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AFRICAN MINISTERS RESOLVE TO STRENGTHEN METEOROLOGICAL AND HYDROLOGICAL SERVICES

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NEWS IN BRIEF

African Ministers resolve to strengthen meteorological and hydrological services

The First Conference of Ministers Responsible for Meteorology in Africa, held in Nairobi (12-16 April 2010), brought the spotlight on to the development of African National Meteorological and Hydrological Services (NMHSs). The Nairobi Declaration commits Ministers to strengthen the NMHSs by providing the necessary resources and priority in development plans. Organised jointly by the WMO and the African Union, the Conference was hosted by the government of Kenya. Also participating were a number of NMHSs and related institutions from other continents.

During its first part - at the level of experts - the Conference examined a number of themes in detail. These included meeting the development needs for the provision of weather, water and climate services

in Africa; benefits of meteorological, hydrological and climate services; disaster risk reduction; filling information gaps; and capacity building. There were two special sessions – first on Aviation and another on the Global Framework for Climate Services (GFCS). Enhancing partnerships in the application and use of weather and climate services, and the user perspectives of these services were also dealt with in separate sessions.

The Ministers have outlined a number of key steps in the Nairobi Declaration. For instance, they have agreed to:

- Establish the African Ministerial Conference on Meteorology (AMCOMET) as a high-level mechanism for development of meteorology and its applications;
- Designate a Task Force of ten members, including five Ministers representing the African sub-regions, to formulate an institutional framework for AMCOMET

and submit a proposal to its second session;

- Develop, within a short period, an African Strategy for Cooperation to strengthen NMHSs, taking into account the statements made during the expert segment;
- Establish, in collaboration with WMO, a sub-regional climate monitoring and adaptation structure for Central Africa;
- Involve technical and financial partners, the international community and the UN system and its agencies to support AMCOMET in the preparation and implementation of the African Strategy;
- Facilitate NMHSs access to the Copenhagen Green Fund for Climate Change and cost recovery with respect to aeronautical and maritime meteorological services;
- Invite WMO to recognise the Declaration and bring it to the attention of the 62nd session of the Executive Council, 15th

session of the WMO Regional Association for Africa and the 16th WMO Congress and to take appropriate measures;

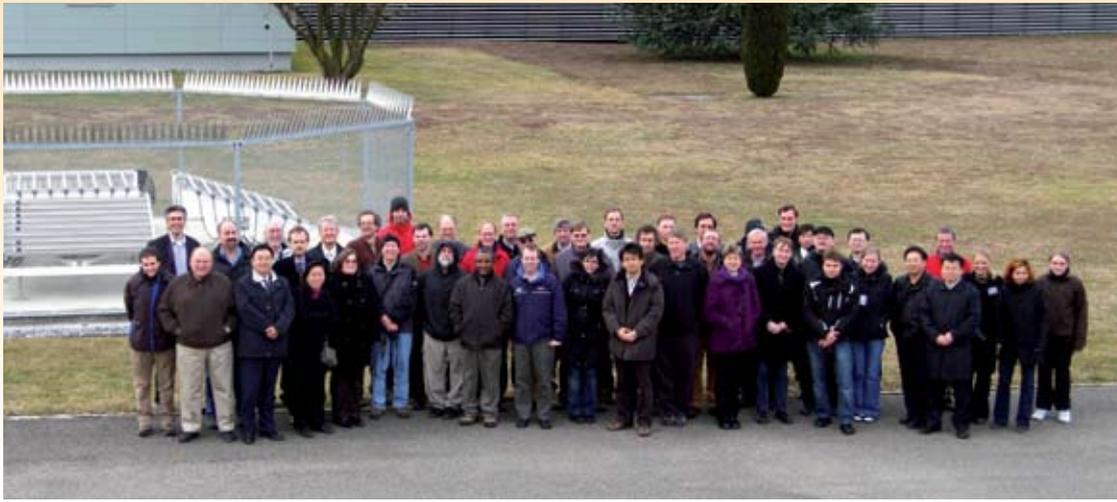
- Invite the African Union Commission to take note of the Declaration and bring it to the attention of its next Summit and take appropriate measures.

A media workshop on the theme “Climate Change and Food Security”, organised by WMO in collaboration with Media 21, was held in parallel with the Conference at the Kenyatta International Conference Centre. More than 40 African journalists participated.

For more information http://www.wmo.int/pages/africaconf/index_en.html

Building a new GCOS Reference Upper-Air Network

The Global Climate Observing System (GCOS) Reference Upper-Air Network (GRUAN) is



Participants at the second GRUAN Implementation-Coordination Meeting, 2–4 March 2010 at the Aerological Observatory of Meteo Swiss in Payerne,

intended to provide long-term high quality climate records of upper-air temperature, water vapour, and other key essential climate variables, particularly in the troposphere and in the lower stratosphere. It will combine balloon borne and remote sensing state of the art instrumentation, and will constrain and calibrate data from more spatially-comprehensive global observing systems, including satellites and current radiosonde networks.

The 2nd GRUAN Implementation-Coordination Meeting was held 2–4 March 2010 at the Aerological Observatory of Meteo Swiss in Payerne, which is one of the GRUAN sites. Meteo Swiss very generously hosted and supported this meeting.

To understand our changing climate and the underlying causes requires an understanding of changes not just at the surface but also throughout the atmospheric column. Existing records of upper-air atmospheric measurements are not good enough for studying long-term climate change to the required degree of accuracy. They lack of the necessary continuity, homogeneity and representativeness of data, because past observations were generally not made for climate research, but mainly for the purpose of short-term weather forecasting.

The WMO, as one of the sponsors of both GCOS and the World Climate Research Programme (WCRP), strongly supports the development of the GCOS Reference Upper-Air Network. This Network

will provide a valuable service in more precise and sustained measurements of Upper-Air Essential Climate Variables that are needed to support climate monitoring and climate research. It will provide a reference to both existing in-situ and space-based observing systems.

When estimating climate system forcing by atmospheric constituents, upper-air temperatures and water vapour remain among the largest uncertainties. Hence, the special focus of GRUAN lies in advancing the observation capabilities of those parameters.

GCOS is promoting the recognition of global networks and it has also been recognized as the climate-observing component of the Global Earth Observation System of Systems (GEOSS). The concept of GRUAN was featured as one of the “First 100 steps to GEOSS” at the Cape Town Ministerial Summit in 2007.

GRUAN is supposed to play an important role as a ground-based calibration/validation programme and is therefore cooperating with the Global Space-based Inter-Calibration System (GSICS) project, which was launched in 2005 by WMO and the Coordination Group for Meteorological Satellites (CGMS). GRUAN aims to ensure that potential gaps in satellite programs do not invalidate the long-term climate record; and to improve satellite data products.

GRUAN strives to ensure the productivity and reliability of existing networks for climate purposes. In this regard, excellent cooperation

amongst the GRUAN community further defined detailed observational requirements, thereby supplying key information to instrument manufacturers and the wider earth observation community about the demands for reference observation of atmospheric profiles. This is particularly relevant to the WMO Commission for Instruments and Methods of Observation (CIMO). The upcoming CIMO radiosonde intercomparison is to be held in Yangjiang, China, in July 2010.

It is hoped that this will boost the development of new reference-quality measurement devices serving the needs of climate observations.

Among the important first steps taken in implementing GRUAN so far are:

- The Richard Assmann Observatory Lindenberg, Germany, has been assigned as GRUAN Lead Centre;
- The 2009-2013 GRUAN Implementation Plan has been published; and
- A Data Archive is currently under development.

In addition, GRUAN has become a pilot project for the WMO Integrated Global Observing System (WIGOS) that will provide a single focus for the operational and management functions of all WMO observing systems. WIGOS will build a framework and mechanism for interactions with WMO co-sponsored observing systems - enabling integration, cooperation and coordination, taking into account the multiplicity of perspectives and observing domains.

WMO recognises these major efforts made so far and highly appreciates the support by all host-countries running GRUAN operations, either by hosting Lead Centre activities or by making contributions to the measurement programme.

For further information, please refer to: www.gruan.org

International Open Science Conference (OSC)

The World Climate Research Programme (<http://wcrp.wmo.int>) will host a major international Open Science Conference (OSC) from 24–28 October 2011 in Denver, Colorado, USA.

A better understanding of the behaviour of the climate system and its interactions with other Earth system components is critical to predict its future evolution, reduce vulnerability to high-impact weather and climate events, and to sustain life. To prepare for meeting these challenges, the WCRP Open Science Conference provides a unique opportunity to bring together major disciplines and leaders of the Earth system research community. It will help identify opportunities to further advance understanding and prediction of variability and change in the Earth's climate system from seasons to centuries, and from regions to the entire globe.

Through active dialogue among the international environmental change research experts, the OSC will:

- Appraise the current state of climate science, thereby making a measurable scientific contribution to the Fifth



RECENT AND COMING EVENTS



30 April–6 May 2010: Regional Association V (South-West Pacific)— 15th session (Bali, Indonesia)

3–6 May 2010: Maritime Safety Services Enhancement Workshop (Melbourne, Australia)

8–9 May 2010: 2010 Informal Planning Meeting on the Voluntary Cooperation Programme and related Technical Cooperation Programmes (Bali, Indonesia)

7–18 May 2010: WIS Workshop on Information Access Enablers (Geneva, Switzerland)

17–20 May 2010: Working Group Bureaux (17-18 May) and 41st session of the IPCC Bureau (19-20 May) (Geneva, Switzerland)

17–28 May 2010: Regional Training Seminar for National Instructors of RA VI (Sibiu, Romania)

6–7 June 2010: 29th session of FINAC (Geneva, Switzerland)

7 June 2010: 64th session of the WMO Bureau (Geneva, Switzerland)

8–18 June 2010: Executive Council - Sixty-second Session (EC-LXII) (Geneva, Switzerland)

8–12 June 2010: International Polar Year Science Conference (Oslo, Norway)

28 June–2 July 2010: CBS OPAG-IOS: 6th session of the Implementation Coordination Team on Integrated Observing Systems OBS (Geneva, Switzerland)

World Meteorological Day 2010

A booklet issued by WMO for WMD 2010 recalls historic achievements by the organization and illustrates sixty ways how WMO makes the difference in our daily lives. At a ceremony at the WMO premises, WMO Secretary-General M Jarraud recalled milestones in the evolution of WMO. Guest speaker Dr Osvaldo F. Canziani, former Co-Chair, Working Group 2 of the Intergovernmental Panel on Climate Change (IPCC), saw a greater role for WMO in finding solutions to a number of challenges humanity will face in the coming decades. Professor Walter R. Stahel, Vice Secretary General and Head of Risk Management Research of the Geneva Association, spoke on the subject of “Extreme-weather-wise decision taking.” He outlined sustainable practices by way of adaptation and mitigation as key to managing risks associated with climate change. In his message, the United Nations Secretary-General Ban Ki-moon said, “The WMO has provided governments around the world with high quality weather data, climate assessments and forecasting tools so their populations can be better protected. Its work has highlighted the need for global solutions to global challenges such as climate change.”

Contemporary artist Remi Benyamin displayed paintings inspired by satellite images. The ceremony was followed by a reception for the diplomatic corps and invited guests.

Trinidad and Tobago Commissions High Tech Radar

The Trinidad and Tobago Doppler Weather Radar Facility was formally commissioned at Brasso Venado, Tabaquite – Trinidad and Tobago, on Wednesday 31st March 2010.

Doppler radar technology affords meteorologists the ability to gain much more insight into weather phenomena than conventional weather observations and forecasting equipment. It allows better weather forecasts and consequently delivers precise severe weather warnings locally. This facility will provide complete radar coverage over Trinidad and Tobago, facilitating more accurate flood forecasting and rainfall mapping in the main watersheds and agricultural areas on both islands.

The new Doppler Weather Radar Facility will allow Trinidad and Tobago to make a significantly increased contribution internationally to the collection of data on global climate change. It is as a

Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC);

- Identify key opportunities and challenges in observations, modelling and analysis for understanding and predicting the Earth’s climate system.
- Facilitate discussion on interdisciplinary research required to understand and predict responses of the Earth as a system to climate variability and change, thus helping chart the path forward over the ensuing decades;
- Highlight priority research in support of the Global Framework for Climate Services initiated at the World Climate Conference -3.

By entraining early career scientists and students from

across the world, especially in less-developed and developing nations and regions, the OSC will facilitate the growth of a diverse future workforce needed to meet the increasingly complex scientific challenges of the future.

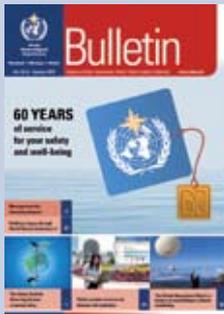
The conference aims to attract the world’s experts to provide a unique synthesis of current research findings on climate variability and change, to identify the most urgent scientific issues and research challenges, and to ascertain how the WCRP can best facilitate research and develop partnerships critical for progress in the future.

For more information please visit the conference Web page: www.wcrp-climate.org/conference2011 or contact the Conference Secretariat: info.conf2011@wcrp-climate.org



From left to right: HE Dr Edwin Carrington - Secretary General, CARICOM, Hon. Mustapha Abdul Hamid - Minister of Public Utilities, Mr Tyrone Sutherland - Coordinating Director CMO, Representative from Piarco/ Talparo Regional Cooperation, Ms Jacqueline Gantaumme Farrell - Permanent Secretary, Ministry of Public Utilities (MPU), Mr Emmanuel Moolchan - Director of Trinidad and Tobago Meteorological Services, Dr Ellis Burris - Deputy Permanent Secretary - MPU, Mr Shakeer Baig - Chief Meteorologist (Ag) - Trinidad and Tobago Meteorological Services.

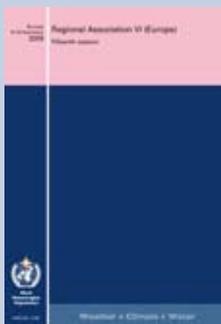
RECENTLY ISSUED



WMO Bulletin,
Volume 59 (1),
January 2010 (theme:
"60 years of service for
your safety and well-
being" [E - F].
[R and S in preparation])



**Manual on Estimation
of Probable Maximum
Precipitation (PMP)**
WMO-No. 1045, [E]



**Regional Association VI
(Europe) 15th session**
Abridged final report
with resolutions
WMO-No. 1046,
[A - E - F - R]

NEWS IN BRIEF

direct result of this that funding for this venture was received from the European Union's Caribbean Regional Indicative Programme of the 9th European Development Fund and was implemented by CARIFORUM through the Caribbean Meteorological Organization.

The installation of the Doppler Weather Radar system in Trinidad and Tobago forms part of the Caribbean Radar Project, a non-commercial CARICOM project, funded by the European Union. The Caribbean Radar Project involves the installation of four (4) Doppler Radar systems in Belize, Barbados, Guyana and Trinidad and Tobago. This project will form part of a network of other radar units in the Caribbean and will have as its main objective, the provision of "an early warning system for the Caribbean" and a virtual "Radar Fence" covering the Eastern Caribbean.

Attending the commissioning ceremony were the H E Dr Edwin Carrington, Secretary General of CARICOM and CARIFORUM; Ms Karin Renner, Charge d'Affaires (Ag), European Commission to Trinidad and Tobago; Mr Tyrone Sutherland, Director, Caribbean Meteorological Organization (CMO); and Mr Emmanuel Moolchan, Director, Meteorology Services Division, Ministry of Public Utilities.

Volcanic Ash – WMO Networks Respond

Iceland's Eyjafjallajökull volcano keeps the European Meteorological Offices on full alert to monitor the atmospheric conditions. On 20 April 2010, WMO issued an advisory, defining its own role and precisising the kind of actions that meteorological offices are engaged in. There are 9 Volcanic Ash Advisory Centers (VAAC) across the world, established by the International Civil Aviation Organization (ICAO) in close cooperation with WMO and the International Union of Geodesy and Geophysics (IUGG). They are operated by WMO Members and provide meteorological

information in support of the International Airways Volcano Watch system. The VAAC responsible for the area where the eruption has occurred (called the lead VAAC) issues a Volcanic Ash advisory based on observations, meteorological data and forecasts of transport and dispersion.

Small jagged pieces of rocks, minerals, and volcanic glass the size of sand and silt (less than 2 millimetres (1/12 inch) in diameter) erupted by a volcano are called volcanic ash. Volcanic ash is hard, does not dissolve in water, is extremely abrasive and mildly corrosive. The smaller particles, which can stay in the atmosphere longest, could typically have a diameter of between 1 and 40 microns (1/1000 of a mm).

Very fine volcanic ash particles sucked into a jet engine melt at about 1 100 °C, fusing onto the blades and other parts of the turbine (which operates at about 1 400 °C). They can erode and destroy fan blades, eventually leading to engine stall. They can also "blind" pilots by sandblasting the windscreen requiring an instrument landing, and damage the fuselage.

The models used by the Volcanic Ash Advisory Centre London, the "lead VAAC" for this event, and its neighbouring VAACs in Toulouse and Montreal use highly developed atmospheric models that calculate the transport of existing aerosols (such as volcanic ash) with



Marco Fulle - www.stromboli.net



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the prevailing winds. They also predict how turbulent motions in the atmosphere help to disperse the ash cloud until it is considered safe to fly in.

Ash models integrate atmospheric data and initial information from sources in the vicinity of the eruption such as volcano observatories, satellite information, and weather radar data. To initialize the models, information from all available sources has to be analyzed. Therefore, the model provides values of ash concentration relative to that measured or assumed at the eruption source.

For more information http://www.wmo.int/pages/mediacentre/press_releases/documents/Q-Avolcanicash2.pdf