



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

ACTIVITY REPORT

Period: September 2012 to December 2013
Centre of Excellence: Russian Federation

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?

Answer: Development of new training and resource materials for the site "Virtual Laboratory satellite» (<http://meteovlab.meteorf.ru> - Centre of Excellence WMO, CoE). In 2013 there have been 18 distance courses using these resources sites, which were attended by 247 specialists.

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

Answer: Difficulties were not.

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)?

Answer: In developing training materials and conducting training was attended by leading specialists from research and operational facilities Hydrometeorology, as well as teachers RSHU, St-Petersburg and Perm State University.

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

Answer: We used «Moodle» и «Joomla» to conduct training activities.

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

Answer: We used a special system developed by Hypermethode, Webinar. Sometimes used «Skype».

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

Answer: Training materials on satellite meteorology used for training courses with specialist forecasters on hydrometeorological, meteorological, agricultural and aviation forecasts. These training materials are also used for training of professionals working in the field of satellite meteorology. Training courses are held regularly, 2-3 times a month.

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?

Answer: Currently VLab financed only RosHydroMet. Space Agency of the Russian Federation does not fund development VLab.

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

| Title of training | Type of resource | Availability of | Submitted to |
|-------------------|------------------|-----------------|--------------|
|-------------------|------------------|-----------------|--------------|

| material | (e.g. text book, video, recorded presentation, Moodle course, webcast, PowerPoint slides) | resource (e.g. open educational resource¹, institutional use only) | ESRC (Yes/No) <u>Передано ESRC (Да / Нет)</u> |
|---|--|--|--|
| 1 | 2 | 3 | 4 |
| Sea surface temperature. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Restriction products obtained using remote methods. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Information technology related sensing from space. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Technology decryption of satellite images. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Meteorological interpretation based on digital processing of satellite images. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Methods of processing satellite images. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| The decision applied meteorological problems based on space. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Using satellite data in synoptic analysis of the tropical zone. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Meteorological interpretation of satellite images. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Synoptic processes on satellite images. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Air masses and atmospheric fronts in satellite imagery. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Results of a preliminary analysis of the quality of | Voiced flash-movies, courses in SCORM | Open Educational Resources | |

¹ Please also indicate if the Creative Commons License was applied to the resource. Просьба также указать, если Creative Commons License был применен к ресурсу.

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|---|--|-------------------------------|--|
| specialized maps satellite assessment of current weather conditions for ARM flight director. | format, pdf files. | | |
| Methodological guidelines for automated mapping nephanalysis and forecast evolution of cloud formations. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Specialized maps aided diagnosis satellite hazardous to aviation weather conditions transmitted in real time on ARM ARM flight director and meteorologist AMC. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Evaluation of the evolution of large-scale perturbations in the space. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Integrated use of information meteorological satellites and radars for weather analysis and forecasting. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Evaluation of local weather conditions on satellite data. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |
| Meteorological forecasting based on digital processing of satellite images. | Voiced flash-movies, courses in SCORM format, pdf files. | Open Educational Resources | |

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?

Answer: The Institute works closely with the research and operational agencies Hydromet and Hydrometeorology departments of higher educational institutions of the Russian Federation. Ways to improve collaboration - is to attract Space Agency of the Russian Federation as a satellite operator.

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

Answer: With the additional funding Institute could make the English translation of educational materials placed on the websites of virtual laboratories.

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 |
|-------------------------------|--|---------------------|------------|----------------------------|------------------|----------|--------------------|-------------------------------|
| 2013/04/01 - 2013/04/06 | Using Satellite Products in Meteorology and Oceanography | Kaliningrad, Russia | VI Europe | Baltic Federal University | Classroom course | Russian | 45 | Russian Federation |
| 2013/06/05 - 2013/06/05 | Virtual Round Table Event on Competence Requirements for Aeronautical Met. Personnel - Russian | Online | VI Europe | Roshydromet-Aviamettelecom | Online course | Russian | 9 | Russian Federation |
| 2013/07/12 - 2013/07/12 | Russian Regional Focus Group | Online | VI Europe | Aviamettelecom RHM | RFG discussion | Russian | 14 | Russian Federation |
| July 2013 | Synoptic meteorology | | VI Europe | ATI of Roshydromet | remote | Russian | 4 | Armenia |
| September 2013 | Aviation meteorology | | VI Europe | ATI of Roshydromet | remote | Russian | 7 | Armenia |
| April 2013 | Synoptic meteorology | | VI Europe | ATI of Roshydromet | remote | Russian | 8 | Belarus |
| December 2013 | Aviation meteorology | | VI Europe | ATI of Roshydromet | remote | Russian | 13 | Belarus |
| March 2013 | Synoptic meteorology | | II Asia | ATI of Roshydromet | remote | Russian | 15 | Kazakhstan |
| September 2013 | Aviation meteorology | | II Asia | ATI of Roshydromet | remote | Russian | 22 | Kazakhstan |
| November 2013 | Synoptic meteorology | | | ATI of Roshydromet | remote | Russian | 17 | RF, The Volga MHS |

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|----------------|----------------------|--|--|--------------------|--------|---------|----|---|
| April 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 9 | RF, The Volga MHS |
| December 2013 | Synoptic meteorology | | | ATI of Roshydromet | remote | Russian | 25 | RF, The Northern MHS |
| February 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 13 | RF, The Northern MHS |
| November 2013 | Synoptic meteorology | | | ATI of Roshydromet | remote | Russian | 28 | RF, The Average-Siberian MHS |
| November 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 22 | RF, The Average-Siberian MHS |
| July 2013 | Synoptic meteorology | | | ATI of Roshydromet | remote | Russian | 20 | RF, The West Siberian MHS |
| September 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 19 | RF, The West Siberian MHS |
| November 2013 | Synoptic meteorology | | | ATI of Roshydromet | remote | Russian | 4 | RF, The North Caucasian MHS |
| December 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 2 | RF, The North Caucasian MHS |
| November 2013 | Synoptic meteorology | | | ATI of Roshydromet | remote | Russian | 8 | RF, The Yakut MHS |
| June 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 4 | RF, The Yakut MHS |
| October 2013 | Aviation meteorology | | | ATI of Roshydromet | remote | Russian | 7 | RF, Main Aviation Meteorological Center |

MHS - Management of hydrometeorological service