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REPORT ON EUMETSAT TRAINING ACTIVITIES

The document describes the status and future plans for training in satellite meteorology provided by EUMETSAT and the Centres of Excellence (CoE) in Africa, the Middle East and Europe.

CGMS XXXVIII is invited to note the current status and future activities for satellite training provided by EUMETSAT and Centres of Excellence in WMO RA I, RA II and RA VI.

Report on EUMETSAT training activities

1 INTRODUCTION

The mandate of the training activities of EUMETSAT is described in the EUMETSAT 5 years training plan, which covers the period 2009-2013. Further guidance on EUMETSAT long term training is given in the EUMETSAT training strategy document, which was also approved in 2008 by the EUMETSAT Council. In these plans also the scope of the EUMETSAT contribution to the WMO Virtual Laboratory (VLab) is described. The User Service Training Team is responsible for conducting and implementing the training activities and plans.

2 EUMETSAT COURSES AND WORKSHOPS

EUMETSAT continued with the organisation of courses, workshops and seminars at the Centres of Excellence and increasingly also at other locations. EUMETSAT supports management and instructors of the training partners to participate at meetings, conferences. The number of events is increasing, including the on-line and distance learning activities. Many of these events were organised in cooperation with the EUMETSAT Member States.

The e-learning and blended learning activities are facilitated by the Internet making use of the Moodle course management software. However, access to the internet in the developing countries is still an area of concern. Traditionally courses are organised at the Centres of Excellence (CoE), but not exclusively. An example of a new activity is the organisation of a workshop on Ocean Sea Waves (OSW) and Ocean Sea Wind Vectors (OSWV) at the UNESCO training institute IOC/IODE in Ostend, Belgium in December 2009 for the benefit of the marine forecasting institutes of the southern hemisphere. This event was jointly organised with NOAA.

3 THE CENTRES OF EXCELLENCE

3.1 Institute for Meteorological Training and Research (IMTR), Nairobi, Kenya

The policy of EUMETSAT is to optimize the training efforts as much as possible. Often this can be achieved through bundling of efforts with other partners such as was done with the AMESD project. One of the objectives of the AMESD project is to replace the aging PUMA receiving stations in the African countries. New software, Synergy, developed by Météo France, has been selected as visualization of data disseminated through the EUMETCast service. This requires training for the beneficiary partners, which is in principle the same target group as for the EUMETSAT training activities in Africa (RA I). It was a good decision to co-organize the first EUMETSAT-AMESD SW Application course, 16-27 August 2010 in Nairobi. The course was very successful, participants are able to visualize and use data received from the EUMETCast service in operational forecasting. IMTR training

instructors were trained at Météo France International in Toulouse, France, during a two weeks course. This concept has proven to be successful and will be applied to future courses as well.

Another major achievement at IMTR is the installation of a training laboratory in the context of the AMESD project. This laboratory will be used also for the regular EUMETSAT courses in the future.

3.2 Ecole Africaine de la Météorologie et de l'Aviation Civile (EAMAC), Niamey, Niger

The eighth EUMETSAT Satellite Application Course (ESAC) course for the French African community was organised in November 2009. During this two weeks course, the latest developments on satellite meteorology, applications and operations were explained to the participants of the 20 countries. In addition to the participants of the countries also participants from local organisations were invited. This course was the last one in the series of ESAC courses which started already 8 years ago.

Also at EAMAC a new AMESD training laboratory will be installed, similar to that at the IMTR in Nairobi. This laboratory will be used for the first EUMETSAT-AMESD SW Application course for the French community in RA I, planned for November 2010. Two participants per country will be invited, who should have the prerequisite knowledge to be able to make a smooth transition to a new way of operational forecasting at their services using digital technology.

EAMAC nominated two new trainers who will be involved in the satellite training team. Three EAMAC trainers will be trained on the Synergy system in Toulouse in October 2010.

3.3 Oman

A two week EUMETSAT Application Course (ESAC) was organised at the Sultan Qaboos University (SQU) 6-17 February 2010 for the benefit of meteorologists of the Middle East, including Iran and Egypt. Participants from countries with low incomes per capita were fully supported by EUMETSAT. Those from more wealthy countries in the region were invited, free of charge. Mission costs for participants from these countries were funded by their home services. It is encouraging that all countries from the region were represented.

The Directorate General of Meteorology and Navigation is planning a new infrastructure and buildings, including a new training centre.

3.4 SAWS

The South African Weather Service (SAWS) in Pretoria has upgraded its status from a regular training institute to the level of CoE in satellite meteorology in the VLab frame by committing to the requirements of WMO. This will assure the committed support from EUMETSAT. Over recent years EUMETSAT has supported SAWS in the development of satellite meteorology training resources, satellite product

applications and presentations at some SAWS regional training courses. Also a new AMESD training laboratory will be installed at the training centre at SAWS in Pretoria.

A one week training course will be organised in Pretoria, from 6-10 December 2010, with the participation from neighbouring countries. The organisation is already in an advanced stage.

An instructor from SAWS was invited to participate at the yearly EUMETSAT Conference in Cordoba, Spain (20-24 September).

3.5 DNM Casablanca

A first EUMETSAT supported training course on satellite meteorology and land applications was held in Casablanca from 26 to 30 October 2009. Neighbouring countries were invited to participate: Algeria, Tunisia and Mauritania. A second training course is in the planning phase and will be conducted early 2011.

4 COURSES ELSEWHERE

As in previous years EUMETSAT continues to also support the user community in South America. A course was organised in Antigua, Guatemala from 30 August -10 September 2010, in cooperation with AEMET. This was the 7th edition of the Latin American workshop on Satellite Meteorology that EUMETSAT has sponsored and co organised together with AEMET. Participants from the following countries participated in the course: Argentina, Bolivia, Brazil, Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Honduras, México, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

The second EUMETCast User Training meeting was organised in Belem, in Brazil from 14-16 September in cooperation with the National Institute for Space Research (INPE). Participants from Argentina, Brazil and Peru attended this course.

Based on the results of the last year's course in Brazil a course on satellite products for land application was organised in Maputo, Mozambique (2-6 November 2009) in cooperation with the Land SAF in Lisbon. Participants from Brazil, Cab Verde, Guinea Bissau, and Sao Tome et Principe participated at the course.

In Turkey at the WMO RTC in Alanya a Training workshop was organised in cooperation with the Turkish Met Service from 15-19 March 2010 on MSG and Metop Applications and Nowcasting. Ten countries from the Region participated in the workshop.

In cooperation with the Climate Monitoring SAF a workshop for experts was held in Rostock, Germany, from 30 August-3 September. At this workshop interactive software packages were used to produce climate products for the participating countries. Additional to European countries (Armenia, Czech Republic, Georgia, Italy, Kazakhstan, Lithuania, Macedonia, Romania, Russia and Spain), Botswana, South-Africa, Egypt, Ethiopia and Jordan participated in this event.

5 DISTANCE LEARNING ACTIVITIES

Distance learning and e-learning activities are becoming a regular training activity and are becoming much more mature as experience is building. A good example is the **Dust event week** – an online training event to highlight the importance of EUMETSAT satellite data for the detection and monitoring of atmospheric dust. This training week, 1-5 March 2010, consisted of eight online sessions, dealing with the detection, nowcasting and forecasting of dust clouds using geostationary and polar orbiting satellite data. This activity supported the WMO SD-WAS project. In addition a workshop will be held in Barcelona, 8-19 November 2010, to further promote and support the WMO SD-WAS project on this subject, coordinated with the Spanish Met Service, AEMET.

6 OTHER ACTIVITIES

Other communities than the typical nowcasting users appreciate the extension of training activities to their specific application areas. A first training course for the marine community was organised in cooperation with NOAA at the UNESCO training centre IOC/IODE in Oostende, Belgium, in December 2009.

Presentations were given at the international UNESCO IOC conference “50 Years of Education and Awareness Raising for Shaping the Future of the Oceans and Coasts”, held at the Russian State Hydro meteorological University (RSHU), in St. Petersburg, Russia, 26 – 30 April.

At the occasion of the inauguration of a EUMETCast receiving station a one day introduction to satellite applications was given to this part of the Russian CoE at the RSHU, to stimulate professors and students to use the data received at this station. This event was organised just before the UNESCO conference in April.

On the occasion of the 5th International Precipitation Working Group Meeting (IPWG-5) in Hamburg, Germany, EUMETSAT sponsored a training event (12 to 14 October) taking advantage of the presence of the international experts and also with involvement of experts from the EUMETSAT Satellite Application Facility on Support to Operational Hydrology and Water Management (H-SAF).

Build on the experience of the PUMA for the African community a project was set-up to assist the remaining eastern European countries which have only limited or no access to satellite data. In the framework of this DAWBEE (**D**ata **A**ccess for **W**estern **B**alkan and **E**astern **E**uropean countries) project a workshop was held at the premises at EUMETSAT, 18-22 October to train these countries on the efficient use of the EUMETCast system. The users were made familiar with the EUMETCast reception station and application (visualisation) software.

7 REGIONAL FOCAL GROUP (RFG) ACTIVITIES

ASECNA as the parent organisation of EAMAC organised a one week distance learning workshop in Nouakchott in Mauritania, 4-8 July 2010. 18 countries were

represented. Subjects were the use of Moodle, Centra and VisitView software for e-learning and distance presentations. This workshop was a follow-up of the workshop held at EAMAC in March 2009.

At the South African Weather Service (SAWS) the implementation of the Satrep online system continued. This system is already regularly used for European Web based weather discussion on the internet and will now be introduced in the SADC region as well. See links at: www.satreponline.org for Europe and saws.satreponline.org for Southern Africa.

8 MANAGEMENT SUPPORT

The progress of the VLab of the reporting period is considerable (see WMO Newsletter August 2010). This could be achieved by the active support of the Technical Officer and the secretarial support from EUMETSAT. It is essential that a modus will be found to continue this support. The VLab newsletter, presented with the new VLab logo, has been widely appreciated and is an excellent tool to promote the VLab activity and to extend the benefitting community.

9 TRAINING MATERIAL DEVELOPMENT AND DISTRIBUTION

The distribution started of the ASMET5 training software which covers: dust storms, convection in East-Africa and the development of secondary lows over the ocean south of Africa. In March a Kick-Off meeting was held at EUMETSAT for the ASMET6 project. A new setup was developed in cooperation with COMET, which should result in the faster production of training modules for the African community.

EUMETSAT continued to provide the training material on hard-discs at training events in Europe and Africa. The distribution of hard discs and US sticks were continued. EUMETSAT's external training library is available in all African countries and the countries in the Middle East.

10 CONCLUSION

CGMS XXXVII is invited to note the current status and future activities for satellite training provided by EUMETSAT and Centres of Excellence in WMO RA I, RA II and RA VI. CGMS is invited to make recommendation for a continued support of the VLab technical officer.