



WMO-CGMS Virtual Laboratory
for Education and Training in Satellite Meteorology

ACTIVITY REPORT

Period: September 2012 to December 2013
Centre of Excellence: Argentina

GENERAL INFORMATION ABOUT THE CENTRE OF EXCELLENCE (CoE) AND THE DEVELOPMENT OF VLAB TRAINING ACTIVITIES

1) What were the major achievements of your CoE during this reporting period?

- a) CoE Argentina and WMO organized and sponsored the “Training Workshop on NOWcasting TEchniques: T-NOTE”.
T-NOTE was directed to graduate and postgraduate students in the field of atmospheric sciences as well as National Meteorological and Hydrological Services personnel and members of WMO RAIII and IV with background in meteorology (VLab Newsletter / December 2013 / Volume 4 / Number 2 / Page 6).
- b) Participation in the **CM4SH Project**.

Also CoE made some advances, as follows:

The **NMS Training Department** was reconstructed and consolidated at the end of 2012. New personnel were added (90% new staff) and even though we are still very few it is an advance that will enable us to develop training activities. Our most important achievement in the reporting period was designing e-learning courses in Moodle platform to respond to the needs of training in the entire country.

- i. The online Surface Weather Observer Course was given to 51 participants (NMS personnel) around the country (12 subjects in one year, including 400 hours practice observations). 82% of the participants graduated.
- ii. Encourage regular courses to go **online and adopt blended learning where necessary**. Adapt and update courses to new requirements and possibilities: Quality Standards, METAR, Antarctica Meteorology
- iii. Detect **Learning Needs** and establish priorities: **update training** for observers and forecasters (in progress).
- iv. Find **Solutions for training needs**: after Toulouse 2013 it was decided to put into practice learning solutions. At the end of the year planning and arrangements were made for the participation of one person in **SIMS course** Feb 2014. Now we are in the process of putting into practice this new methodology to teach and assess competencies.
- v. Participation in **international events** : a) to learn about different and better ways to carry out training, b) to show what we are doing and c) improve links that will enable us to grow (improve quality and capacity of training). Examples: Participation in Perú **Train the Trainer Workshop** 2012, and **Calmet 2013** Toulouse.
- vi. Discussions about our participation on Calmet online 2014, and planning to conduct a Spanish session.

Department of Atmosphere and Ocean Sciences (DAOS) – University of Buenos Aires

The Department of Atmosphere and Ocean Sciences has developed a course on General Meteorology using distance education system. General Meteorology is one of the duty courses to

obtain the degree on Atmospheric Sciences. It includes printed material, electronic material, computer conferencing, audiotapes and videotapes. The e-mail will be used to get the material and to get help from tutors. The course was developed in an open-source Learning Platform (Moodle). During 2014 it will be launched in Argentina and it is projected to be offered in 2015 to all Spanish speakers.

2) What were the main difficulties of your CoE during this reporting period?

NMS:

Time: few personnel with partial dedication for developing training resources.

Budget: low budget for trainers and to improve technological support.

Communication: no reliable internet access, communication difficulties

Language: few opportunities of conference sessions and materials in Spanish and for South America.

Geographical distances: online and web conferences are not yet commonly used. It takes a little time for some trainers to switch into new technologies.

Status of training: we need to find better strategies to motivate personnel into training and regular resources to promote ongoing training.

DAOS:

Budget: low budget for the maintenance of virtual platforms and to add new courses for distance education.

3) Who provides support in the production of your training materials (e.g. produced by own trainers, support from Satellite Operators, IT staff, University researchers and lecturers, etc)?

The training department is investing time and effort in writing new material for several courses. Training material is usually produced by the trainers themselves. The trainers may belong to any of the institutions mentioned. Support in the production of training material may be given by anyone available and willing to collaborate: senior university students, IT staff or professionals usually on a voluntary basis for a certain course. There are joint training projects in which the different parts (institutions) work together in producing training material.

At NMS we try to use any open educational resource (OMM, Comet, Eumetsat/train), and use them for our learning objectives.

Advanced students researchers from the University of Buenos Aires (UBA) and data processing personnel took part in producing the content for Conceptual Models for the Southern Hemisphere Project.

At the end of 2013, while preparing for SIMS course Langen 2014, the training department reinforced links with forecaster and data processing (images) who collaborated in preparing the material needed.

DAOS: The development of the virtual course on General Meteorology was supported by a University of Buenos Aires- InformationTechnology (UBA-TIC) grant.

4) Is any kind of Learning Management System (e.g. Moodle, Blackboard, etc) used by your CoE to conduce training activities?

NMS, UBA and CONAE manage online courses using Moodle, available in each institution.

Moodle was installed at the end of 2012 in NMS and put in practice very successfully enabling a much wider participation in courses and a more efficient training.

5) Is any kind of Online Conferencing System (e.g. Saba Centra, Blackboard Collaborate, GoToWebinar, etc) used by your CoE to conduce training activities?

We have taken part e-training activities and international cooperation through Sabameeting and Webex. But we have not delivered training in this way.

6) What kind of training is provided to the trainers of your CoE and at what frequency?

We promote our trainers to be updated and take part in any suitable course.

Personnel from the NMS training department took part in

- Training for trainers at INAP (Institute of National Public Administration) some of the courses offered are: Training for trainers (Moodle design); Design and production of activities on moodle platform; this courses started in 2013. There are more courses on training for 2014.
- Eumetsat Workshops
- Nowcasting (partial attendance)
- Participation in Courses at University
- WMO online sessions (aeronautical competencies, satellites)
- SIMS to apply in training
- CM4SH to develop and apply training material
- Calmet
- Participation on "Train the trainers workshop" organized by WMO

7) Can you suggest ways for the VLab (including CoEs, Supporting Satellite Agencies, Partner Programmes, WMO Space Programme, VLab Co-chairs and TSO) to provide better support to your CoE?

It would be very useful if Trainers from VLAB or Eumetsat could offer training courses in our region about pedagogy and strategies to design online learning courses.

Provide tools to apply the products and results of research and design useful learning material.

Also strategies to generate partnership between the NMS and stakeholders such as government organizations, universities, ONG, business, etc. in order to obtain support (private as well as public) to be able to develop meteorological learning products and participate in international events: conferences, meetings, workshops

The structure of CM4SH was very useful to us, and effective, it could be used on other projects as well.

Provide a bridge from research to application, from research papers to operationally useful material.

Generate more cooperation and information exchange with the other CoEs reinforce the network relation

8) Please use the table below to list any training materials you may have developed over this reporting period:

Title of training material	Type of resource (e.g. text book, video, recorded presentation, Moodle course, webcast, PowerPoint slides)	Availability of resource (e.g. open educational resource¹, institutional use only)	Submitted to ESRC (Yes/No)
Weather Observer	Moodle course	Institutional	No
Antartica	Video conference, Moodle, PowerPoint.	Institutional	No
Geomagnetism	Face to face, Power Point, observation practice	Institutional	No
Quality - Standards	Moodle	Institutional	No
METAR	online	Institutional	No
General Meteorology Virtual Course	Moodle course	Open to public from 2015 onwards.	No

9) Is your CoE working closely together with the CoE's sponsoring Satellite Operator/Agency in VLab training activities? Can you suggest ways to improve this collaboration?

We have recently reinforced the relationship with CONAE in the framework of the VLab. We have just identified some common goals to organize regional online courses during 2014 and 2015.

¹ Please also indicate if the [Creative Commons License](#) was applied to the resource.

10) Please use this space for additional remarks you may wish to make relating to the delivery of training by your CoE.

During 2012 and 2013 CoE Argentina made an effort in order to reinforce its capability of training. We know that this is a first step. Our main challenge for the coming years is to increase the number of on line courses for the Spanish speaker's countries.

11) The next page presents a table containing all training events entered by this CoE in the VLab Online Calendar of Events during this reporting period. Please complete the table with information about the number of trainees and Country of origin of trainees that attended the events. If the CoE had conducted other training events considered as part of their VLab activities, that for some reason were not submitted to the Online Calendar of Events, please add them to the table.

Date	Title	Location	WMO region	Host	Type	Language	Number of trainees	Country of origin of trainees
------	-------	----------	------------	------	------	----------	--------------------	-------------------------------

2013/08/05 - 2013/08/16	T_NOTE Training Workshop on NOWCASTING TECHNIQUES	classroom	III	Dpto. Ciencias de la Atmósfera y los Océanos, Facultad de Ciencias Exactas y Naturales – UBA - Argentina	Course	English	40	Uruguay, Chile, Brasil, Perú, Venezuela, Argentina
-------------------------------	---	-----------	-----	--	--------	---------	----	--