WMO-CGMS Virtual Laboratory

for education and training in satellite meteorology

About VLab

Who Are We?

Satellite Agencies

Eight satellite operators sponsor VLab CoEs: CMA, CONAE, EUMETSAT, INPE, JMA, KMA, NOAA, and ROSHYDROMET.

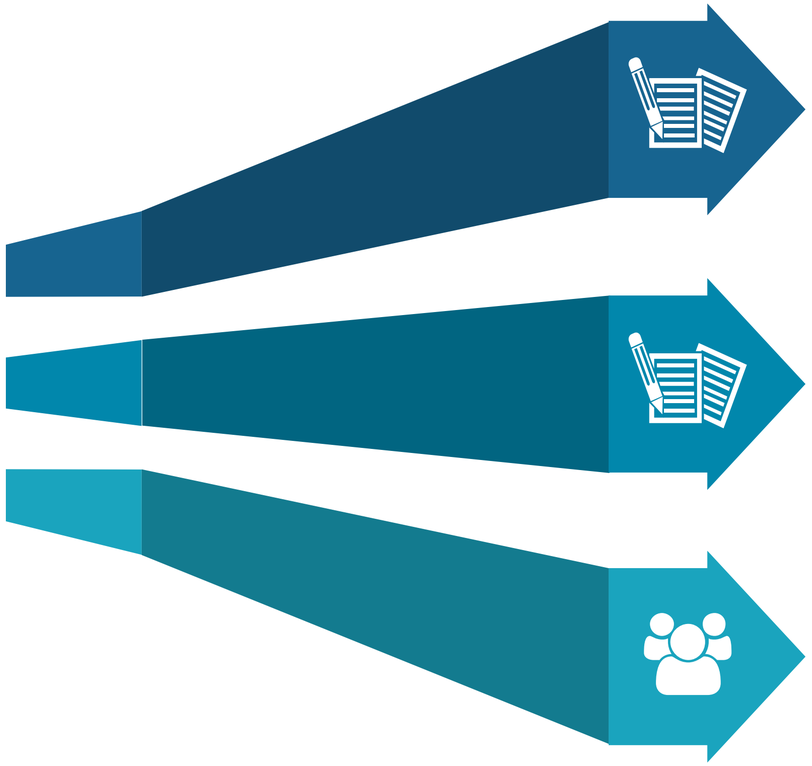
Centres of Excellence

The 13 Centres of Excellence (CoEs) for training in Satellite Meteorology are sponsored by one or more Satellite Operator and/or Agency.

Established by the World Meteorological Organization (WMO) and the Coordination Group for Meteorological Satellites (CGMS), the Virtual Laboratory for Training and Education in Satellite Meteorology (VLab) is a global network of specialised training centres and meteorological satellite operators working together to improve the utilisation of data and products from meteorological and environmental satellites.

Our Mission

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



Objectives

1 To achieve better exploitation of data from the space-based component of the WMO Integrated Global Observing System (WIGOS) for services that are increasingly reliant on satellite data.

Objectives

2 To globally share knowledge, experience, methods, and tools related to access and usage of satellite data, especially in support of WMO Members that have limited resources.

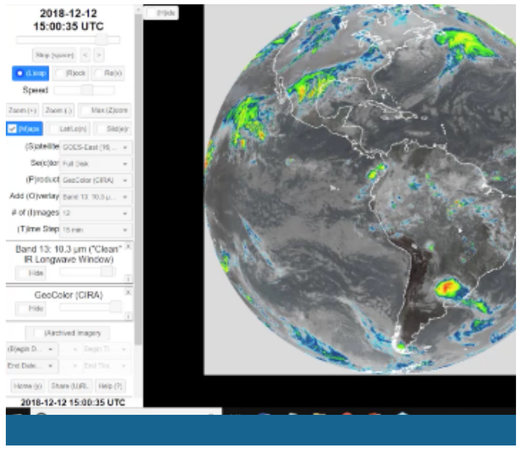
Audience

Mainly operational meteorologists, those performing the duties of analysis, diagnosis, prognosis and forecasting of the weather.

GOES

Major activities 2018

RFG Sessions

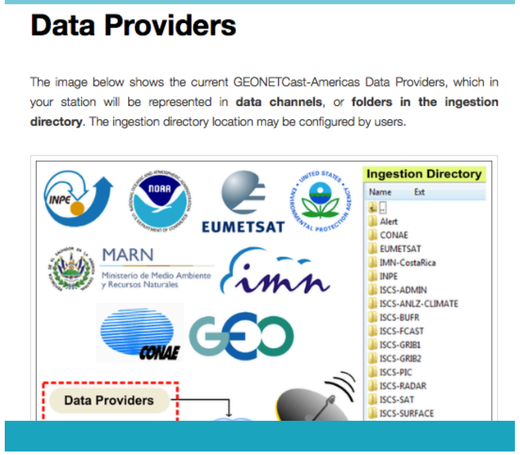


The Americas & Caribbean Focus Group had boosted interaction among meteorologists and forecasters in WMO RA III & IV (bilingual sessions). These sessions have been providing informal learning, promoting the new data types and products from GOES and JPSS satellites.

Training resources

26 new training resources were developed by Meted and CIRA. CoE Brazil developed numerous resources on Goes-16 (videos, slides, and blogs).

Data access



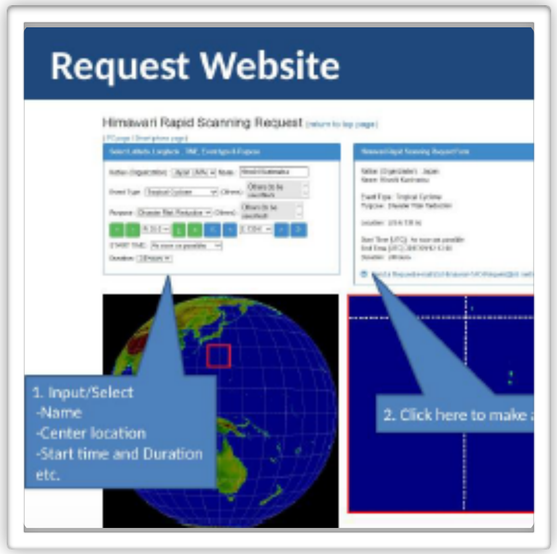
Collaborations with CoEs Costa Rica and Brazil supported linkages in data access associated with the new satellites and in support of GEO via AmeriGEOSS.

Workshops

GOES-16 and GeonetCast Workshops were carried out in various countries. CoE Argentina delivered four short online courses in WMO RA III and IV, based on Conceptual Models developed in CM4SH project using updated GOES-16 imagery.

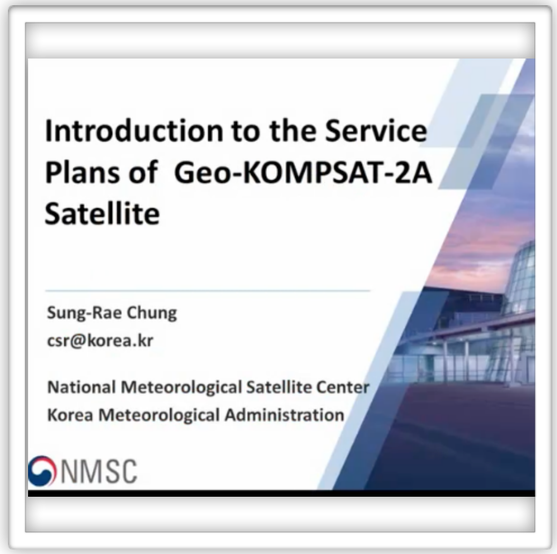
Himawari and Geo-KOMPSAT

Major activities 2018



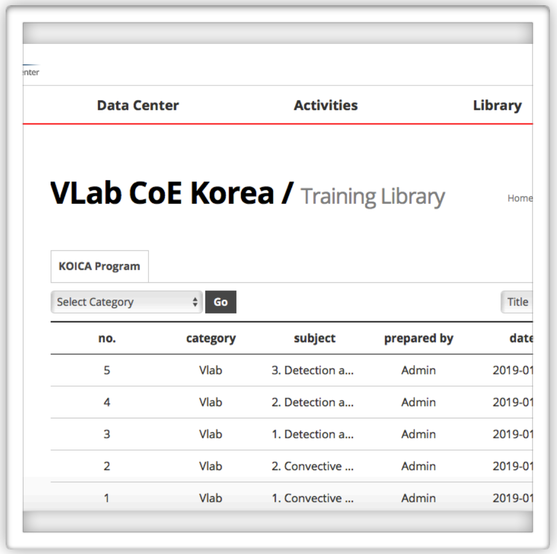
Himawari Request

JMA launched the Himawari Request service in January 2018 to provide NMHSs in WMO RA II and RA V with Himawari-8/9 on-demand TA-observation earth images taken every 2.5 minutes over an area of approximately 1,000 x 1,000 km within the Himawari observation domain.



RFG sessions

VLab CoE Australia continued organising monthly RFG meetings during 2018, with attendees from WMO RAV, RAII, RAIV. This marks the 5th year of organising monthly RFG meetings in the Region.



Training resources

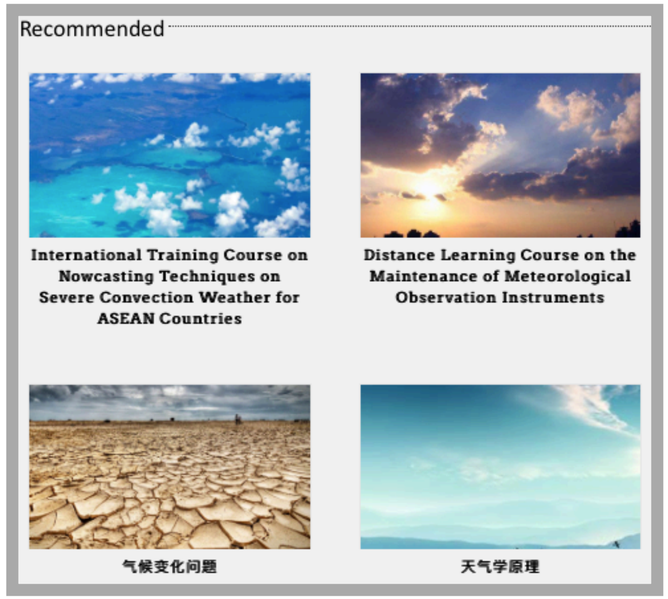
VLab CoE Republic of Korea created a central library/ repository for recorded RFG sessions and other online training events. This adds to already existing repositories of training resources in CoE Australia and JMA.

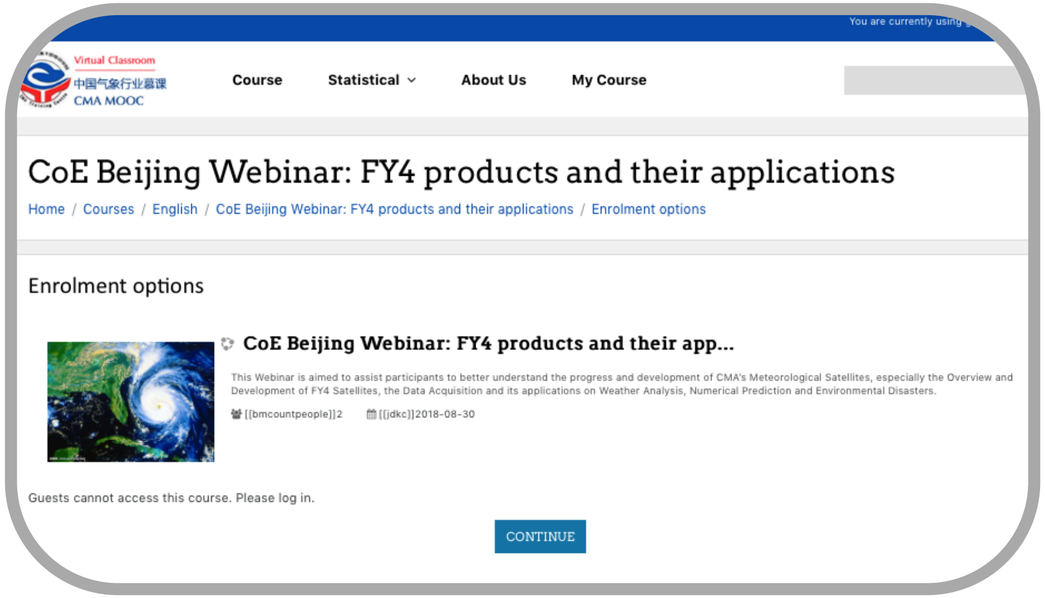
AOMSUC-9

AOMSUC-9 (hosted by BMKG, Indonesia) had a pre-conference Workshop, counted on VLab CoEs Australia, Republic of Korea, and JMA offering 3 training sessions.

FY3 and FY4

Major activities 2018





International training

CoEs in China (Beijing and Nanjing) have produced and shared various resources including disaster risk reduction and emergency management. They offered online and classroom International courses.

FY4

Information on FY4 was presented in webinars (English). Plans for 2019 include training on application of FY4 in disaster risk reduction for WMO RA II and V.

Meteosat

Major activities 2018

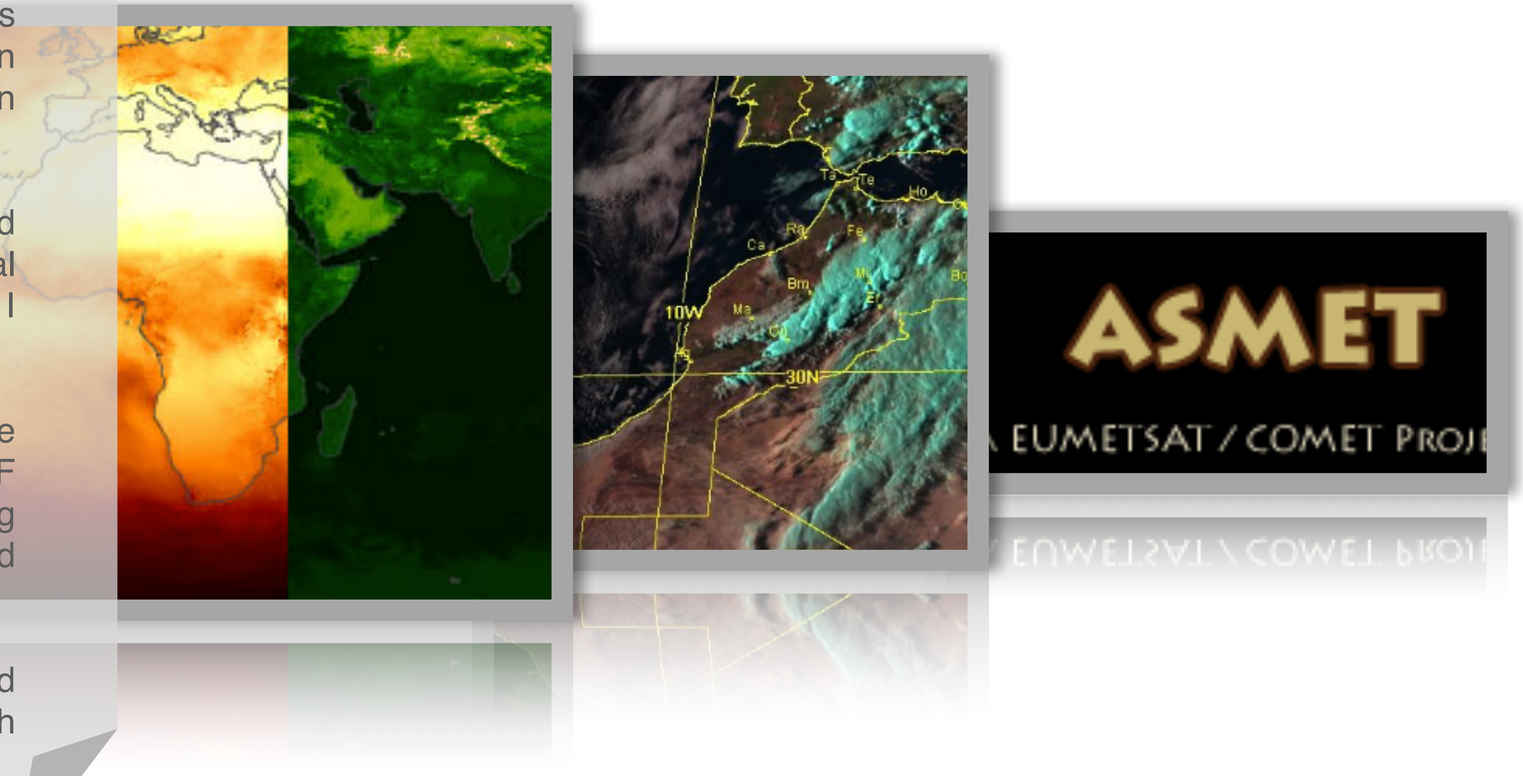
Training opportunities

EUMETSAT, in collaboration with various WMO Teams, has supported training on dust, land and agricultural applications in WMO RA I and VI.

Monthly Weather briefings were organised by EUMETSAT (EUMeTrain) and Regional Focus Group discussions for WMO RA I were organised by CoE South Africa.

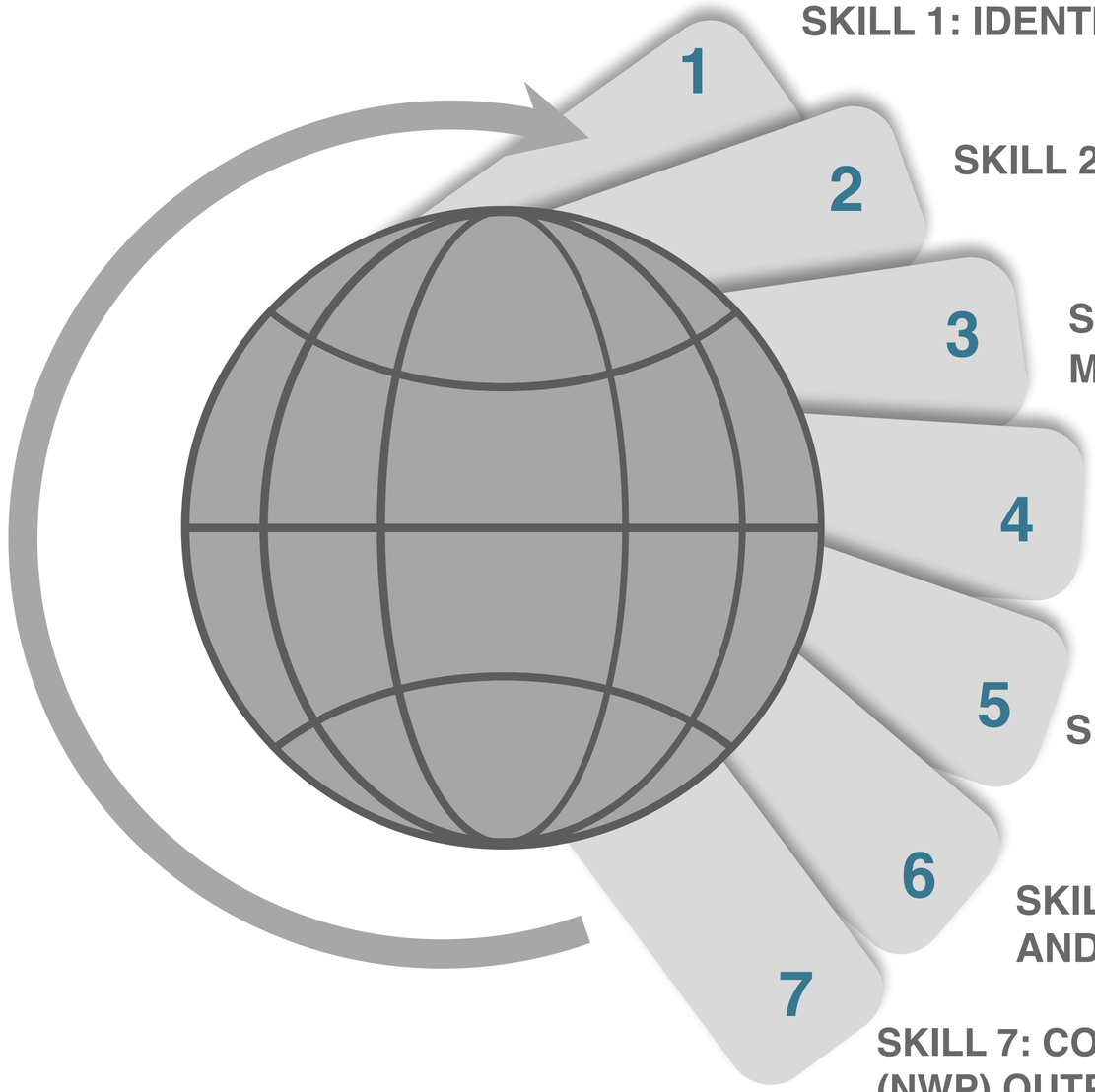
CoE South Africa hosted a climate workshop to instruct on the use of CM SAF products for operational climate monitoring and climate research. The CoE continued working on the design of ASMET modules.

CoEs in Niger and Morocco offered courses on satellite application for French speaking countries in WMO RA I.



Guidelines on Satellite Skills and Knowledge for Operational Meteorologists

2018 Edition



SKILL 1: IDENTIFY SURFACE FEATURES

SKILL 2: IDENTIFY CLOUD TYPES AND THEIR CHARACTERISTICS

SKILL 3: IDENTIFY AND INTERPRET BROADSCALE, SYNOPTIC AND MESOSCALE SYSTEMS

SKILL 4: IDENTIFY AND INTERPRET ATMOSPHERIC PHENOMENA

SKILL 5: INTERPRET DERIVED FIELDS AND DERIVED PRODUCTS

SKILL 6: IDENTIFY AND INTERPRET OCEANIC AND WATER FEATURES AND SYSTEMS

SKILL 7: COMPARE SATELLITE DATA WITH NUMERICAL WEATHER PREDICTION (NWP) OUTPUTS

Guidelines on Satellite Skills and Knowledge for Operational Meteorologists

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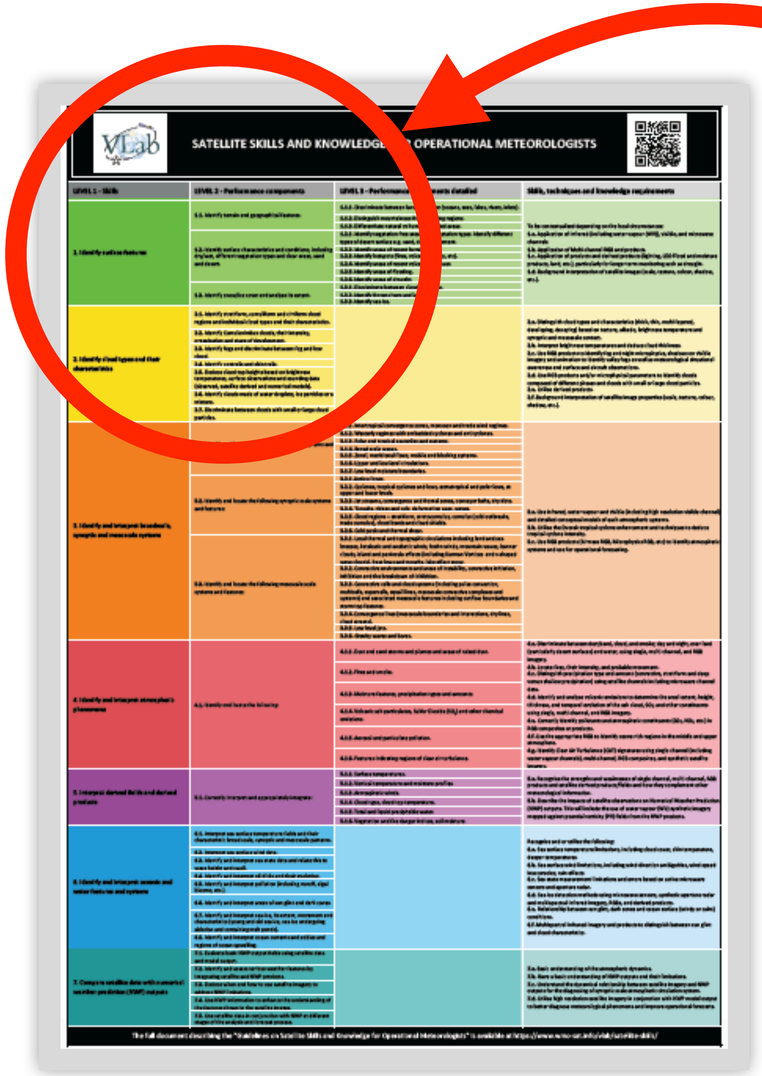
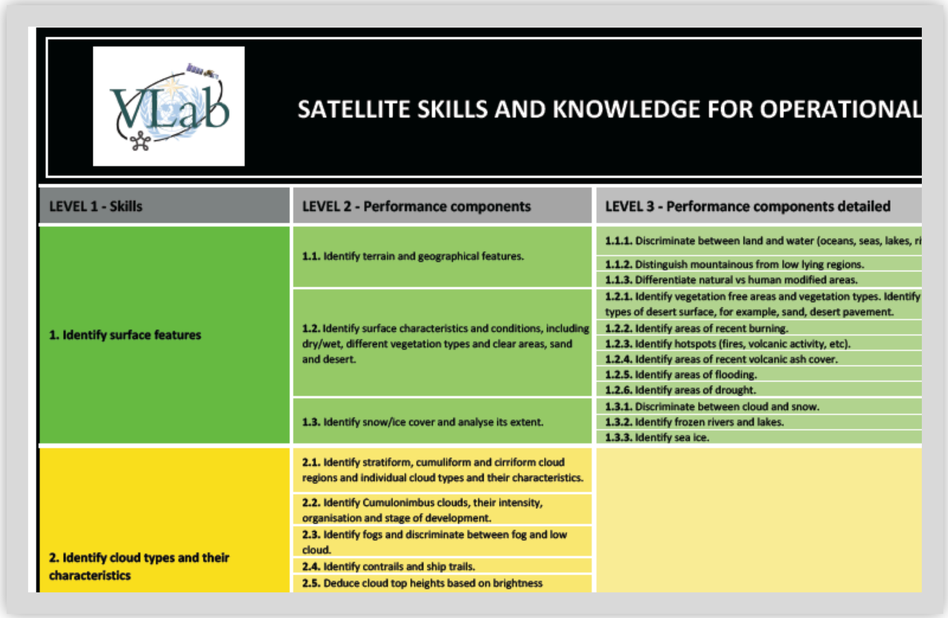
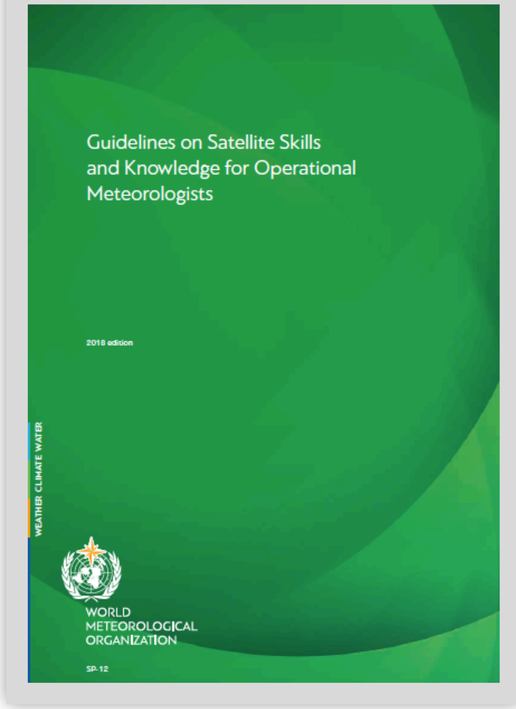






https://www.wmo-sat.info/vlab/satellite-skills/

VLab Recommendations

for Satellite Training Providers

WMO Guidelines

VLMG recommends all training organisers to:

1) Design courses following the WMO Guidelines for Trainers in Meteorological, Hydrological and Climate Services (WMO-No. 1114), available at http://www.wmo.int/pages/prog/dra/documents/wmo_1114_en.pdf

2) Link courses to the relevant WMO skills / competencies frameworks (see WMO Guide to Competency - WMO-No 1205 at https://library.wmo.int/doc_num.php?explnum_id=4237 and more information on the Competency Frameworks at http://www.wmo.int/pages/prog/dra/etrp/competencies.php).

Satellite Skills

Whenever appropriate, the satellite skills and knowledge addressed in a training event should be identified in the training description and certificate of participation.

https://www.wmo-sat.info/vlab/satellite-skills/

Creative Commons License

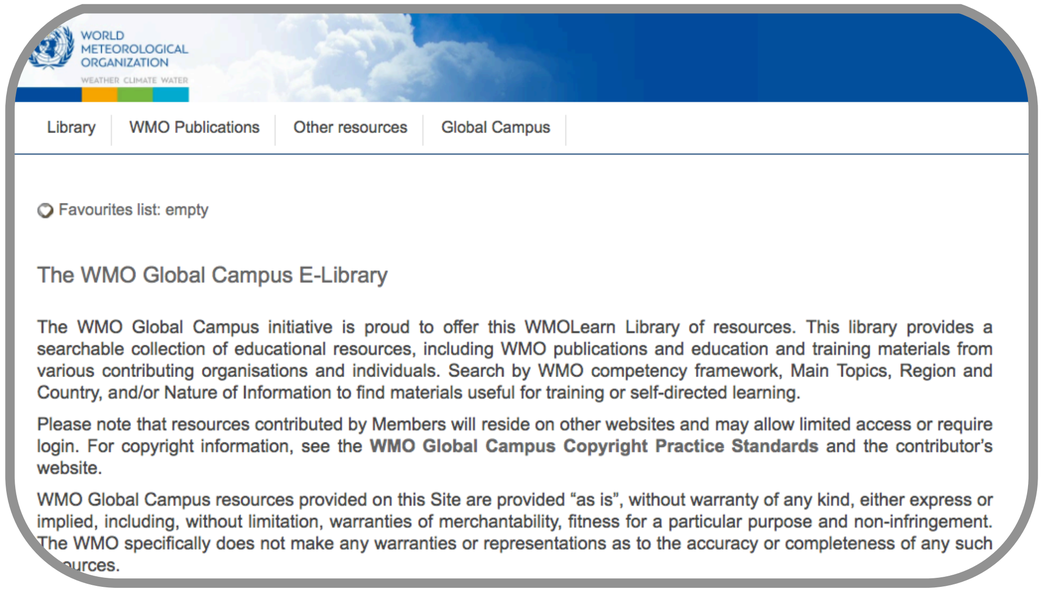
VLMG and Partners recommend that satellite training providers use Creative Commons License by attribution (CC BY) to provide clear identification of copyrights license in their training resources (see https://creativecommons.org/licenses/by/4.0/). This is an effort to improve sharing of resources, and is also part of adapting to the standards for submission of resources to the Global Campus Library. NOTE: VLMG Partners attending VLMG-9 will further discuss this recommendation within their members for ratification).

Making Training Information Easier to Find

Training Events and Resources

Calendar(s) of Training Events

Satellite training only:
http://trainingevents.eumetsat.int
Wider WMO related training topics:
http://learningevents.wmo.int



Global Campus E-Library

https://library.wmo.int
Choose Global Campus to see resources organised by WMO Competency Frameworks

Searching for Training Events and Resources is getting easier

Online Calendars and Global Campus Library

Language

Dates
Dates of training events (Calendar)
Dates of resource publication (Library)

WMO Competency Frameworks and related Qualifications

Location
Countries and
WMO Regional Associations

Access Type
Copyright information (Library)
Registration and fees information (Calendar)

Format
Delivery format (Calendar)
Document type (Library)

Authors
Resource authors (Library)
Training organisers (Calendar)

Potential Areas for Collaboration

Learning technology

Sharing information and, whenever possible, mutual support on the use (and testing) of various learning technologies that could potentially enhance learning experiences.

Training requests

Sharing training requests received, and results of training needs analysis performed by our programmes.

Training resources and events

Sharing information on satellite related training events and resources directed to various audiences.

Sharing information and expertise

Whilst VLab addresses a very specific audience (operational meteorologists), there is a growing opportunity for us to complement each other activities, particularly in the area of impact based decision support services (IDSS).

Trainers' development

Share opportunities for training and further development of trainers.

Lets start sharing

These are some opportunities that might be of your interest

Starts 25 March

WMO Advanced Online Course for Trainers 2019

This year VLab is co-sponsoring the course, so Members and Partners have the opportunity to nominate one participant to attend. The focus of the course will be on the use of blended learning.

Interested? Please email Lu Veeck at luveeck@gmail.com for more information. Applications will be accepted until the 18th of March, but the sooner the better.

4-5 April

TSO Meeting

This meeting is organised by a small group of Training Support Officers of various Programmes/ Agencies. It addresses major topics of common interest and challenges faced by these professionals. In 2019, the meeting will be hosted by WMO (Geneva). If you have interest on learning more about this **informal Group** or consider attending the meeting, please email Lu Veeck at luveeck@gmail.com

17-20 Sept

Joint Eumetcal-CALMet Conference

This conference brings together educators, trainers and managers from universities, research institutions and NMHSs. It provides an opportunity for a community from around the world to collaborate and network on workforce development in support of the global weather, water and climate industry.

https://www.eventsforce.net/eumetsat/5/home

Trainer resources portal

This portal was developed to support the WMO Competency Requirements for Education and Training Providers. The portal contains resources used in the WMO Online Course for Trainers, including downloadable readings, templates and examples.

https://etrp.wmo.int/course/view.php?id=30

https://www.wmo-sat.info/vlab/

A Final Note

As part of our effort to improve communication and engagement with our audience, the VLab website is in the process of being redesigned. The new website is planned to be operational in the second semester of 2019. Meanwhile, we will do our best to keep the actual site as updated as possible.

- **Calendar of Training Events**
- **Links to VLab Members and Partners**
- **Satellite related News**
- **VLab Reports and publications**