided here as guidance, and not as a constraint. All bullets will be considered by the core writing team (CWT). The coverage of the bullets will depend on the assessment of the literature by the authors, cognizant of the page length restrictions. The IPCC Chair will report to the Panel on the evolution of the outline of the SYR after the zero order draft has been produced.

The core writing team may note submissions by governments containing their views and questions on the SYR, including IPCC-XXXII/INF.3 and IPCC-XXXI/INF.5. The SYR would be based exclusively on material contained in the three Working Group Reports and Special Reports produced during the 5th or previous Assessment Cycles.

Cross Cutting Themes and Methodologies (CCT and CCM) need to be given careful attention throughout the report, and particular attention must be paid to specific issues requiring consistent treatment in the SYR.

III. SYR OUTLINE

FOREWORD

The Chairman's foreword will describe the history of the report, its structure, and the relationship to the other AR5 reports, how detailed information on topics and regions can be accessed and how it has been cross-referenced. It will describe who the intended users are. It will also state how the cross cutting themes and methodologies used in the AR5 are addressed in the SYR.

INTRODUCTION

- Rationale
- Framing the climate and human systems
- Major challenges
- Treatment of confidence, risk and uncertainty

TOPIC 1 – Observed Changes and their Causes

- Pre-instrumental environmental changes, their effects and their causes
- Recent observed changes in the climate system
- Observed effects and impacts
- Past and recent drivers of climate change
- Attribution of climate changes, impacts, effects and drivers
- Human activities affecting climate drivers
- Historical transformational dynamics of societies and lessons to be learned
- Observed vulnerability to shifts in extreme-events and other climatic changes

TOPIC 2 - Future Climate Changes, Impacts, and Risks

Drivers of future climate change

- Description of Representative Concentration Pathways (RCPs) and scenarios used in AR5 (including comparison with the Special Report on Emissions Scenarios (SRES) and previous Assessment Reports)
- Anthropogenic (primarily) and physical factors that lead to a change in climate (e.g.,

emissions, land-use change, population, etc.)

Basis of projections

- Earth system, vulnerabilities, impacts, and economic models, and their validity
- Uncertainty and confidence

Projections of future changes and risks

- Climate futures: mean, variability, and extremes
- Committed climate change, abrupt changes, irreversibility
 - High impact / low probability events
- Changes and impacts on systems, sectors, and regions
 - Ecosystems, food production, and sustainable economic development (Article 2 of the UNFCCC)
- Direct and aggregate costs
- Relationships between risks and vulnerabilities with temperature, levels, timing, and pathways for stabilization of greenhouse gas concentrations / cumulative emissions

TOPIC 3 - Adaptation and Mitigation Measures

Response options

- Observed responses
 - Drivers, outcomes and implications
- Adaptation and mitigation responses (including regional and sectoral perspectives):
 - Options, including technologies, and related policies and measures
 - Capacities and their determinants
 - Costs and benefits, including co-benefits, trade-offs, and spillover effects
 - Barriers, constraints, and limits, including inertia
 - Cross-cutting issues and aggregate responses
- Interactions between adaptation, mitigation, and development, including equity and ethics
- Geo-engineering – possible role, options, risks and status

Enabling factors and addressing barriers, constraints, and limits including regional considerations

Note: this part should address only the factors related to specific options but not address systemic aspects

- International and regional collaboration
- Governance and institutional arrangements
- Investment, finance and financial instruments
- Changes in lifestyles and behavioural patterns
- Innovation, and technology research, development, deployment, diffusion and transfer
- Information, monitoring and evaluation to support decision-making

TOPIC 4 - Transformations and Changes in Systems

Note: This topic takes a systems perspective in addressing climate change response strategies and policies.

Overview of transformation pathways

- Interpreting scenarios and their pathways including regional and sectoral aspects across

different stabilization levels (timeframes and emission pathways for different stabilization levels)

- Mitigation and adaptation strategies - characteristics, risks and interactions
- Systems, costs, investment strategies, and trade flows
- Avoided damages under adaptation and mitigation
- Benefits and co-benefits, tradeoffs and spillover effects (mitigation, adaptation and sustainable development); Possible reference to Millennium Development Goals (MDGs)
- Societal changes

Strategic approaches: common and specific systemic changes across the pathways

- Technology change (RD&D, technology transfer, role of private sector)
- Societal changes
- Policy, governance and institutional (including international) arrangements
- Investment and finance
- Capacity building: mechanisms and strategies
- Equity and ethical dimensions
- Diversity of values and priorities
- Co-benefits, tradeoffs, obstacles and barriers

Box - Information relevant to Article 2 of the UNFCCC

Note: this box will not duplicate information presented in former topics; cross-references should be made to the corresponding data in previous topics.

- Preamble preventing prescriptive interpretation
- Relationship of risks and key vulnerabilities to levels, timing and pathways for stabilization of greenhouse gas concentrations (including regional information)
- Relationship to cumulative emissions and budgets
- Timeframes and pathways for stabilization of greenhouse gas concentrations

Ecosystems, Food Production and Sustainable Economic Development

- Allowing ecosystems to adapt naturally
- Ensuring food production is not threatened
- Enabling economic development to proceed in a sustainable manner (including regional information)

Annexes

- User guide and access to more detailed information
- Glossary
- Acronyms, chemical symbols; scientific units; country groupings
- List of Authors
- List of Reviewers and Review Editors
- Index
- List of all publications of the IPCC

IV PREPARATION OF THE SYR

Writing Team

The IPCC Chair would lead the Core Writing Team (CWT). In accordance with the IPCC Procedures the members of the CWT would be nominated by the IPCC Chair in consultation with the Co-Chairs of the Working Groups. The composition of the writing team would be agreed by the Bureau.

Time schedule

In order to start the synthesis report process in a timely manner, the implementation of the decisions of IPCC-32 on the SYR will be taken up by the IPCC Chair and WG Co-Chairs at the time of the IPCC-34 Session in November 2011. This discussion will include criteria for composition and selection of members of the core writing team and extended writing team.

- The members of the core writing team (CWT) and members of the extended writing team would be chosen in March 2012, after the second Lead Author meetings of the three Working groups. By that time, the Co-Chairs and writing teams will have sufficient oversight as to efficiently divide the workload.
- CWT-1 should be held in mid 2012 (when all 1st-order drafts of the WG Reports are available) the writing of the Zero-order draft SYR would start. A progress report for the next Session of the Panel (scheduled Sept/Oct 2012 tbd) will be prepared.
- Between January and March 2013 the Zero-order draft of the SYR will be reviewed by the authors of the AR5 Working Group Reports.
- CWT-2 would meet in mid 2013 to consider the comments on the Zero-order draft and start writing the first draft SYR based on the 2nd-order drafts of the Working Group Reports, including development of integrated graphics, figures and tables.
- CWT-3 (scheduled for January 2014 after the final drafts of all Working Group contributions are available) will produce a draft SYR.
- CWT-3bis should be a small targeted meeting held back-to-back with the Approval Session of WGIII (April 2014) and revise the first draft based on the outcome of this Session and produce a second-order draft for expert government review.
- The expert/government review will take place in May/June 2014 (8 weeks).
- CWT-4 (scheduled early July) would consider the review comments and prepare the final draft SYR.
- The final draft would be submitted to governments and participating organizations at least 8 weeks before the Session of the Panel that adopts/approves the AR5 SYR.
- Adoption and approval of the SYR and its SPM will take place by end of October 2014 to allow making available an advanced copy of the longer report and the SPM of the AR5 SYR prior to the UNFCCC COP 20.
- The Panel invites the UNFCCC to consider holding COP 20 as late as possible in order to allow sufficient time between the SYR approval Session and its availability for UNFCCC COP 20.
- Printing, Translation and Distribution of the AR5 should be ready in February or March by early 2015.

Management of the SYR

The IPCC Chair will chair the writing team and provide overall guidance to the development of the SYR. The management of the SYR will be considered at a future plenary.

IPCC TRUST FUND PROGRAMME AND BUDGETDecisions taken by the Panel at its 32nd Session

Based on the recommendations of the Financial Task Team, the Panel:

1. Thanked the Secretariat of IPCC for the Statement of contributions and expenditure as of 30 September 2010, as contained in document IPCC-XXXII/Doc.3/Add.2.
2. Approved the modifications proposed by the Secretariat to the 2010 budget:
 - postponement of 3 meetings to 2011
 - reduction from 65 journeys to 57 journeys for WGI AR5 LA 1
 - addition of budget line for external audit.
3. Approved the 2011 budget with the following additions: one day for the 33rd Session of the IPCC, one SRREN CLA meeting to deal with consistency, a budget line for external audit and 25 trips to cover travel costs of the 4 Task Groups established to implement the recommendations of the IAC Report.
4. Noted the 33rd Session of the IPCC may be held separately from the WGIII Session for accepting and approval of SRREN.
5. Noted the forecast budget for 2012 and the indicative budget for the two following years 2013-2014, up to the end of the Fifth Assessment cycle, as proposed in IPCC-XXXII/Doc.3 and the need to align the budget with any matters arising from Panel decisions in relation to the IAC report at the 33rd Session of the IPCC.
- 6a. Requested that the IPCC Chair write to the Secretary General of WMO to stress the importance of effective and efficient travel arrangements for the conduct of IPCC business.
- 6b. Called on developed country members of the Panel to be prepared to pay the travel costs for experts from their country as has been practiced in the past.
7. Requested that the Secretariat maintain a list of all in-kind activities, to the extent feasible, (e.g. TSUs), as an appendix to future budgets so as to improve the transparency and completeness of the IPCC Programme and Budget.
8. Requested the Secretariat to maintain a list of underlying costing assumptions as an appendix to future budget documents so as to improve transparency and completeness.
9. Requested that the Secretariat provide a strategic program and budget presentation to the Financial Task Team at the 33rd Session of the IPCC that examines projected income, project budget and project expenditure by source for the duration of the Fifth Assessment cycle.
10. Expressed its gratitude to the WMO and UNEP for their contributions to IPCC Trust Fund and for financing one position each, and to WMO for hosting the Secretariat.
11. Expressed its gratitude to governments, including those from developing countries, for their generous contributions to the IPCC Trust Fund, with special thanks to governments which support the TSUs and a number of IPCC activities, including data centres, meetings and outreach actions.

12. The Panel noted the importance of ensuring alignment of the programmes with the budget across the Fifth Assessment cycle. The budget of 2011 is increasing and will exceed CHF 10,000,000. The Panel noted the pressures of resource needs on the budget will increase along the course of the Fifth Assessment period and any financial implications that may arise from the IAC report. The Panel requests that countries maintain their generous contribution in 2010 and 2011 and invites governments, which may be in a position to do so, to increase their level of contributions to the IPCC Trust Fund or to contribute in case they have not yet done so. The Panel requested that the Chair and Secretariat work closely with governments to seek contributions by conducting fundraising efforts and report back to the 33rd Session of the IPCC.

TABLE 5

2010 REVISED BUDGET ADOPTED BY IPCC-XXXII

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-32 3 days	programme and budget various	540,000 120 journeys	210,000	750,000
Bureau 4 days	2 sessions and consultations	351,000 78 journeys	125,400	476,400
TFB	1 session	40,500 9 journeys	6,075	46,575
SBSTA/COP/JWG and other UN meetings		67,500 15 journeys		67,500
SUB-TOTAL				1,340,475
Lead Authors, scoping and expert meetings for reports agreed by Panel				
WG I AR5 LA 1	CLA/LA meeting	256,500 57 journeys	38,475	294,975
WG II AR5 * LA 1	CLA/LA meeting	472,500 105 journeys	70,875	0
Scoping meeting for AR5 SYR		180,000 40 journeys	27,000	207,000
Sea level rise/ice sheet workshop	AR5 workshop (WG I)	180,000 40 journeys	27,000	207,000
Multi Model Climate Projections	AR5 expert meeting (WG I/II)	72,000 16 journeys	10,800	82,800
Expert meeting on ocean acidification *	expert meeting (WG II)	135,000 30 journeys	20,250	0
Expert meeting on human settlements *	expert meeting (WG III)	135,000 30 journeys	20,250	0
Cross-WG Mtg on Art. 2	cross-WG meeting	45,000 10 journeys	6,750	51,750
Cross-WG Mtg on uncertainties and risks	cross-WG meeting	45,000 10 journeys	6,750	51,750
SRREN expert meetings and LA 3 and 4	2 CLA/LA mtgs, 2 expert mtg	706,500 157 journeys	105,975	812,475
SREX LA 2 and 3	2 CLA/LA meetings and 1 expert meeting (case studies)	459,000 102 journeys	68,850	527,850
SUB-TOTAL				2,235,600
Other scoping meetings, expert meetings and workshops				
New Scenarios	2 expert meetings	180,000 40 journeys	27,000	207,000
TGICA	2 meetings	63,000 14 journeys	9,450	72,450
EFDB Board	1 meeting	94,500 21 journeys	14,175	108,675
EFDB Expert meeting	2 meetings	90,000 20 journeys	13,500	103,500
TFI Software review	1 meeting	90,000 20 journeys	13,500	103,500
UNFCCC-TFI contingency		90,000 20 journeys	13,500	103,500
TFI Expert meetings	2 expert meetings on IPCC 2006 guidelines	180,000 40 journeys	27,000	207,000
Issues arising from using the IPCC 2006 guidelines		45,000 10 journeys	6,750	51,750
SUB-TOTAL				957,375
Other Expenditures				
EFDB maintenance	update/management			7,000
2006 GL software	software development			60,000
Outreach				400,000
Webconferences	licence and equipment			12,000
Secretariat				1,300,000
External Audit				20,000
Co-Chairs				250,000
SUB-TOTAL				2,049,000
TOTAL				6,582,450

* Postponed to 2011

TABLE 6

PROPOSED BUDGET FOR 2011 ADOPTED BY IPCC-XXXII

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
WG III, 11th Session; 4 days	approval and acceptance of SRREN	540,000 120 journeys	280,000	820,000
IPCC-33 4 days, back-to-back with WG III	programme and budget various	270,000 60 journeys	280,000	550,000
Joint WG I/II 4 days	approval and acceptance of SR on extreme events	540,000 120 journeys	280,000	820,000
IPCC-34 2 days, back-to-back with WG I/II Session	programme and budget various	270,000 60 journeys	140,000	410,000
Bureau 4 days	2 sessions and consultations	351,000 78 journeys	125,400	476,400
TFB	1 session	40,500 9 journeys	6,075	46,575
Task Groups (4)	Implementation of IAC recommendations	112,500 25 journeys	16,875	129,375
SBSTA/COP/JWG and other UN meetings		67,500 15 journeys		67,500
SUB-TOTAL				3,319,850
Lead Authors, scoping and expert meetings for reports agreed by Panel				
WG I AR5 LA 2	CLA/LA meetings	256,500 57 journeys	38,475	294,975
WG II AR5 LA 1* and 2	CLA/LA meetings	936,000 208 journeys	140,400	1,076,400
WG II AR5 regional expert meetings	to support part B of WG II	450,000 100 journeys	67,500	517,500
WG III AR5 LA 1	CLA/LA meeting	486,000 108 journeys	72,900	558,900
Expert meeting on economics, costing	WG II & III	135,000 30 journeys	20,250	155,250
AR5 cross cutting issues and SYR	expert and SYR CWT meetings	180,000 40 journeys	27,000	207,000
LA 4 SREX	1 CLA/LA meeting and prep CLA mtg before Session	202,500 45 journeys	30,375	232,875
SREX approval session	preparatory meeting CLAs, REs, Bureau members	45,000 10 journeys	6,750	51,750
SRREN	CLA meeting (consistency)	58,500 13 journeys	8,775	67,275
SRREN approval session	preparatory meeting CLAs, REs, Bureau members	99,000 22 journeys	14,850	113,850
Expert meeting on ocean acidification *	expert meeting (WG II/I)	135,000 30 journeys	20,250	155,250
Expert Meeting on Human Settlements and Infrastruc.*	Expert meeting (WG II/III)	135,000 30 journeys	20,250	155,250
Expert Meeting on Geoengineering	Expert Meeting (WG I/II/III)	112,500 25 journeys	16,875	129,375
SUB-TOTAL				3,715,650
Other scoping meetings, expert meetings and workshops				
New Scenarios	1 expert meeting	180,000 40 journeys	27,000	207,000
TGICA	2 meetings	63,000 14 journeys	8,820	71,820
EFDB Board	1 meeting	94,500 21 journeys	14,175	108,675
EFDB Expert meeting	2 meetings	90,000 20 journeys	13,500	103,500
TFI Expert meeting Wetlands	1 meeting	108,000 24 journeys	16,200	124,200
TFI Expert meeting Bottom-up Inventory Compilation	1 meeting	108,000 24 journeys	16,200	124,200
TFI Expert meeting Software	1 meeting	108,000 24 journeys	16,200	124,200
2006 GL Related Issues Japan	1 meeting	45,000 10 journeys	0	45,000
TFI Expert meeting UNFCCC Needs	contingency for 1 expert meeting	108,000 24 journeys	16,200	124,200
SUB-TOTAL				1,032,795
Other Expenditures				
EFDB maintenance	update/management			7,000
2006 GL software	software development			30,000
Publication	SRREN publication/translation			200,000
Outreach				400,000
Webconferences	licences & communication costs			50,000
Secretariat				1,400,000
External audit				20,000
SYR TSU	1 professional staff member			100,000
Co-Chairs				250,000
SUB-TOTAL				2,457,000
TOTAL				10,525,295

* Approved in 2010 but postponed to 2011

TABLE 7

FORECAST BUDGET FOR 2012 NOTED BY IPCC-XXXII

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-35 3 days	programme and budget various	540,000 120 journeys	210,000	750,000
Bureau 4 days	2 sessions and consultations	351,000 78 journeys	125,400	476,400
TFB	1 session	40,500 9 journeys	6,075	46,575
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
SUB-TOTAL				1,340,475
Lead Authors, scoping and expert meetings for reports agreed by Panel				
WG I AR5 LA 3	CLA/LA meeting	288,000 64 journeys	43,200	331,200
WG II LA 3	CLA/LA meetings	576,000 128 journeys	86,400	662,400
WG III LA 2 and 3	CLA/LA meetings	1,035,000 230 journeys	155,250	1,190,250
AR5 cross cutting issues and SYR	experts and SYR CWT meetings	180,000 40 journeys	27,000	207,000
SUB-TOTAL				2,390,850
Other scoping meetings, expert meetings and workshops				
New Scenarios	1 expert meeting	180,000 40 journeys	27,000	207,000
TGICA	2 meetings	63,000 14 journeys	9,450	72,450
EFDB Board	1 meeting	94,500 21 journeys	14,175	108,675
EFDB Expert meeting	2 meetings	90,000 20 journeys	13,500	103,500
TFI Expert meetings	contingency for 3 expert meetings	261,000 58 journeys	39,150	300,150
SUB-TOTAL				791,775
Other Expenditures				
EFDB maintenance	update/management			7,000
2006 GL software	software maintenance			6,000
Publication(contingency)	possible SR on extreme events			200,000
Outreach				400,000
Webconferences	licences & communication costs			50,000
Secretariat				1,400,000
External audit				20,000
SYR TSU	1 professional staff member			200,000
Co-Chairs				250,000
SUB-TOTAL				2,533,000
TOTAL				7,056,100

TABLE 8

INDICATIVE BUDGET FOR 2013 NOTED BY IPCC-XXXII

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-36 2 days	programme and budget various	540,000 120 journeys	140,000	680,000
WG I Session 4 days	approval AR5 WG I Report	540,000 120 journeys	280,000	820,000
Bureau	2 sessions and consultations	351,000 78 journeys	125,400	476,400
TFB	1 session	40,500 9 journeys	6,075	46,575
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
SUB-TOTAL				2,090,475
Lead Authors, scoping and expert meetings for reports agreed by Panel				
WG I AR5 LA 4	CLA/LA meeting	288,000 64 journeys	43,200	331,200
WG I Session	preparatory meeting before Plenary	45,000 10 journeys	6,750	51,750
WG II LA 4	CLA/LA meeting	576,000 128 journeys	86,400	662,400
WG III LA 4	CLA/LA meeting	553,500 123 journeys	83,025	636,525
AR5 SYR	SYR CWT meetings	180,000 40 journeys	27,000	207,000
SUB-TOTAL				1,888,875
Other scoping meetings, expert meetings and workshops				
TGICA	2 meetings	63,000 14 journeys	9,450	72,450
EFDB Board	1 meeting	94,500 21 journeys	14,175	108,675
EFDB Expert meeting	2 meetings	90,000 20 journeys	13,500	103,500
TFI Expert meetings	contingency for 3 expert meetings	261,000 58 journeys	39,150	300,150
SUB-TOTAL				584,775
Other Expenditures				
EFDB maintenance	update/management			7,000
2006 GL software	software maintenance			6,000
Publications	WG I publication/translation			300,000
Outreach				400,000
Webconferences	licences & communication costs			50,000
Secretariat				1,400,000
External audit				20,000
SYR TSU	1 professional staff member			200,000
Co-Chairs				250,000
SUB-TOTAL				2,633,000
TOTAL				7,197,125

TABLE 9

INDICATIVE BUDGET FOR 2014 NOTED BY IPCC-XXXII

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-37 (or 38) 6 days	Approval/adoption AR5 SYR various	540,000 120 journeys	420,000	960,000
WG II Session 4 days	Approval AR5 WG II Report	540,000 120 journeys	280,000	820,000
WG III Session 4 days	Approval AR 5 WG III Report	540,000 120 journeys	280,000	820,000
Bureau 4 days	2 sessions and consultations	351,000 78 journeys	125,400	476,400
TFB	1 session	40,500 9 journeys	6,075	46,575
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
SUB-TOTAL				3,190,475
Lead Authors, scoping and expert meetings for reports agreed by Panel				
WG II Session	preparatory meeting before Plenary	67,500 15 journeys	10,125	77,625
WG III Session	preparatory meeting before Plenary	157,500 35 journeys	23,625	181,125
AR5 SYR	CWT meeting and preparatory CWT meeting before Panel	135,000 30 journeys	20,250	155,250
SUB-TOTAL				414,000
Other scoping meetings, expert meetings and workshops				
TGICA	2 meetings	63,000 14 journeys	9,450	72,450
EFDB Board	1 meeting	67,500 21 journeys	10,125	77,625
EFDB Expert meeting	2 meetings	90,000 20 journeys	13,500	103,500
TFI Expert meetings	contingency for 3 expert meetings	261,000 58 journeys	39,150	300,150
SUB-TOTAL				553,725
Other Expenditures				
2006 GL software	software maintenance			6,000
EFDB maintenance	update/management			7,000
Publications	WG II/III			600,000
Outreach				400,000
Webconferences	licences & communication costs			30,000
Secretariat				1,400,000
External audit				20,000
SYR TSU	1 professional staff member			200,000
Co-Chairs				250,000
SUB-TOTAL				2,913,000
TOTAL				7,071,200



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

**THIRTY-SECOND SESSION OF THE
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE
Busan, 11-14 October 2010**

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