



CGMS-39 NOAA-WP-13
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Prepared by NOAA
Agenda Item: H.1
Discussed in Plenary

Summary of Virtual-training Laboratory Activities
In Response to CGMS Actions 38.11, 38.12 and 38.32:

This report provides a summary of NOAA Support for the WMO Virtual Laboratory, Virtual Laboratory Management Group (VLMG), the Environmental Satellite Resource Center (ESRC), and Focus Groups from September 2010 through September 2011.

Action/Recommendation proposed: None.

Summary of Virtual-training Laboratory Activities

1 INTRODUCTION

NOAA and its partners continue to show leadership and active support in the area of education and training across WMO Regions III and IV with assistance provided for other Regions. This report provides a summary of the activities conducted by NOAA and its partners in support of the WMO Virtual Laboratory (VL) for Satellite Education and Training and for the VL Management Group (VLMG). NOAA and its partners (CIRA, CIMSS, COMET, VISIT and the Centres of Excellence in Region IV) continued to be very active in 2010 and in 2011. Key activities during this period included:

- NOAA funding and support for the Virtual Laboratory Technical Support Officer (TSO) to assist with VL Management Group activities starting in 2010 and continuing through 2011
- Establish and maintain the Environmental Satellite Resource Center at COMET as an official WMO Space Programme Web Portal
- Monthly Regional Focus Group (RAIII and IV) discussions continued throughout this period (conducted since March 2004) in coordination with NOAA National Centers for Environmental Prediction International Desk and VISIT.
- Participate in and provide briefings to WMO VL Management Group virtual meetings every 3 months.
- Provide briefings and support break out groups at NOAA Direct Readout and GOES User conferences and to Virtual Laboratory courses to assist international users with enhanced training and translations in support of RA III, IV and other regions.

2 NOAA Support in 2010 and 2011

2.1 NOAA Activities in Support of WMO Virtual Laboratory

WMO reported on training activities within the framework of the Virtual Laboratory for training and education in satellite meteorology (VL) along with future plans and directions. Important developments had taken place since CGMS-38, including the continued support for the five-year VL strategy, the recognition of new Centers of Excellence (CoEs), and the continued support for and productive activities of the VL Technical Support Officer (TSO). The TSO has effectively supported the activity and advanced the objectives of the VL along the lines of the five-year strategy. A key action in 2011 was that NOAA funded and supported the TSO position for a second year through 2011. In addition, a proposal was presented to initiate training activities directed towards research communities in developing countries, following an initial suggestion from NASA.

The status of the CGMS endorsed WMO actions are as follows:

- **Action 38.07:** CGMS Satellite Operators are encouraged to note the usefulness of RA II Pilot Project web pages on the WMO Space Programme (WMOSP) website, <http://www.wmo.int/pages/prog/sat/ra2pilotproject->



intro_en.php, providing information related meteorological satellites for NMHSs users, and to support the Project providing the information of satellite data and products answering to the questionnaire, which will be sent from the project co-coordinators.

Deadline: CGMS-39

Statement will be submitted at CGMS-39 requesting that NOAA be added as observer to this project (same status as EUMETSAT).

Action 38.11: The WMO/CGMS Virtual Laboratory Management Group (VLMG) to liaise with the Severe Weather Forecasting Demonstration Project (SWFDP) to identify opportunities to coordinate training activities and share training resources that would allow Member countries in SWFDP project regions, such as Southern and Eastern Africa, South-eastern Asia and the Southern Pacific, to further enhance the benefits realised through the SWFDP in better using satellite-based products in support of severe weather forecasting. Deadline: CGMS-39. NOAA has identified the Proving Ground (PG) Spring Experiment activity at its Storm Prediction Center (SPC) and Hazardous Weather Testbed (HWT) in Norman, Oklahoma for demonstrating pre-operational data and algorithms in support of severe weather forecasting and demonstration of future satellite (GOES-R) capabilities. Pre-operational demonstrations of these GOES-R PG data will provide National Weather Service (NWS) operational forecasters at the SPC and HWT an opportunity to critique and improve the products relatively early in their development. The providers of the products include the Cooperatives Institute for Research in the Atmosphere (CIRA), Cooperative Institute for Meteorological Satellite Studies, (CIMSS), the University of Alabama at Huntsville (UAH), and NASA's Short-term Prediction Research and Transition (SPoRT) Center. Satellite products demonstrated this past Spring include Cloud and Moisture Imagery, Lightning Detection, automated Enhanced-V/overshooting top detection, Convective Initiation, and simulated satellite imagery derived from the Weather Research Forecasting (WRF) model. NOAA would like to highlight an important goal of the project "The most important aspect of the interactions ..(is).. to build relationships between each key product development team and the diverse user groups within both the HWT and the broader weather community."

Action 38.12: CGMS Satellite Operators to provide a contact point for SWFDP, who would contribute to inform the SWFDP project on relevant satellite data and products responding to SWFDP needs, and to identify opportunities for development of improved products and services. Deadline: CGMS-39.

Proposed NOAA contact points are James Gurka (NESDIS) and Anthony Mostek (NWS).

Action 38.13: CGMS members to respond to the updated set of GCOS needs, through the proposed space-based architecture for climate monitoring and the CEOS response (cf. CGMS-38 NOAA-WP-13), as appropriate. Deadline: CGMS-39.

Request for response sent to NOAA/NCDC.

Action 38.32: Propose CMA, IMD, NOAA, and other interested CGMS agencies to support future training related to the use of satellites to monitor



dust, volcanic ash, fog, and forest fires in conjunction with the WMO Virtual Laboratory. Report at CGMS-39.

EUMETSAT has organized a week of virtual training on the topics of dust and ash that will take place 24-28 October 2011. The US will contribute two presentations: one on Volcanic Ash Detection from CIRA and one on Dust Detection from Naval Research Laboratory (NRL).

COMET has partnered with the Caribbean Institute of Meteorology and Hydrology to develop the Aeronautical Meteorology Continuing Professional Development (AeroCPD) distance learning course. The first course will be offered in early October and will run into February 2012. In reference to this action item, the CIRA Volcanic Ash modules Parts 1 and 2 and COMET's Volcanic Ash series (4 modules) are utilized in this training effort.

The 9th International Conference on Creating Activities for Learning Meteorology (CALMet) will be hosted by the University of Pretoria and the South African Weather Service 3-8 October 2011. CALMet has been a forum to share experiences, expectations, and new ideas for applying emerging strategies for meteorology and hydrology in education and training. NOAA has provided partial support for 3 participants to attend: the WMO- TSO, a CIRA trainer engaged in VLab activities and a COMET trainer. At the conference, there will be ample opportunity to interact and collaborate with participants from 6 continents and further the work of the VLab in particular the activities of the Focus Group of the Americas and the Caribbean. NOAA tracks the participation from countries in regions III and IV not only during 2011 but since the Focus Group sessions began in 2004. NOAA monitors these sessions to assess what motivates the participants and how to continue to improve the training efforts in the future.



3 CONCLUSIONS

NOAA and its partners continue their active support of the training and education activities of the WMO Space Programme Virtual Laboratory (VL), ET-SUP and VL Management Group (VLMG). NOAA has a special emphasis on funding for TSO, developing and supporting ESRC site at COMET, and for distance events especially those done to support the Regional Focus Groups (RFG), virtual workshops and the enhanced use of distance technologies for all training events.

Thanks to the many training courses and RFG events, the increased coverage provided by NOAA GEO and LEO satellites is being utilized at an increasing rate across the Americas and Caribbean (especially GOES-12 Atlantic and NPP satellites). NOAA will work with its partners, its International Offices and its user community in Regions III, IV and others to ensure that the enhanced Geostationary coverage provided by GOES-East, -West and – Atlantic is maintained in the most continuous manner possible as allowed by the health and stability of its GOES and LEO fleets.