

FIVE-YEAR STRATEGY FOR THE WMO-CGMS VIRTUAL LABORATORY FOR EDUCATION AND TRAINING IN SATELLITE METEOROLOGY 2015-2019

Scope and Definition

The WMO-CGMS Virtual Laboratory for Education and Training in Satellite Meteorology (VLab) is a global network of specialized training centres, named Centres of Excellence (CoEs), that are supported by one or more CGMS satellite operators (Ref: <http://vlab.wmo.int>). These CoEs, often co-located with WMO Regional Training Centres (RTCs), are established in the various WMO Regions to meet user needs for increased skills and knowledge in using satellite data within their Region.

Mission of VLab

To improve weather, water, climate and related environmental services by enabling WMO Members to utilize satellite data.

Objectives of VLab

1. To achieve better exploitation of data from the Space Based global observing system for services that are increasingly reliant on satellite data;
2. To globally share knowledge, experience, methods and tools related to satellite data, especially in support of WMO Members that have limited resources.

Strategic Drivers

The strategic drivers of VLab have been and will continue to be:

- the improvement of the quality of services offered by WMO Members, in particular those with constrained resources;
- the introduction of the new generation of satellites, with new data types and products as well as new dissemination systems
- communicate improved scientific understanding, technological advances and address new societal challenges;
- responding to new and emerging service demands for Weather, Climate and Water, such as in support of marine, land , and Global Framework for Climate Services (GFCS) applications;
- promoting and achieving the new competence and quality control requirements, and professionalism within WMO Services.

Current status and achievements of VLab

In its 15 years of existence, the VLab has demonstrated its capability to deliver global scale events on training and education in satellite meteorology. Each CoE is responsible for conducting training activities and normally supports one or more Regional Focus Groups involving NMHSs from its region.

The years 2010-2014 have seen more than 50 classroom and virtual training events organized on annual basis in all WMO regions and in all WMO languages. These included regular online weather briefings, Event Weeks, regional training events and Virtual Round Table events. There has been an increase in the organizing of online training activities, especially within the past two years, resulting in an increased number of participants from all over the world.

As a global virtual entity, the VLab has also provided education and training in other areas of relevance to WMO Members. As an example, the Virtual Round Table on the implementation of the aeronautical meteorological competencies was highly successful, with participants using 212 connections from 87 countries worldwide. The event was offered in 5 languages.

VLab has also seen the addition of two new Centres of Excellence since 2009. They are located in Casablanca (Morocco) and Gwanghyewon (Republic of Korea).

Strategy for the period 2015-2019

In the years 2015-2019, VLab intends to provide support to education and training in the use of satellite data and technology among WMO Members by developing and delivering training around the various competency frameworks through:

- active support to the introduction of the new generation of satellites;
- the delivery of Regional Focus Group (RFG) sessions;
- the creation and maintenance of a central library/repository for recorded RFG sessions and other online events;
- maximise the visibility of online information resources, such as OSCAR and SATURN
- the organization of Event Weeks on topics of particular interest (such as the new generation of satellites and the WMO priority areas);
- engaging directly with its co-sponsors WMO (through IPET-SUP) and CGMS;
- engaging increasingly with other international entities providing training
- supporting online capability in classroom events;
- the assurance of high quality of training using state-of-the-art educational tools and methods;
- encouraging the availability of more training material in WMO official languages other than English;
- encourage evaluation of the effectiveness of the training for the use of satellite data and products and its long term benefits

Through the experience acquired in the coordination and delivery of online training, the VLab will strive to meet the increasing demands of WMO Members in the period 2015-2019. These will be in line with:

- WMO Strategic Priorities;
- GFCS Priority Areas;
- GEO Societal Benefit Areas.

While providing training for weather forecasting, the VLab will also engage strongly in the areas of:

- Support to Climate monitoring;
- Marine, Ocean and coastal monitoring;
- Dust, ash and smoke monitoring;
- Space weather.

Delivery of training will rely on:

- Online techniques;
- Enhanced communication capabilities for data and training material;
- classroom and distance learning delivery of training where appropriate;
- Collaboration among CoEs.
- Cooperation with other entities providing training
- Continued support from CGMS members

VLab has proved it can reach every WMO Region and will strive to increase its reach to all WMO Members, in line with the WMO Education and Training Programme. To ensure quality of services provided by VLab, continuous internal quality evaluations will be put in place. These include undertaking evaluations of the training impact of its activities following the best available approaches, as well as establishing procedures to ensure the meeting of the VLab expectations from both partners: the CoEs and the Satellite Operators within CGMS. Annual reviews of achievements will also be carried out to ensure focus is kept in the provision of training in the main priority areas established in this document.

The VLab is an entity sustained by contributing CoEs and Satellite Operators. Technical support function is critical for the organization of online events and VLab coordination. Currently, VLab provides a broad support to CoEs activities with its central website (<http://vlab.wmo.int>) serving as a platform for collaboration and networking. The work of a dedicated Technical Support Officer (TSO), who also provides pedagogical advice to the VLab community, is mission-critical in this regard. VLab will seek to provide continuous instructional and technical support of its activities through the work of the TSO. However, this requires a long-term collaborative funding effort from CGMS Satellite Providers via the designated WMO VLab Trust Fund.



It is imperative that the strong collaboration between VLab CoEs and partner Satellite Operators is kept in order to maintain the development and delivery of training, with particular emphasis on national and regional specific demands and requirements. This will ensure the economic benefit of the large investments in the space based observing system.

The continuation of VLab collaboration with other training and education programmes in the subject of meteorology, such as EUMeTrain, EUMETCAL, CALMet, COMET and the WMO Training and Education Programme is essential for further success. VLab will further build on the partnership with the Committee on Space Research (COSPAR), and explore partnerships with the Working Group on Capacity Building and Data Democracy of the Committee on Earth Observation Satellites (CEOS WGCapD) and other programmes in areas of common or complementary interest. VLab will also monitor the development of the WMO Global Campus initiative and explore ways to contribute and benefit from it.