

IPWG recent accomplishments and future directions

Paul Kucera (NCAR, Boulder, USA)

And

Bozena Lapeta (IMWM Krakow, Poland)

with additions by Volker Gärtner (EUMETSAT, IPWG Rapporteur)

IPWG Objectives

IPWG was established under Coordinating Group on Meteorological Satellites (CGMS) to:

- ❑ Promote standard operational procedures and common software for deriving precipitation estimates from satellites
- ❑ Establish standards for validation and independent verification of precipitation estimates
- ❑ Foster the exchange of data on inter-comparisons of operational precipitation estimates from satellites
- ❑ Stimulate increased international scientific research and development in this field
- ❑ Provide recommendations to national and international agencies regarding the utilization of current and future satellite instruments on both polar and geostationary platforms
- ❑ Encourage regular education and training activities.

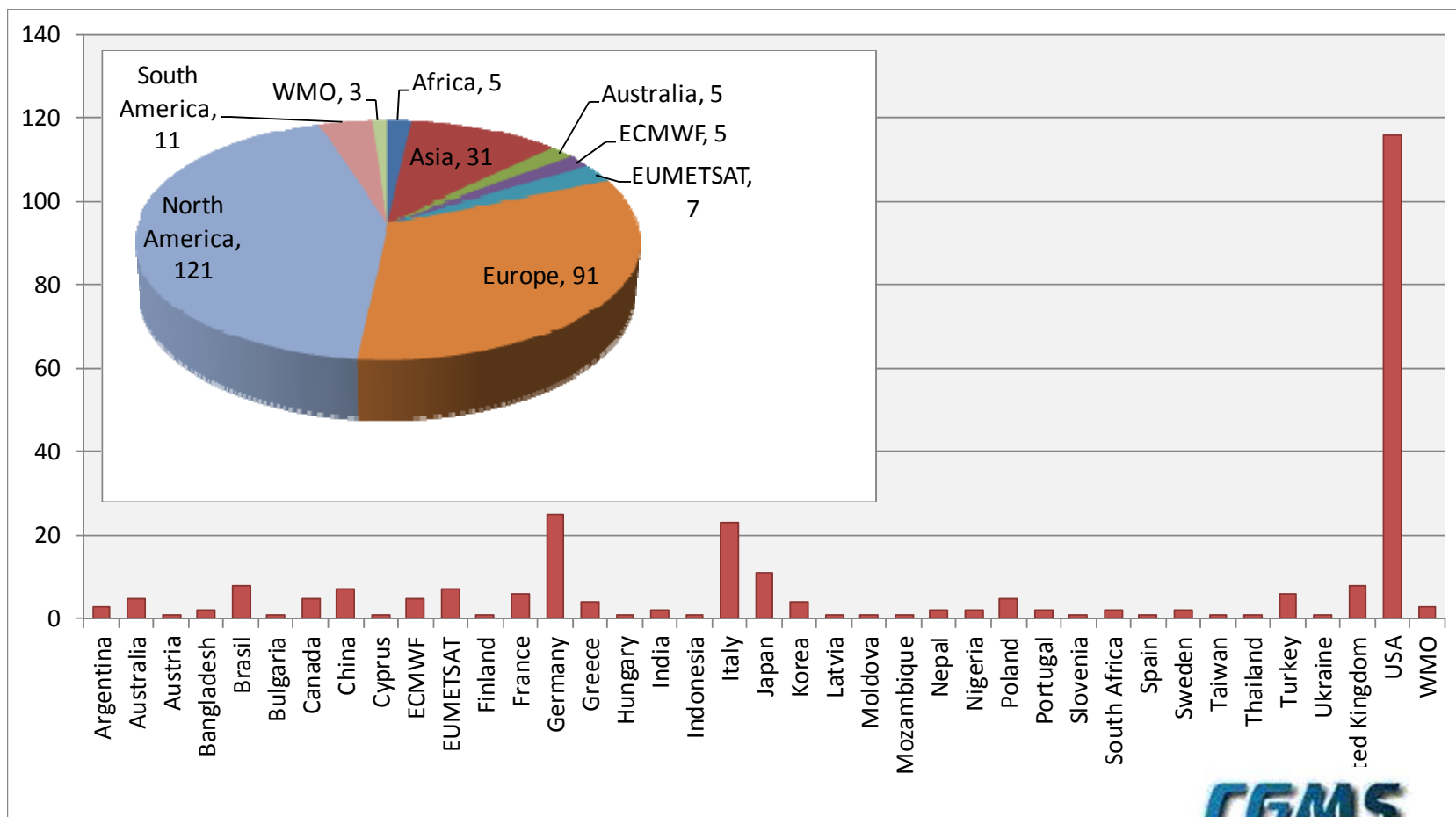
New IPWG Co-chairs

The new IPWG co chairs have been nominated during IPWG 6 Workshop and approved by CGMS-41:

- Dr. Nai-Yu Wang from University of Maryland, USA
- Dr. Kazumasa Aonashi of JMA , Japan.

IPWG Membership

- There are about 279 participants from 39 countries and agencies
- Every year new members are joining IPWG.



IPWG accomplishments

- Conducting the survey on applications of satellite-derived precipitation products and publishing the list of adequate datasets;
- Survey of different sources of validation rainfall data, according to Recommendation No 3 from IPWG-5 Validation Working Group Meeting;
- Publishing at the IPWG web page the lists of publicly available, quasi-operational and quasi-global precipitation data sets;
- Leadership of Group on Earth Observations (GEO) precipitation subtask;
- Interactions with Working Group on Numerical Experimentation (WGNE) on satellite precipitation validation using NWP generated precipitation estimates;



6TH WORKSHOP OF THE INTERNATIONAL PRECIPITATION WORKING GROUP

SÃO JOSÉ DOS CAMPOS, 15-19 OCTOBER, 2012



- Hosted and sponsored by CPTEC/INPE, Brasil.
- 55 Participants from 14 countries (Argentina, Boliva, Brazil, China, France, Germany, Italy, Japan, Poland, South Africa, South Korea, Switzerland, United Kingdom, United States).
- Five oral sessions (42 presentations).
- Two poster sessions (23 posters).
- Two Working Groups sessions (Research&New Technologies, Validation, Aplication).
- Special session on Megha-Tropiques.
- Discussion about the future of IPWG and next activities.

IPWG 6 Training event

NOAA Training on “New and Emerging Technologies, Sensors, and Datasets for Precipitation”, 15-17 October 2012.

➤ 15 participants from 10 countries (Argentina, Brazil, Columbia, Guatemala, Costa Rica, Peru, Poland, Nigeria, Uruguay, United States).

➤ Lectures on:

- New and Upcoming Satellite Sensors;
- New and Existing Precipitation Products;
- Satellite Precipitation Product Applications and Applications for Improved NWP Predictive Capabilities;
- New and Existing Validation/Verification Techniques;
- Regional Focus: Precipitation in South America.

IPWG recent accomplishments

- Promoting IPWG, expanding membership and updating the membership database;
- IPWG focused publications:
 - IPWG-5 summary in the AMS Bulletin (Huffman, G.J., and C. Klepp, 2011: Meeting Summary: Fifth Workshop of the International Precipitation Working Group. Bull. Amer. Meteor. Soc., doi: 10.1175/BAMS-D-11-00030.1);
 - IPWG-5 Proceedings (Klepp, C. and G. J. Huffman, 2011: 5th International Precipitation Working Group Proceeding, Hamburg, Germany, 15 October 2010, Hamburg, Germany, Berichte zur Erdsystemforschung, 100, 2011);
 - paper on highlighting the variety of applications using satellite precipitation products (Kucera, P. A., et al., 2012: Precipitation from Space: Advancing Earth System Science. Bull. Amer. Meteor. Soc. (in press)
 - IPWG-6 Proceedings under preparation;
- Representation at 10 meetings.

IPWG recent accomplishments

- a new and improved "datasets" page in the IPWG website that organizes precipitation information according to their sources (single source, merged satellite data, combination of satellite and gauges, etc). These new tables are designed to guide the users directly to the precipitation data they are looking for:

<http://www.isac.cnr.it/~ipwg/data/datasets.html>

(Thanks to George Huffman and Vincenzo Levizzani)

- the South African Weather Service joined the coordinated IPWG validation effort.
- There is also a new AMMA-catch gauge data added to the ground validation data source to:

<http://www.isac.cnr.it/~ipwg/validation-links.html>.

IPWG recent accomplishments

- IPWG supported the



Fourth International Workshop on Space-based Snowfall Measurement: Developing Requirements and Framework for a Space-based Mission

6 - 8 May 2013
Mammoth Mountain, California

Goals Circulars Venue Register Program

- Nai-Yu Wang (IPWG Co-Chair) gave an IPWG update presentation to the Fourth International Workshop on Space-based Snowfall Measurement (4th IWSSM) in May and co-chaired the Working Group on Global and Regional Detection and Estimation.
- Dr. Kazumasa Aonashi of JMA (IPWG Co-Chair) will participate in the CGMS-41 meeting in Tsukuba.

IPWG future activities

- To continue and expand validation activities:
 - Foster improved availability of validation data from data sparse regions: Africa;
 - Prepare guidance document for precipitation validation techniques and issues;
 - Encourage validation of precipitation datasets in hydrological models;
 - Collect datasets for snow validation.
- To continue with training activities and establish the training devoted section at the IPWG web site.
- To establish an ad-hoc Area-Average Special Interest Group to share information, processing concepts, and best practices on shapefile-averages for countries, other political subdivisions, stream basins, as well as to work toward providing data products in GIS-standard format.

IPWG 6 Recommendations to CGMS

- IPWG recommend to CGMS to ensure the long-term continuity of conically-scanning microwave imagers, as well as space based radars, consistent with the CGMS baseline and the WMO Vision for the Global Observing System in 2025. Furthermore, the coordination of satellite overpass times has to be ensured including non sun-synchronous platforms with a minimum temporal resolution of 3 h.
- CGMS members and WMO should provide adequate support to ensure active participation at international meetings and training events.
- To ensure the optimum use of satellite-based precipitation products more trading is necessary. Satellite agencies are invited to cooperate in this endeavor with IPWG experts and the WMO/CGMS VLab.

IPWG 6 Recommendations to CGMS

- For products derived by operational and quasi-operational satellite algorithms based on multiple platforms and channels (VIS, IR, WV), CGMS members should set up the necessary archives of historical data together with the relevant algorithm versions. Those should be kept for a minimum of two years to facilitate intercomparisons and enable graceful transitions to the new algorithms. The archive infrastructure should enable routine access to and assembly of channels from GEO and LEO satellites to provide consistent generation of multi-channel satellite records supporting a range of applications. The infrastructure should also allow an efficient reprocessing of products for climate data record generation.