REPORTS

Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies, 15-18 September 2015, São José dos Campos, Brazil

(Submitted by the Acting Secretary of the IPCC)
(Prepared by the Co-Chairs of Working Group I)
The IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies was held at the Instituto Nacional de Pesquisas Espaciais (INPE) in São José dos Campos, Brazil from 15 to 18 September 2015. The support of the Government of Brazil and the assistance of Dr Thelma Krug are kindly acknowledged.

Following the approval of the WGI Proposal (see Annex 1) to hold this Workshop, a Scientific Steering Committee was formed and a call for nominations of experts was sent to all IPCC member Governments from the Secretariat on 24 March 2015, with a close date for nominations of 18 May 2015. The WGI Bureau, assisted by the Scientific Steering Committee, considered the nominations of 290 potential participants, from 97 countries. The selection of experts considered the need for adequate coverage of the scientific and technical areas of expertise defined for the workshop, broad geographic representation, gender balance, the inclusion of young scientists and experts not previously involved in the IPCC, as well as the limitations in overall size and the limited number of trips available for support through the IPCC Trust Fund.

The Workshop brought together 110 experts from 52 countries to discuss regional climate projections and their use in impacts and risk analysis studies. The workshop included experts from the Working Group I and Working Group II communities, including scientists from the climate modelling community, the regional modelling and downscaling community, and the climate impacts and risk analysis communities. The workshop provided an opportunity for the participants to reflect on the assessment of regional climate change projections and the regional projections of climate change impacts and risks in the IPCC Fifth Assessment Report, discuss developments made since the IPCC Fifth Assessment Report, and explored ways to facilitate the collaboration and exchange between the different communities in advance of and during the IPCC Sixth Assessment Report, with the goal to enhance the information IPCC can provide its users and stakeholders. A copy of the final Programme (Annex 2) and Participant List (Annex 3) are attached to this report.

A Workshop Report, including an Information Paper that will provide a synthesis of the scientific discussions including recommendations to the IPCC, is currently being finalized as is expected to be available at the end of November 2015, in time to help inform the scoping of the IPCC Sixth Assessment Report.

**Outreach and Communication**

Three outreach events and one media event were held in conjunction with the IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies.

On 14 September 2015, two outreach events, coordinated by Brazil with support from WGI, were held at INPE. They addressed secondary school students and teachers from the area in the morning and the scientific community from the area in the afternoon. The events, the first of which with simultaneous translation in English and Portuguese, included presentations by the WGI Co-Chairs, TSU and Authors, and were attended by about 200 students and 100 scientists, respectively.

On 15 September 2015, following on the positive experience of previous WGI organized meetings, a Media Briefing was held following the Opening Ceremony to provide the local and national media with background information on the IPCC, WGI/WGII, the AR5, and the purpose of the workshop. The Media Briefing also provided an opportunity for a question and answer session for members of the press with the WGI Co-Chairs and WGII Co-Chair, Vicente Barros. The Media Briefing included translation support in Portuguese, English, Chinese and Spanish. The Media Briefing and Opening
Ceremony, as well as a number of individual interviews, were the subject of a variety of media coverage including television, radio, and newspaper reports.

On 18 September 2015, a joint event organized by Brazil through INPE and The Netherlands through the Royal Netherland Meteorological Institute (KNMI), with support from IPCC through WGI, was held at INPE for users and policymakers on efforts toward climate services. The event included presentations by the WGI Co-Chairs and Authors and was attended by a range of participants from government ministries, embassies, scientific institutions
FUTURE WORK OF THE IPCC

Proposal for an IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies

(Submitted by the Co-Chairs of Working Group I on behalf of the Working Group I Bureau)
Proposal for an IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies

Submitted by the Co-Chairs of Working Group I on behalf of the Working Group I Bureau

Background

Regional climate change projections provide the quantitative basis for studies of projected impacts from climate change and associated risks, which are essential building blocks for the comprehensive assessment of climate change science by the IPCC. There exist a number of climate modelling initiatives aimed at producing regional climate change projections, but they overall have not yet reached the maturity necessary for their wide spread use by the impacts assessment community and relevant stakeholders. Therefore there is a real opportunity to strengthen the link between regional projections and the assessment of projected impacts and risks by the IPCC. This will enhance the information the IPCC can provide to its users and stakeholders.

Working Group I (WGI) in its contribution to the IPCC Fifth Assessment Report (AR5) did provide a comprehensive assessment of climate change projections from global to regional scales. This assessment, however, relied largely on information derived from large-scale, multi-model initiatives using global climate models. The WGI Atlas of Global and Regional Climate Projections, for example, a new feature of the AR5 that provides maps and regionally averaged time series of annual and seasonal multi-model means, with uncertainties, of changes in surface temperature and precipitation over the 21st century for 37 regions covering the entire world, is based entirely on global climate models. Although model data underlying the WGI Atlas is electronically available from the IPCC websites as part of the WGI Supplementary Material of AR5, it is not yet widely used in studies of regional impacts and risks of climate change to human and natural systems around the world. Regional impacts and risks studies would substantially benefit from the inclusion of information coming from regional climate models or from statistical downscaling methods used to drive impacts models (e.g., crop models, hydrology models, etc.).

Since the finalization of the WGI AR5 in September 2013, important activities in the physical science community have evolved which will be crucial for an enhanced interaction between IPCC WGI and WGI in the area of assessing projections of climate change impacts at a regional scale. These concern, for example, the definitional phase of Phase 6 of the Coupled Model Intercomparison Project (CMIP6) which will include the next generation of comprehensive climate models. It is expected that there will be a further increase in model resolution which will provide even more regional details to users and stakeholders from global models. A second area of rapid progress is the Coordinated Regional Climate and Downscaling Experiment (CORDEX) of the World Climate Research Programme (WCRP). The initial focus was on Africa, but currently 14 regional domains around the world are being considered in CORDEX and the data base of this coordinated regional modelling initiative is rapidly growing.

It is therefore timely for the IPCC to convene a Workshop to explore ways how to enhance the convergence of information on projections of climate change and resulting risks and impacts, and to improve the consistent use and application of information in the next IPCC assessment cycle. The Workshop should bring together scientists from both the WGI and WGII communities, i.e., from the climate modelling community (e.g., CMIP5 and CMIP6), the regional modelling and downscaling community (e.g., CORDEX) and the climate impacts and risk community. It is important to hold such a Workshop early, and even before the decision on the scope and outline of the next IPCC assessment cycle, in order to help establish closer links between these communities and to facilitate the IPCC assessment process in the future. This would also be beneficial to the IPCC scoping process and subsequent author nomination and selection, in particular with regard to the regional representation in the WGI and WGII scopes and cross-WG topics, if the Panel decides to carry out a 6th assessment cycle.

Aims of Workshop

- Critically reflect on the assessment of regional climate change projections and of regional projections of climate change impacts and risks, and their limitations, in the IPCC AR5;
- Collect views and perspectives on how IPCC assessment of regional projections could be better supported/improved from leading world experts on issues related to regional information from climate model...
projections and dynamical downscaling as well as from the broader community of impacts studies and climate risk analyses which use physical climate information;

- Discuss the latest, post IPCC AR5 results from regional climate modelling and downscaling efforts and obtain an overview of the status of information currently available or foreseen on a time scale relevant for the next assessment cycle for all regions of the world;
- Explore ways how the IPCC could facilitate the collaboration and exchange between the climate modelling and impact and risk communities in issues related to projections of climate change, risks and impacts, including ensuring an effective flow and quality control of information and data;
- Identify numerical data requirements (climate variables, derived quantities, proxies, and statistics) by the impacts and risk communities from the climate modelling community that could help facilitate the assessment process in the next IPCC assessment cycle and that would help provide the basis for a comprehensive IPCC assessment.
- Draft an Information Paper covering, inter alia, (i) how the collaboration of the climate modelling and impacts and risk analysis communities could be facilitated by the IPCC, (ii) data quality requirements and perhaps a data protocol to feed emerging data bases, and (iii) potential problems IPCC users and others need to be aware of. If available, a report would also present a few specific case studies in which regional climate model or high-resolution global climate model results are used and successfully applied for impacts studies.

Organizing Group (about 10 members)
Dahe Qin (WGI Co-Chair, China)
Thomas Stocker (WGI Co-Chair, Switzerland)
Fredolin Tangang (WGI Vice Chair, CORDEX South East Asia, Malaysia)
Bruce Hewitson (WGII Coordinating Lead Author, TGICA Co-Chair, South Africa)
Filippo Giorgi (WGII Lead Author, CORDEX Chair, Italy)
Geert Jan van Oldenborgh (WGI Lead Author, The Netherlands)
Caroline Vera (SREX Lead Author, Argentina)
Gian-Kasper Plattner (WGI TSU Head, Switzerland)

A Scientific Steering Committee with broad regional representation will be formed.

Timing: time window mid-August to mid-September

Duration: 4 days

Location: TBD

Participants
About 100 expert participants in total. In order to ensure broad international representation, it is proposed that there should be a call for governments to nominate scientific experts to attend the workshop. We envisage an allocation of 40 journeys from the IPCC Trust Fund to support experts from developing countries and countries with economies in transition. This allocation is being requested from the Panel at IPCC-XLI.

Expertise
Global climate modelling (CMIP5, CMIP6), regional climate modelling (e.g., CORDEX), downscaling, extreme events, climate statistics, impact studies, climate risk analysis.
Annex 2: Programme

IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies
Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil
15–18 September 2015

PROGRAMME

Tuesday, 15 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Registration/Poster Set-up</td>
</tr>
<tr>
<td>09:00</td>
<td>OPENING CEREMONY (Auditório Fernando de Mendonça)</td>
</tr>
<tr>
<td>09:00</td>
<td>Welcome and Opening [Chair: Thelma Krug]</td>
</tr>
<tr>
<td></td>
<td>Welcome Remarks:</td>
</tr>
<tr>
<td></td>
<td>◆ Mr Ricardo Novaes, Director, Department of the Environment, São José dos Campos</td>
</tr>
<tr>
<td></td>
<td>◆ Dr Leonel Fernando Perondi, Director, National Institute of Space Research</td>
</tr>
<tr>
<td></td>
<td>◆ Mr Everton Lucero, Director, Division of Climate, Ozone and Chemical Safety, Department of Environment and Special Themes, Ministry of Foreign Relations and IPCC Focal Point for Brazil</td>
</tr>
<tr>
<td></td>
<td>◆ Dr Márcio Rojas da Cruz, General Coordination for Global Climate Change, Ministry of Science, Technology and Innovation</td>
</tr>
<tr>
<td></td>
<td>◆ Prof Qin Dahe, Co-Chair, IPCC Working Group I</td>
</tr>
<tr>
<td></td>
<td>◆ Prof Vicente Barros, Co-Chair, IPCC Working Group II</td>
</tr>
<tr>
<td></td>
<td>◆ Prof Thomas Stocker, Co-Chair, IPCC Working Group I</td>
</tr>
<tr>
<td>10:00</td>
<td>Break (Planta Atrium)</td>
</tr>
<tr>
<td>10:00</td>
<td>Media Briefing (Auditório Roger Honiat)</td>
</tr>
<tr>
<td>10:30</td>
<td>INTRODUCTORY PLENARY (Auditório Fernando de Mendonça) [Chair: Qin Dahe]</td>
</tr>
<tr>
<td>10:30</td>
<td>Introduction to the IPCC AR5: from WGI and WGII to the Synthesis Report (Thomas Stocker) [15 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>10:50</td>
<td>Bridging the Gap Between Science and Practice for Information from Regional Climate Projections (Bruce Hewitson) [15 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>11:10</td>
<td>A Decisionmaker Perspective on Climate Information from Regional Climate Projections (Judy Omumbo) [15 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>11:30</td>
<td>THEME PLENARY SESSION I: LESSONS FROM THE ARS (Auditório Fernando de Mendonça) [Chair: Vicente Barros]</td>
</tr>
<tr>
<td>11:30</td>
<td>WGI Regional Climate Projections: Chapter 14 and Atlas (Krishna Kumar Kanikicharla and Geert Jan van Oldenborogh) [15 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>11:50</td>
<td>Impact Modelling: General Needs and WGII Experience (Linda Mearns) [15 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>12:10</td>
<td>Risk Modelling: General Needs and WGII Experience (Roger Jones) [15 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch (INPE Restaurant)</td>
</tr>
<tr>
<td></td>
<td><strong>THEME PLENARY SESSION II: COORDINATED MODELLING PROJECTS</strong> (Auditório Fernando de Mendonça) [Chair: Fredolin Tangang]</td>
</tr>
<tr>
<td>14:00</td>
<td><strong>CMIP and Applications</strong> (Veronika Eyring) [20 min presentation + 10 min discussion]</td>
</tr>
<tr>
<td>14:30</td>
<td><strong>CORDEX and Applications</strong> (Filippo Giorgi) [20 min presentation + 10 min discussion]</td>
</tr>
<tr>
<td>15:00</td>
<td><strong>Coordinated Impacts and Risk Modelling Projects</strong> (Sonali McDermid) [20 min presentation + 10 min discussion]</td>
</tr>
<tr>
<td>15:30</td>
<td>General Discussion</td>
</tr>
<tr>
<td>16:00</td>
<td>Break (Planta Atrium)</td>
</tr>
<tr>
<td></td>
<td><strong>POSTER SESSION I</strong> (Auditório Fernando de Mendonça) [Chair: Gian-Kasper Plattner]</td>
</tr>
<tr>
<td>16:30</td>
<td>Poster Presentations [2 min presentation with one ppt slide]</td>
</tr>
<tr>
<td>17:00</td>
<td>Poster Viewing (Planta Atrium)</td>
</tr>
<tr>
<td>18:00</td>
<td>Adjourn</td>
</tr>
<tr>
<td>18:00</td>
<td>Welcome Reception at INPE <em>(Sponsored by Working Group I/Government of Switzerland)</em></td>
</tr>
</tbody>
</table>
Annex 2: Programme

Wednesday, 16 September 2015

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Feedback from the IPCC TGICA Expert Meeting on Decision-Centered Approaches to the Use of Climate Information (Bruce Hewitson) [5 min presentation]</td>
</tr>
<tr>
<td>08:35</td>
<td><em>Perspective Presentation I</em> (Heike Huebener) [5 min presentation]</td>
</tr>
<tr>
<td>08:40</td>
<td><em>Perspective Presentation II</em> (Satoshi Watanabe) [5 min presentation]</td>
</tr>
<tr>
<td>08:45</td>
<td><em>Perspective Presentation III</em> (Benjamin Lamptey) [5 min presentation]</td>
</tr>
<tr>
<td>08:50</td>
<td><em>Perspective Presentation IV</em> (John Charlery) [5 min presentation]</td>
</tr>
<tr>
<td>08:55</td>
<td>Discussion</td>
</tr>
<tr>
<td>09:25</td>
<td><em>Perspective Presentation V</em> (Kathleen McInnes) [5 min presentation]</td>
</tr>
<tr>
<td>09:30</td>
<td><em>Perspective Presentation VI</em> (Suwanna Rongwiriyaphanich) [5 min presentation]</td>
</tr>
<tr>
<td>09:35</td>
<td><em>Perspective Presentation VII</em> (Petra Tschakert) [5 min presentation]</td>
</tr>
<tr>
<td>09:40</td>
<td><em>Perspective Presentation VIII</em> (Ines Camilloni) [5 min presentation]</td>
</tr>
<tr>
<td>09:45</td>
<td>Discussion</td>
</tr>
<tr>
<td>10:15</td>
<td>Break (Planta Atrium)</td>
</tr>
<tr>
<td>10:45</td>
<td>Poster Presentations [2 min presentation with one ppt slide]</td>
</tr>
<tr>
<td>11:15</td>
<td>Poster Viewing (Planta Atrium)</td>
</tr>
<tr>
<td>12:15</td>
<td>Lunch (INPE Restaurant)</td>
</tr>
<tr>
<td>13:45</td>
<td><em>Decisionmaking under Uncertainty</em> (Robert Lempert) [20 min presentation + 10 min discussion]</td>
</tr>
<tr>
<td>14:15</td>
<td>Introduction to Breakout Groups and Workshop Deliverables (Thomas Stocker and Qin Dahe)</td>
</tr>
<tr>
<td>14:30</td>
<td><em>Issues</em> (Kathleen McInnes, Linda Mearns and Judy Omumbo) [10 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>14:45</td>
<td><em>Requirements</em> (Taikan Oki, Jose Marengo and Fredolin Tangang) [10 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>15:00</td>
<td><em>Recommendations</em> (Carolina Vera, Filippo Giorgi and Bruce Hewitson) [10 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td>15:15</td>
<td>General Discussion</td>
</tr>
<tr>
<td>15:30</td>
<td>Break (Planta Atrium)</td>
</tr>
</tbody>
</table>
### BREAKOUT GROUP SESSION I

**16:00** Breakout Groups:

- **BOG1:** *Linking Coordinated Climate Model Projection Efforts with Impacts and Risk Modelling Efforts*  
  (Auditório Roger Honiat) [Chair: Jana Sillmann; Rapporteur: Tereza Cavazos]

- **BOG2:** *National/Regional Assessments: How to Optimize Climate Information for Use by Decisionmakers at Regional Scales*  
  (Meeting Room I) [Chair: Andrew Tait; Rapporteur: Kiyoshi Takahashi]

- **BOG3:** *Dealing with High Risk–Low Probability Events: What Climate Scientists Can Provide and What Decisionmakers Need to Deal with Climate/Weather Extremes and Natural Disasters (including bias corrections)*  
  (Meeting Room II) [Chair: Erich Fischer; Rapporteur: Sara Pryor]

**18:00** Adjourn

**18:30** WGI Bureau and Scientific Steering Committee Meeting (Golden Tulip Colinas Hotel Esplanada Meeting Room)
Thursday, 17 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Reports from Break-Out Groups (BOG Chairs)</td>
</tr>
<tr>
<td>08:45</td>
<td>General Discussion</td>
</tr>
<tr>
<td>09:00</td>
<td><strong>Theme Plenary Session V: From Global to National – Regional Assessments</strong> (Auditório Fernando de Mendonça) [Chair: David Wratt]</td>
</tr>
<tr>
<td>09:00</td>
<td>Perspective Presentation I (Jose Marengo) [5 min presentation]</td>
</tr>
<tr>
<td>09:05</td>
<td>Perspective Presentation II (Penny Whetton) [5 min presentation]</td>
</tr>
<tr>
<td>09:10</td>
<td>Perspective Presentation III (Panmao Zhai) [5 min presentation]</td>
</tr>
<tr>
<td>09:15</td>
<td>Perspective Presentation IV (Carolina Vera) [5 min presentation]</td>
</tr>
<tr>
<td>09:20</td>
<td>Discussion</td>
</tr>
<tr>
<td>09:45</td>
<td>Perspective Presentation V (Joanna Wibig) [5 min presentation]</td>
</tr>
<tr>
<td>09:50</td>
<td>Perspective Presentation VI (Gemma Teresa Narisma) [5 min presentation]</td>
</tr>
<tr>
<td>09:55</td>
<td>Perspective Presentation VII (Joseph Kanyanga) [5 min presentation]</td>
</tr>
<tr>
<td>10:00</td>
<td>Perspective Presentation VIII (Philip Mote) [5 min presentation]</td>
</tr>
<tr>
<td>10:05</td>
<td>Discussion</td>
</tr>
<tr>
<td>10:30</td>
<td>Break (Planta Atrium)</td>
</tr>
<tr>
<td>11:00</td>
<td>Breakout Groups:</td>
</tr>
<tr>
<td></td>
<td>BOG1: Linking Coordinated Climate Model Projection Efforts with Impacts and Risk Modelling Efforts (Auditório Roger Honiat) [Chair: Jana Sillmann; Rapporteur: Tereza Cavazos]</td>
</tr>
<tr>
<td></td>
<td>BOG2: National/Regional Assessments: How to Optimize Climate Information for Use by Decisionmakers at Regional Scales (Meeting Room I) [Chair: Andrew Tait; Rapporteur: Kiyoshi Takahashi]</td>
</tr>
<tr>
<td></td>
<td>BOG3: Dealing with High Risk–Low Probability Events: What Climate Scientists Can Provide and What Decisionmakers Need to Deal with Climate/Weather Extremes and Natural Disasters (including bias corrections) (Meeting Room II) [Chair: Erich Fischer; Rapporteur: Sara Pryor]</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch (INPE Restaurant)</td>
</tr>
<tr>
<td>14:30</td>
<td>Poster Presentations [2 min presentation with one ppt slide]</td>
</tr>
<tr>
<td>15:00</td>
<td>Poster Viewing (Planta Atrium)</td>
</tr>
<tr>
<td>16:00</td>
<td>Break (Planta Atrium)</td>
</tr>
</tbody>
</table>
**BREAKOUT GROUP SESSION III**

<table>
<thead>
<tr>
<th>Time</th>
<th>Breakout Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:30</td>
<td><strong>BOG1:</strong> <em>Linking Coordinated Climate Model Projection Efforts with Impacts and Risk Modelling Efforts</em> (Auditório Roger Honiat) <em>[Chair: Jana Sillmann; Rapporteur: Tereza Cavazos]</em></td>
</tr>
<tr>
<td></td>
<td><strong>BOG2:</strong> <em>National/Regional Assessments: How to Optimize Climate Information for Use by Decisionmakers at Regional Scales</em> (Meeting Room I) <em>[Chair: Andrew Tait; Rapporteur: Kiyoshi Takahashi]</em></td>
</tr>
<tr>
<td></td>
<td><strong>BOG3:</strong> <em>Dealing with High Risk–Low Probability Events: What Climate Scientists Can Provide and What Decisionmakers Need to Deal with Climate/Weather Extremes and Natural Disasters (including bias corrections)</em> (Meeting Room II) <em>[Chair: Erich Fischer; Rapporteur: Sara Pryor]</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Adjourn</th>
</tr>
</thead>
<tbody>
<tr>
<td>18:00</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>
**Annex 2: Programme**

Friday, 18 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>08:30</strong></td>
<td><strong>Synthesis Presentation: BOG1:</strong> Linking Coordinated Climate Model Projection Efforts with Impacts and Risk Modelling Efforts  [Chair: Jana Sillmann; Rapporteur: Tereza Cavazos; SSC Members: Filippo Giorgi, Judy Omumbo, Fredolin Tangang] [10 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td><strong>08:45</strong></td>
<td><strong>Synthesis Presentation: BOG2:</strong> National/Regional Assessments: How to Optimize Climate Information for Use by Decisionmakers at Regional Scales  [Chair: Andrew Tait; Rapporteur: Kiyoshi Takahashi; SSC Members: Bruce Hewitson, Jose Marengo, Carolina Vera] [10 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td><strong>09:00</strong></td>
<td><strong>Synthesis Presentation: BOG3:</strong> Dealing with High Risk–Low Probability Events: What Climate Scientists Can Provide and What Decisionmakers Need to Deal with Climate/Weather Extremes and Natural Disasters (including bias corrections)  [Chair: Erich Fischer; Rapporteur: Sara Pryor; SSC Members: Kathleen McInnes, Linda Mearns, Taikan Oki] [10 min presentation + 5 min discussion]</td>
</tr>
<tr>
<td><strong>09:15</strong></td>
<td><strong>General Discussion</strong></td>
</tr>
<tr>
<td><strong>10:00</strong></td>
<td><strong>Break</strong> (Planta Atrium)</td>
</tr>
<tr>
<td><strong>10:30</strong></td>
<td><strong>Synthesis Plenary Continued</strong></td>
</tr>
<tr>
<td><strong>10:45</strong></td>
<td><strong>General Discussion on Recommendations</strong></td>
</tr>
<tr>
<td><strong>11:45</strong></td>
<td><strong>Closing Remarks (Qin Dahe and Thomas Stocker)</strong></td>
</tr>
<tr>
<td><strong>12:00</strong></td>
<td><strong>End of Workshop</strong></td>
</tr>
</tbody>
</table>
Annex 3: Participant List

IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies
Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil
15–18 September 2015

PARTICIPANT LIST

Ana Paula AGUIAR
Instituto Nacional de Pesquisas Espaciais
BRAZIL

Amel AZZI AKLOUF
Office National de la Météorologie
ALGERIA

Rondrotiana BARIMALALA
Center for Ocean-Land-Atmosphere Studies
MADAGASCAR

Vicente BARROS
IPCC WGII Co-Chair
Universidad de Buenos Aires
ARGENTINA

Rasmus BENESTAD
Norwegian Meteorological Institute
NORWAY

Marius-Victor BIRSAN
National Meteorological Administration
ROMANIA

Judith BOSCHUNG
IPCC WGI TSU
University of Bern
SWITZERLAND

Ines CAMILLONI
Centro de Investigaciones del Mar y la Atmósfera
ARGENTINA

Timothy CARTER
Finnish Environment Institute
FINLAND

Tereza CAVAZOS
Centro de Investigacion Cientifica y de Educacion Superior de Ensenada
MEXICO

John CHARLERY
The University of the West Indies
BARBADOS

William CHEUNG
The University of British Columbia
CANADA

Sin-Chan CHOU
Instituto Nacional de Pesquisas Espaciais
BRAZIL

Jens Hesselbjerg CHRISTENSEN
Danish Meteorological Institute
DENMARK

Faye Abigail CRUZ
Manila Observatory
PHILIPPINES

Rosmeri Porfirio DA ROCHA
Universidade de São Paulo
BRAZIL

Ulrich Jacques DIASSO
National Meteorological Service
BURKINA FASO

Alessandro DOSIO
European Commission Joint Research Centre
ITALY

Jason EVANS
University of New South Wales
AUSTRALIA
Annex 3: Participant List

Veronika EYRING
Deutsches Zentrum für Luft- und Raumfahrt e.V.
GERMANY

Abate Getachew FELEKE
National Meteorological Agency
ETHIOPIA

Erich FISCHER
ETH Zurich
SWITZERLAND

Xuejie GAO
Chinese Academy of Sciences
CHINA

Filippo GIORGI
International Centre for Theoretical Physics
ITALY

Premchand GOOLAUP
Mauritius Meteorological Services
MAURITIUS

José Manuel GUTIÉRREZ
Spanish National Research Council
SPAIN

Jan HAERTER
Niels Bohr Institute
DENMARK

Muhammad Zia Ur Rahman HASHMI
Global Change Impact Studies Centre
PAKISTAN

Bruce HEWITSON
University of Cape Town
SOUTH AFRICA

Hugo HIDALGO
University of Costa Rica
COSTA RICA

Yasuaki HIJIOKA
National Institute for Environmental Studies
JAPAN

Heike HUEBENER
Hessian Agency for Environment and Geology
GERMANY

Geoffroy IBIASSI MAHOUNGOU
Université Marien Ngouabi
REPUBLIC OF THE CONGO

Suman JAIN
University of Zambia
ZAMBIA

Richard JONES
Met Office Hadley Centre
UNITED KINGDOM

Roger JONES
Victoria University
AUSTRALIA

Jean JOUZEL
IPCC WGI Vice-Chair
Laboratoire des Sciences du Climat et de l’Environnement
FRANCE

Liew JU NENG
National University of Malaysia
MALAYSIA

Hyun-Suk KANG
National Institute of Meteorological Research
REPUBLIC OF KOREA

Krishna Kumar KANIKICHRAL
Qatar Meteorology Department
QATAR

Joseph Katongo KANYANGA
Zambia Meteorological Department
ZAMBIA

Michio KAWAMIYA
Japan Agency for Marine-Earth Science and Technology
JAPAN

Akio KITOH
University of Tsukuba
JAPAN

Erik KJELLSTRÖM
Swedish Meteorological and Hydrological Institute
SWEDEN

Thelma KRUG
IPCC TFI Co-Chair
Instituto Nacional de Pesquisas Espaciais
BRAZIL

Benjamin Lantei LAMOTTE
African Centre of Meteorological Applications for
Development
NIGER
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penehuro LEFALE</td>
<td>Bodeker Scientific</td>
<td>NEW ZEALAND</td>
</tr>
<tr>
<td>Robert LEMPERT</td>
<td>RAND Corporation</td>
<td>UNITED STATES OF AMERICA</td>
</tr>
<tr>
<td>L. Ruby LEUNG</td>
<td>Pacific Northwest National Laboratory</td>
<td>UNITED STATES OF AMERICA</td>
</tr>
<tr>
<td>Fanny LOPEZ-DIAZ</td>
<td>Instituto Nacional de Ecologia y Cambio Climático</td>
<td>MEXICO</td>
</tr>
<tr>
<td>Philippe LUCAS-PICHER</td>
<td>Université du Québec à Montréal</td>
<td>CANADA</td>
</tr>
<tr>
<td>Lijuan MA</td>
<td>China Meteorological Administration</td>
<td>CHINA</td>
</tr>
<tr>
<td>Douglas MARAUN</td>
<td>GEOMAR Helmholtz Centre for Ocean Research Kiel</td>
<td>GERMANY</td>
</tr>
<tr>
<td>José MARENGO</td>
<td>National Center for Monitoring and Early Warning of Natural Disasters</td>
<td>BRAZIL</td>
</tr>
<tr>
<td>Valéry MASSON</td>
<td>Météo France</td>
<td>FRANCE</td>
</tr>
<tr>
<td>Sonali Shukla MCDERMID</td>
<td>New York University</td>
<td>UNITED STATES OF AMERICA</td>
</tr>
<tr>
<td>Kathleen MCINNES</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
<td>AUSTRALIA</td>
</tr>
<tr>
<td>Carol MCSWEENEE</td>
<td>Met Office Hadley Centre</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Linda MEARNS</td>
<td>National Center for Atmospheric Research</td>
<td>UNITED STATES OF AMERICA</td>
</tr>
<tr>
<td>Francisco MEZA</td>
<td>Pontificia Universidad Catolica de Chile</td>
<td>CHILE</td>
</tr>
<tr>
<td>Adrien MICHEL</td>
<td>IPCC WGI TSU</td>
<td>SWITZERLAND</td>
</tr>
<tr>
<td>Philip MOTE</td>
<td>Oregon State University</td>
<td>UNITED STATES OF AMERICA</td>
</tr>
<tr>
<td>Elisha MOYO</td>
<td>Ministry of Environment, Water and Climate</td>
<td>ZIMBABWE</td>
</tr>
<tr>
<td>Gemma Teresa NARISMA</td>
<td>Ateneo de Manila University</td>
<td>PHILIPPINES</td>
</tr>
<tr>
<td>Thanh NGO DUC</td>
<td>Hanoi University of Science</td>
<td>VIETNAM</td>
</tr>
<tr>
<td>Taikan OKI</td>
<td>University of Tokyo</td>
<td>JAPAN</td>
</tr>
<tr>
<td>Jean Pierre OMETTO</td>
<td>Instituto Nacional de Pesquisas Espaciais</td>
<td>BRAZIL</td>
</tr>
<tr>
<td>Judy OMUMBO</td>
<td>Kenya Medical Research Institute</td>
<td>KENYA</td>
</tr>
<tr>
<td>PERDINAN</td>
<td>Bogor Agricultural University</td>
<td>INDONESIA</td>
</tr>
<tr>
<td>Claudio PIANI</td>
<td>American University of Paris</td>
<td>FRANCE</td>
</tr>
<tr>
<td>Gian-Kasper PLATTNER</td>
<td>IPCC WGI TSU</td>
<td>SWITZERLAND</td>
</tr>
<tr>
<td>Elvira Severina POLOCZANSKA</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
<td>AUSTRALIA</td>
</tr>
</tbody>
</table>
Annex 3: Participant List

Benjamin Lee PRESTON
Oak Ridge National Laboratory
UNITED STATES OF AMERICA

David PRICE
National Resources Canada
CANADA

Sara PRYOR
Cornell University
UNITED STATES OF AMERICA

Dahe QIN
IPCC WGI Co-Chair
China Meteorological Administration
CHINA

Renato RAMOS DA SILVA
Federal University of Santa Catarina
BRAZIL

Chris REASON
University of Cape Town
SOUTH AFRICA

Suwanna RONGWIRIYAPHANICH
Naresuan University
THAILAND

Geoffrey SABIITI
Makerere University
UGANDA

Igor SHKOLNIK
Voeikov Main Geophysical Observatory
RUSSIAN FEDERATION

Jana SILLMANN
Center for International Climate and Environmental Research
NORWAY

Aimée SLANGEN
Commonwealth Scientific and Industrial Research Organisation
AUSTRALIA

Silvina Alicia SOLMAN
Centro de Investigaciones del Mar y la Atmósfera
ARGENTINA

Anna Amelia SORENSSON
Centro de Investigaciones del Mar y la Atmósfera
ARGENTINA

Tannecia STEPHENSON
The University of the West Indies
JAMAICA

Thomas STOCKER
IPCC WGI Co-Chair
University of Bern
SWITZERLAND

Seree SUPRATID
Rangsit University
THAILAND

Elza SURMAINI
Indonesian Agroclimate and Hydrology Research Institute
INDONESIA

Mouhamadou Bamba SYLLA
West African Science Service Center on Climate Change and Adapted Landuse
SENEGAL

Gabriella SZÉPSZÓ
Hungarian Meteorological Service
HUNGARY

Andrew TAIT
National Institute of Water & Atmospheric Research
NEW ZEALAND

Kiyoshi TAKAHASHI
National Institute for Environmental Studies
JAPAN

Fredolin TANGANG
IPCC WGI Vice-Chair
National University of Malaysia
MALAYSIA

Michael TAYLOR
The University of the West Indies
JAMAICA

Claudia TEBALDI
National Center for Atmospheric Research
UNITED STATES OF AMERICA

Adam TERANDO
US Geological Survey
UNITED STATES OF AMERICA

Claudia TEUTSCHBEIN
Uppsala University
SWEDEN
Annex 3: Participant List

Melinda TIGNOR  
IPCC WGI TSU  
University of Bern  
SWITZERLAND

Petra TSCHAKERT  
Pennsylvania State University and  
University of Western Australia  
UNITED STATES OF AMERICA / AUSTRALIA

Geert Jan VAN OLDENBORGH  
Royal Netherlands Meteorological Institute  
NETHERLANDS

Jean-Pascal VAN YPERSELE  
IPCC Vice-Chair  
Université catholique de Louvain  
BELGIUM

Carolina VERA  
Centro de Investigaciones del Mar y la Atmósfera  
ARGENTINA

Gé VERVER  
Royal Netherlands Meteorological Institute  
NETHERLANDS

Pedro VITERBO  
Instituto Português do Mar e da Atmosfera  
PORTUGAL

Satoshi WATANABE  
University of Tokyo  
JAPAN

Penny WHETTON  
Commonwealth Scientific and Industrial Research Organisation  
AUSTRALIA

Joanna WIBIG  
University of Lodz  
POLAND

David WRATT  
IPCC WGI Vice-Chair  
National Institute of Water & Atmospheric Research  
NEW ZEALAND

Cunde XIAO  
Chinese Academy of Meteorological Sciences  
CHINA

Hongmei XU  
China Meteorological Administration  
CHINA

Ying XU  
China Meteorological Administration  
CHINA

Panmao ZHAI  
China Meteorological Administration  
CHINA

Botao ZHOU  
IPCC WGI TSU  
CHINA

Niklaus ZIMMERMANN  
Swiss Federal Institute for Forest, Snow and Landscape Research  
SWITZERLAND