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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-39 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 financial support of the VLab technical officer.



## Report on EUMETSAT Training Activities

### 1 INTRODUCTION

The current EUMETSAT Training Plan covers the period 2009-2013. The training activities are matching with the training mandate as approved by the EUMETSAT Council. Substantial progress has been achieved especially on distance learning activities.

Many new applications have been developed over the recent years, including those from Metop and Jason-2. Gradually the Satellite Application Facilities (SAFs) are getting more involved in the EUMETSAT training activities. This situation led to the need of an additional trainer. Mark Higgins took up duty as the fourth training officer at EUMETSAT in April 2011.

Also the EUMETSAT contribution to the WMO Virtual Laboratory (VLab) activities is significant. However these efforts will be described in a document submitted by the VLab technical support officer (WMO.WP-14).

#### 2 EUMETSAT Courses and Workshops

The EUMETSAT strategy is to organise courses, workshops and seminars for and with its Member and Cooperating States (M&C) in RA VI. Often experts from the M&C States are invited to assist the EUMETSAT Training Team in delivering lectures. Additional to the presentations in traditional class room courses delivering of on-line and distance learning is rapidly increasing. The conduction of blended courses is well appreciated as shown at the post course evaluations. These blended training activities are a mix of traditional class room course and on-line presentations. Also the one week on-line training events on specific subjects gain popularity rapidly. It is planned to extend these activities, which also optimise the usage of the limited financial resources under the current economic conditions.

On-line presentations rely on a good access to the internet. Latest developments show also an improved access in the developing countries, which is a requisite to facilitate a north-south knowledge transfer and to narrow the knowledge gap. Voluminous training material, developed by partner organisations, can be downloaded and used for local training activities at the CoE.

EUMETSAT is also taken initiatives to further develop training activities in climate, oceanography, land applications and hydrology. The SAF's are often invited to present their products of these applications so that the products will be used by a wider community.



## 3 The Centres of Excellence

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

The concept of the Centres of Excellence (CoE) is working very well. Initially the IMTR (Nairobi) and EAMAC (Niamey) were the only training centers recognized as CoEs. At the local training institutes instructors were further trained as experts in satellite meteorology following the WMO strategy of "Training the Trainers" The training centers in Oman and Pretoria were also upgrade as CoE. These four CoE are now well servicing their regions and communities. The IMTR in Nairobi and the training institute at SAWS in Pretoria are each other complement and backup and are cornerstones for the training on satellite meteorology in RA I.

It is felt that RA I requires an additional CoE for the French speaking community. Potentially this role might be played by the DMN of Morocco, which has an excellent infrastructure and experts on many applications.

EUMETSAT organizes the regular ESAC courses on a yearly basis at IMTR, EAMAC and in Pretoria. However in 2010 the courses at IMTR and EAMAC were merged with the AMESD training activities. These two courses were funded by EUMETSAT but the participants were trained on the Synergie visualization software as installed at the PUMA2010 work stations of the AMESD project. This project provided also the training laboratories at IMTR, EAMAC and Pretoria. Reference is made to the AMESD project site: www.amesd.org

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

Given the career development of some core trainers at EAMAC, two meteorologists were assigned as instructors. One of them is also contributing to the development of training material of the ASMET project.

The new appointed Director-General of ASECNA in Dakar has given more authority to EAMAC. This is a positive development as it gives EAMAC autonomy for decisions.

The EUMETSAT/AMESD training course on Synergie was held at EAMAC from 15 till 26 November 2010.

### 3.3 Oman

The 7<sup>th</sup> ESAC for the Middle East (ESAC-ME-VII) was co-organised with DGMAN and Sultan Qaboos University in Oman for the benefit of meteorologists of the Middle East from 5 till 16 February 2011. The objectives of the course were to make the participants familiar with products and services from EUMETSAT and the SAFs and on how this information can be applied in the region.



Carla Barroso, IM Portugal, gave an excellent distance presentation from Lisbon on Land SAF products, using a broadband link and the Centra tool, the presentation was also technically a success.

Also the training coordinator of the NMS of Morocco was invited to participate. Exchange of experience and information between the CoE is considered as an important element to optimise the training efforts. Oman and Morocco are Arabic speaking countries with many similar interests and climate conditions.

## 3.4 South African weather Service (SAWS)

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. Cooperation is also extended to research and product development and evaluation. SAWS training experts are contributing to the development of training material in the framework of the ASMET project.

A one week training course was conducted at the training centre of the SAWS in Pretoria. At the opening ceremony of this course on 6 December 2010 this institute was inaugurated as the third CoE of training on satellite meteorology in RA I. The EUMETSAT Director of Operations, Mikael Rattenborg, and the SAWS General manager Gerhard Schulze officially opened this CoE. The WMO Deputy SG, Jerry Lengoasa and Mr. Jerome Lafeuille from the WMO Space Program attended the opening ceremony via a teleconference. This opening ceremony was also the start of the one week training course held from 6 till 10 December.

### 3.5 DNM Casablanca

Regular coordination meetings were organised with the training coordinator from the DNM of Morocco. EUMETSAT invited him to participate at the EUMETSAT User Forum in Ougadougou and at the training course in Oman in February 2011. At these occasions plans were discussed and further developed. The next course is planned from 24 till 28 October 2011 in Casablanca with invited European and African experts as lecturers.

# 4 TRAINING EVENTS ELSWHERE

A training workshop was held in cooperation with the NMS of Turkey in Antalya, 4-7 April, on the Drought and Fire monitoring from space. 35 participants from South Eastern European countries attended the workshop. The workshop was organised in the framework of a EUMETSAT project called SALGEE project, which stands for satellite applications for land and surface analysis in Eastern Europe.

The EUMETCast receiving station is operational for one year at the Russian CoE in St. Petersburg now. A workshop was held at the Russian State Hydrological University between 10 and 14 May 2011 to optimise the usage of the data by students and researchers.



## 5 DISTANCE LEARNING ACTIVITIES

It is becoming usual practice to include on-line presentations at courses and workshops. These activities are often coordinated with the experts from the EUMETCAL and EUMeTrain projects.

A good example is the organisation of the 2011 EUMETCAL - EUMeTrain Satellite Course, which covers a total period of several months divided in three blocks. This concept is proven to be very successful considering the number of course is mainly conducted as an online course with only one classroom phase in late autumn 2011.

## 6 OTHER ACTIVITIES

Support is given for several other training activities such as to the Brazilian Remote Sensing Symposium, which was held in Curitiba in Brazil in May 2011.

EUMETSAT participated at the workshop on oceanography in Liege , Belgium in March by UNESCO/IODE. EUMETSAT continues with courses for marine forecasters to advertise the use of satellite data (especially scatterometer data). These activities are also supported by experts of NOAA.

## 5 REGIONAL FOCAL GROUP (RFG) ACTIVITIES

The concept of the Regional Focus Groups is a good concept and facilities the organisation of training activities in the region of the CoE. However due to the limited access to the internet the potential of the RFG has not been fully exploited in the recent past. New initiatives will be taken up as the access is improving rapidly in most are.

### 6 TRAINING MATERIAL DEVELOPMENT AND DISTRIBUTION

A new concept for the development of ASMET training material has been developed for the African communities. The first results will be ready to become operational by the end of 2011. The ASMET6 modules cover topics like Flooding in W-Africa, Droughts in E-Africa and Satellite data in support for hydrological management. The project partners are IMTR, EAMAC, SAWS, COMET and EUMETSAT.

The distribution of training material on USB sticks is very effective and much appreciated.

### 7 CONCLUSION

CGMS-39 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 financial support of the VLab technical officer.