



# EUMETSAT training in satellite meteorology data applications

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## The Role of EUMETSAT in Training

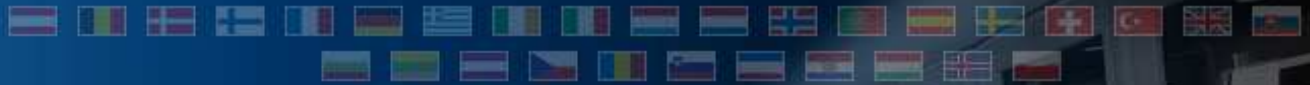
- ❑ **To act as a catalyst**, promoting training in use of satellite data in Member & Cooperating States, Africa, the Middle East and parts of South & Central America.
- ❑ **We work in close coordination, but not in competition, with training Institutes** of our Member States (e.g. France, Germany, UK...). We also make use of the capabilities of recognised Centres of Excellence (CoE) in satellite meteorology in Africa, the Middle East and parts of South & Central America. In future this will include China, Russia ....
- ❑ **Draw on expertise** coming from Member/Cooperating States and other partners (CoEs) is used at EUMETSAT training courses and workshops.
- ❑ EUMETSAT often takes on a **sponsoring role** when the scope of an training activity is too big for one country alone: e.g. ASMET Modules for Africa, MeteoCAL Tools, EUMeTrain educational resources, etc.

## New Learning Methods

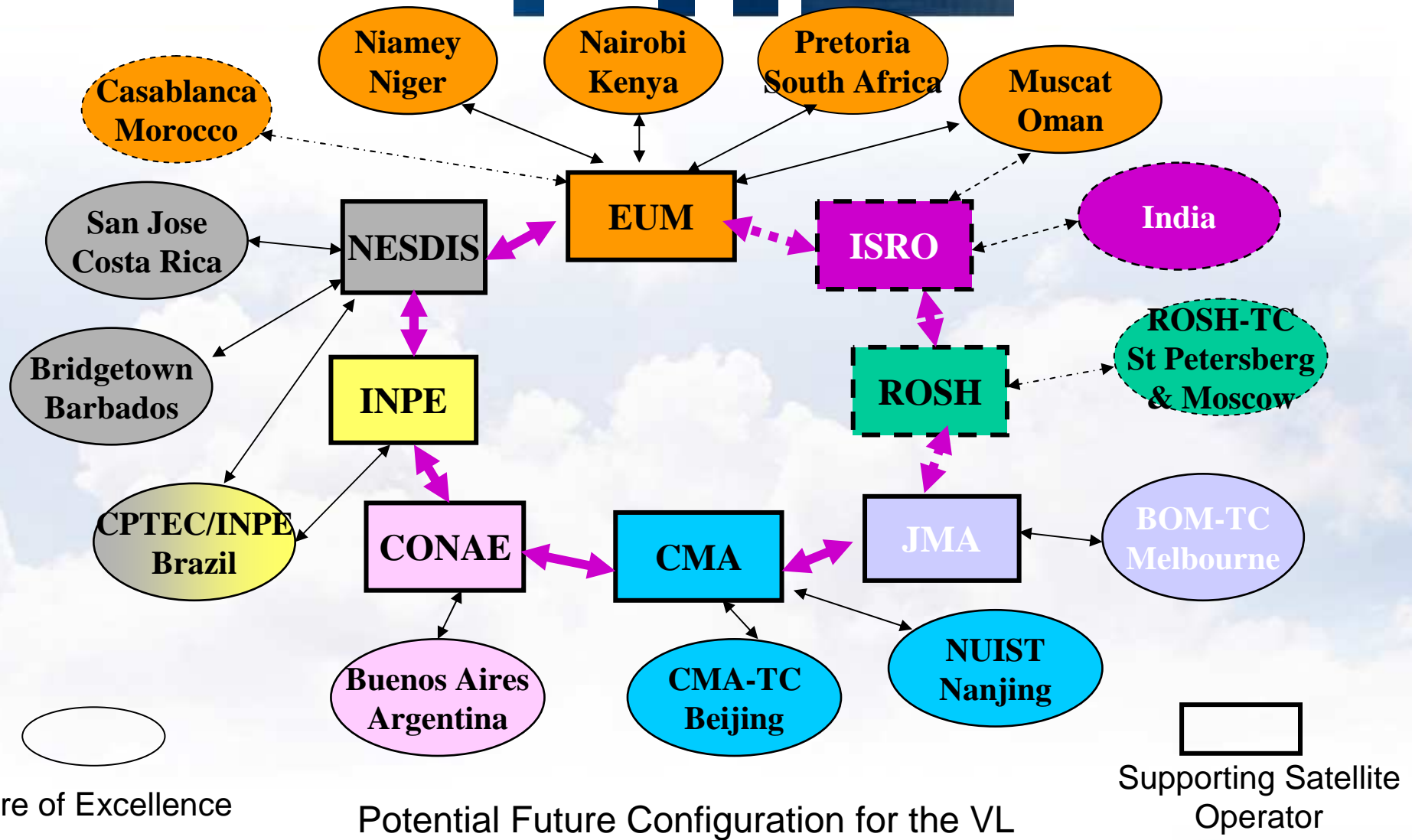


Now the focus is more on web content (webcasts), distance learning lectures, “blended learning” courses, with maximum use of the Internet because:

- ❑ elements from centrally collected training resources (libraries) can be more easily integrated into courses by trainers
- ❑ “blended learning” courses (based upon largely virtual classrooms) can be accessed by more persons, can be re-used, thus they become very cost effective. There are new delivery tools such as CENTRA.
- ❑ management of the participants and course preparation can be handled by a Course Management Systems such as Moodle
- ❑ all regions of the globe can be reached, albeit with differing degrees of success, via the Internet or other dissemination schemes such as the (EUMETCast “training channel”, hard drives, donated laptops, etc.)



# The Global Perspective



# The Strategy

## EUMETSAT CENTRAL TRAINING UNIT

Working in partnership to develop training

### Core benefit application areas

Meteorology, NWC & NWP

Climatology

Ocean applics

Land applics

Atmos. comp.

Hydrol. & water mangmnt

others.

### Contributing satellites

Meteosat, MTG, Metop, Post EPS, Jason, Sentinel-3, other sats, e.g. GOES, NOAA, GEO and LEO FY series, MTSAT Series, COMS, MODIS,.....

### Core Partnerships

NMHS TCs, SAFs, WMO VL, other TCs, NOAA (COMET), CMA, Russia, other Satmet projects, e.g. Eumetcal, EUMETrain

GEO and GMES partners

### User communities

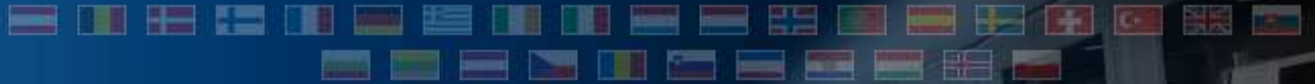
Priority 1 – Member & Cooperating States NMHSs  
 Priority 2 – Broader Europe (EUMETNET) NMHSs - this is Eumetcal  
 Priority 3 – WMO Virtual Lab (includes African, Arabian, S American, NMHSs & partner institutes)

User groups of the GMES Euro services, African GMES services, SAFs, and other GEO and GMES Communities as they evolve,

### Training activities

- Promote satmet, hydrology, ocean, land, climate applications based upon EUM products & services (incl. EUMETCast)
- Support development of resources and their delivery - this is the role of EUMETrain
- Support goals of Eumetcal
- Encourage applications development
- Training support to AMESD

- Promote GEO/GMES products & services
- Encourage GEO/GMES applications development
- Derive max benefit of data for GMES & other user communities



## International Cooperation

To optimize the training efforts regionally and globally EUMETSAT aligns its training efforts with those of partner Organisations:

- ❑ **EUMETCAL**
- ❑ **EUMeTrain**
- ❑ **WMO (Virtual Laboratory)**
- ❑ **Bilateral Cooperation Partners (e.g. NOAA and COMET, Russia (Moscow & St. Petersburg), China (Beijing and Nanjing))**
- ❑ **International Working Groups of CEOS and GEO**

## International cooperation

- ❑ EUMETSAT's training activities focus primarily on operational personnel from weather services of Member States and Co-operating States (with highest priority), but the countries in Africa, in Arabian Gulf region and in South America all have the next priority).
- ❑ Training will, in future also focus upon the needs of scientists and IT experts developing new services, and will also address additional application areas such as climate, land surface, ocean, atmospheric chemistry, hydrology (obvious connection to several GEOSS SBAs).
- ❑ Training outside Member States is coordinated in Europe through EUMETCAL and worldwide with the WMO, as agreed by the EUMETSAT Council.
- ❑ There is further special cooperation on training with international partners, especially with NOAA & COMET for the joint development of polar orbiting satellite training resources.

## The role of blended learning for EUMETSAT's training (1)

- ❑ To be successful in providing satellite data from space for meteorology and climatology, it has to be assured that the data are being fully used !
- ❑ Training on applications is important to ensure synergetic use of satellite data (in combination with other datasets).
- ❑ This is achieved by combining distant learning via the Internet with classroom courses.
- ❑ The balance of the distant learning components and classroom parts is flexible.
- ❑ In all instances the human factor (tutoring) has to be included in the courses.

## The role of blended learning for EUMETSAT's training (2)

- ❑ To be efficient in delivering blended learning courses, a course management system has to be used.
- ❑ EUMETSAT together with its international partners (EUMETCAL, WMO VL) has decided to make use of Moodle.
- ❑ One of the many advantages of creating and (re-) delivering courses is that the imbedded training material is subject to review by the lead-teacher.
- ❑ Interaction between the students and the teachers are available (social component).



## The role of blended learning for EUMETSAT's training (3)

- ❑ Progress tracking and testing of knowledge is part of the courses.
- ❑ This will finally enable the evaluation and subsequent certification of course participants.
- ❑ Beside application training, the training experts have to be qualified in the use of the training tools like Moodle, VisitView, Centra, Skype etc.

## The role of blended learning for EUMETSAT's training (4)

- ❑ Joint use of training methodologies and training material offers the highest degree of efficiency in use of training resources.
- ❑ This allows re-delivery of course material and progress towards an international education standard.
- ❑ The sharing of training (course) material will be facilitated by joint use of resource libraries (e.g. the environmental satellite resource centre (ESRC) of COMET or the CEOS portal for education and training).

# EUMETSAT's support for progressing the delivery of courses

## Recent Courses :

- EUMETSAT in house courses
- Niamey and Pretoria
- Muscat and Nairobi
- Langen (DWD training school)
- Cordoba
- Kiev
- Nairobi
- Morocco
- Bulgaria,
- Columbia
- Croatia,
- South Africa,
- Mozambique

## Conclusion 1

**With increased Internet performance and specialised broadcasts such as EUMETCast, there are now real possibilities to reach the global audience:**

- As a global satellite operator, EUMETSAT needs the new technologies to satisfy its global training needs**
- To conduct courses globally, a Course Management System is very desirable, as it permits the total management of courses, from initial participant selection through to final course assessment**
- Language difficulties are more easily overcome through global training partnerships (e.g. VL. Translations into P. Esp. F. Chinese, Russian, etc)**
- The task of preparation and delivery of training resources can be shared between partners, thus making training more efficient and much more cost effective.**

## Conclusion 2

# The New Training Strategy

- ❑ **A new strategy defines EUMETSAT training Activities for the next 20 years**
- ❑ **This strategy builds upon existing successes, whilst taking account of new future exciting satellite programmes with a wealth of new types of data.**
- ❑ **It will fully take into account the significant influence of e-learning on the style and scope of training activities.**
- ❑ **The Strategy proposes a continuation of training support to many parts of the world, in particular, the developing countries, and will increasingly focus upon the development of data applications responding to the needs of several GEO Societal Benefit Areas (weather, climate, disasters, ocean, water, agriculture, health etc.)**

# Finally – have a look at our training Web Pages !

See the EUMETSAT Web Pages at: Home → What We do → Training → Distance Learning



The screenshot shows the EUMETSAT website in a Microsoft Internet Explorer browser. The page title is "EUMETSAT WHAT WE DO Monitoring Weather, Climate and the Environment". The navigation menu includes "WHO WE ARE", "WHAT WE DO", "ACCESS TO DATA", "IMAGE GALLERY", "PUBLICATIONS", and "MEDIA". The "WHAT WE DO" section is expanded to show "Distance Learning".

**Distance Learning**

On this page a number of training sessions in the area of Satellite Meteorology are offered as teletraining sessions. The teletraining sessions utilise the VISITview software (see related links) where a PC with an Internet connection is required. A conference call or Voice over IP (VOIP) is used for the instructor and students to interact. The phone number and/or the VOIP contact details will be provided by email along with signup instructions.

The currently available training sessions are given in the list below. Please, click on the link under "Details" to get a full description of the session and the download instructions. If you want to participate in a training session, please check the **Schedule** for details as regards dates and times. If you prefer self-learning, you can download the training lesson to your local PC and open it in a local mode. More instructions are given in the PDF files under "Details".

**Note:** it is recommended to use a fast Internet connection for downloading. The files can be very large, typically around 50 MB. Downloading via an analogue modem is not appropriate.

Title	Author	Duration	Details	PDF, KB
 Airmass RGB	Jochen Kerkmann	90 min.	<a href="#">Details</a>	PDF, 43 KB
 Early Detection of Rapid Cyclogenesis	Jochen Kerkmann	120 min.	<a href="#">Details</a>	PDF, 46 KB

# THANK YOU !