Advancing Research for Seamless Earth System Prediction

Paolo M. Ruti, Oksana Tarasova, Julia H. Keller, Greg Carmichael, Øystein Hov, Sarah C. Jones, Deon Terblanche, Cheryl Anderson-Lefale, Ana P. Barros, Peter Bauer, Véronique Bouchet, Guy Brasseur, Gilbert Brunet, Phil DeCola, Victor Dike, Mariane Diop Kane, Christopher Gan, Kevin R. Gurney, Steven Hamburg, Wilco Hazeleger, Michel Jean, David Johnston, Alastair Lewis, Peter Li, Xudong Liang, Valerio Lucarini, Amanda Lynch, Elena Manaenkova, Nam Jae-Cheol, Satoru Ohtake, Nadia Pinardi, Jan Polcher, Elizabeth Ritchie, Andi Eka Sakya, Celeste Saulo, Amith Singhee, Ardhasena Sopaheluwakan, Andrea Steiner, Alan Thorpe, and Moeka Yamaji

<https://doi.org/10.1175/BAMS-D-17-0302.2>

Corresponding author: Paolo Ruti, pruti@wmo.int

This document is a supplement to <https://doi.org/10.1175/BAMS-D-17-0302.1>

©2020 American Meteorological Society

For information regarding reuse of this content and general copyright information, consult the [AMS Copyright Policy](#).

Science Summit on Seamless Research for Weather, Climate, Water, and Environment

The Science Summit, organized by the World Meteorological Organization's Commission for Atmospheric Sciences was held from 20 to 22 October 2017 in Geneva, Switzerland.

The Science Summit provided an opportunity to shape the new research agenda of the organization, building on the closer collaboration between weather, climate, water, and environment research. An additional focus of the Science Summit was to close the gap between research and the derived societal benefits. The keynote speeches, round table discussions, and World Cafe breakout sessions of the Science Summit revolved around the following five topics:

- Seamless prediction in 2023: Improving predictive capacity across weather, climate, water, and environment.
- Future infrastructures: Planning and investing in future infrastructures (computing, data handling, observations).
- Science for services: Developing and implementing a new interactive model for integrating research and operations.
- Nurturing scientific talents: Guaranteeing the sustainable development of science; breaking through geographical, gender, and age barriers; ensuring institutional continuity and transfer of knowledge.
- Innovation and resources: Catalyzing innovation and mobilizing resources in weather, climate, water, and environment research globally and locally.

The Science Summit created an inclusive, informal, and interactive forum for leading scientists from academia, the WMO community, and the private sector, as well as the representatives of funding agencies, to prioritize the key issues to be addressed in the five areas. Keynote addresses, panel discussions, and breakout group debates permitted the participants to share thoughts on how to promote both local and global exchange across the multiple disciplines related to Earth system sciences. In so doing, the Science Summit participants could outline a new framework for scientific cooperation in support of weather, climate, atmospheric composition, and related environmental research and its translation into new and better products and services.

An agenda, as well as the keynote talks of the Science Summit, can be found at <https://public.wmo.int/en/events/meetings/science-summit-seamless-research-weather-climate-water-and-environment>.

Fig. ES1. Further impressions from the World Cafe, where participants could express their view and visions also graphically.

Figures ES1 and ES2 contain impressions from the World Cafe.

Participants and organizers

Tables ES1 and ES2 contain lists of the speakers and participants, respectively, and the Organizing Committee is as follows:

- Øystein Hov (Norway, President of Commission for Atmospheric Sciences)
- Sarah Jones (Germany, Chair World Weather Research Programme Scientific Steering Committee)
- Greg Carmichael (United States, Chair Environmental Pollution and Atmospheric Chemistry Scientific Steering Committee)
- Deon Terblanche (WMO Secretariat)
- Oksana Tarasova (WMO Secretariat)
- Paolo M. Ruti (WMO Secretariat)

Fig. ES2. As in Fig. ES1.

Table ES1. List of speakers.

Name	Country	Name	Country
Andrea Celeste Saulo	Argentina	Wilco Hazeleger	Netherlands
Elizabeth Ritchie	Australia	David Johnston	New Zealand
Véronique Bouchet	Canada	Mariane Diop Kane	Senegal
Gilbert Brunet		Christopher Gan	Singapore
Michel Jean		Nam Jae-Cheol	South Korea
Victor Dike	China	Alastair Lewis	United Kingdom
Peter Li		Valerio Lucarini	
Xudong Liang		Alan J. Thorpe	
Jan Polcher	France	Peter Bauer	United States
Vladimir Ryabinin		Ana P. Barros	
Guy Brasseur	Germany	Philip Decola	
Julia H. Keller		Kevin R. Gurney	WMO
Andrea Steiner		Steven Hamburg	
Amith Singhee	India	Amanda Lynch	WMO
Nadia Pinardi		Elena Manaenkova	
Moeka Yamaji	Japan		
Satoru Ohtake			

Table ES2. List of participants.

Name	Country	Name	Country
Elizabeth Ebert	Australia	Cheryl Anderson	New Zealand
Peter May		Greg Pearson	
Alice Marlene Grimm	Brazil	Abdulrasheed Darazo Zakariyau	Nigeria
Pierre Tabsida Zongo	Burkina Faso	Cynthia Celebre	Philippines
Michel Beland	Canada	Janusz Filipiak	Poland
Lawrence Wilson		Ji hyeon Do	South Korea
Min Chen	China	Sangok Han	
Yihong Duan		Hyojeong Jeong	
Yaqiang Wang		Hyun-Suk Kang	
Min Wen		Dongkyou Lee	
Hui Yu		Youngsan Park	
Haijia Zang		Jaegwang Won	
Alphonse Kanga	Congo	Violeta Balan	Moldova
Branka Ivancan-Picek	Croatia	Chin Ling Wong	Singapore
Cleo Kosanovic		Alick Haruhiru	Solomon Islands
Abdalla Abdelrahman Baligh	Egypt	Lucky Dalton Ntsangwane	South Africa
Mohamed Salah M. Okka		Abdelgadir Lado	South Sudan
Dula Shanko Lebeta	Ethiopia	Dahanayake Ananda Jayasinghearachchi	Sri Lanka
Finland Antti Makela		Joakim Langner	Sweden
Philippe Dandin	France	Jörg Klausen	Switzerland
Véronique Ducrocq		Heike Kunz	
Marc Pontaud		Philippe Sierra	
Susanne Crewell	Germany	Songkran Agsorn	Thailand
Martin Goeber		Yusuf Nsubuga	Uganda
Sarah Jones		Carla Cardinali	United Kingdom
Thomas Jung		Brian Golding	
Matthieu Masbou		Frederic Vitart	
Christian Plass-Duelmer		Keith Williams	
Roland Potthast			
Bozo Laszlo	Hungary	Doreen Mwara	Tanzania
		Pascal Waniha	
Urip Haryoko	Indonesia	Roelof Bruintjes	United States
Bagus Rachmat Rievan		James Butler	
Ardhasena Sopaheluwakan		Gregory R. Carmichael	
Maman Sudarisman		Brittany Croll	
Kazuto Suda	Japan	Thomas Cuff	
Munehiko Yamaguchi		Randall Dole	
Ahmed Rasheed	Maldives	Jenni Evans	
Siham Sbii	Morocco	Michael Morgan	
Tun Hla	Myanmar	Shanna Pitter	
Su Su Win		Rita Roberts	
Bartholomeus van den Hurk	Netherlands	Duane Waliser	