



FINAL REPORT



5th SALGEE Workshop

“MSG Land Surface Applications: Heat waves, Drought Hazard and Fire Monitoring”

Yerevan, 18–20 September 2017, Armenia

SALGEE Secretary
October 2017

1) Introduction

The 5th SALGEE2017 Workshop “MSG Land Surface Applications: Heat waves, Drought Hazard and Fire Monitoring” was held at Yerevan /Ani Plaza Hotel/, Armenia, on 18-20 September 2017 and was hosted by the Service on Hydrometeorology and Active Influence on Atmospheric Phenomena of Armenia. Armenian Hydromet Service belongs to Ministry of emergency situations of the Republic of Armenia.

The Workshop is supported by EUMETSAT in the frame of SALGEE (Satellite Applications for Land surface analyses Group for Eastern Europe) project. It is an advanced thematic Workshop, providing a forum and framework to develop strategic objectives and collaborations to maximize the uses of EUMETSAT LSA SAF products for the long term.

2) 5th SALGEE Workshop objectives

The 5th SALGEE2017 Workshop is organized in line with the LSA SAF CDOP-3 phase strategic goals to reflect contemporary needs and capabilities of satellite technology using multiple sensors for monitoring and forecasting land surface state and environmental processes, their anomalies and related high impact weather and climate events. Some aspects of environmental response to weather and climate that provoke drought-related phenomena put in consideration during the 4th SALGEE2017 Workshop for the first time now are further explored.

The specific goals were:

- Based on using multidisciplinary approach to illustrate the utility of satellite products for characterizing biogeophysical aspects of natural hazards of drought, fire risk, forest/wild fires and their environmental effects. To report development of concepts, to explore validation approaches, communicate the broadening range of LSA SAF applications for southeastern/eastern Europe and case study examples.

- To provide a forum to review the key uses of satellite data in this field and share experience among the NMSs user community (mainly) and product developers/trainers from EUMETSAT, LSA SAF, NASA, NOAA, and others.
- To consolidate current User Requirements. The intention is for users to be able to identify requirements for new data sets, to develop collaborations with the data providers and to respond to training needs of the new comers in the SALGEE initiative.

3) Administrative organization of the 5th SALGEE

The Armenian Hydromet Service in cooperation with EUMETSAT organized the logistic aspects of the 5th SALGEE Workshop, as:

- Invitation Letters, signed by the by the Armenian Hydromet Director were sent to all sponsored participants.
- The Workshop was held at the Hotel "*Ani Plaza Hotel*" in the town Yerevan, Armenia. The opening was at 09:00 hr on Monday, 18 September 2017. An official opening ceremony was organised with the attendance of Mr. Davit Karapetyan, Deputy minister of the Ministry of emergency situations and TV representatives. The closure was at 12:30 h on Wednesday, 20 September.
- Logistics: Responsible person for the Local Organising Committee in Armenia regarding the organization of all logistic matters was Ms. Zarmandukht Petrosyan, Head of Meteorological Centre in Hydromet Service. All participants were staying at "*Ani Plaza Hotel*". The lecture Hall was in the hotel with good facilities for presentations. Most of the participants arrived on 16 Sep late afternoon or 17 Sep in the nighttime; only one person arrived on 18 Sep on the day of his presentations. The transportation from/to airport –hotel was by taxi, by grouping the participants. Training equipment: All SALGEE presentations were given as oral talks using hotel technical equipment for PowerPoint presentations. Very good Internet connection was available in the Hotel.
- Social events: Three social events were organised for the 5th SALGEE participants:
 - The Armenian Hydromet Serevice hosted a Dinner in the Hotel on 18 September 2017.
 - Workshop dinner on 19 September 2017 hosted by EUMETSAT was organised.
 - A tour and visit to the two remarkable ancient places was organised after the closure of the workshop, in the afternoon of 20 September. We visited the following places: The medieval monastery Geghard in the Kotayk province of Armenia; Temple of Garni in village of Garni in Armenia's Kotayak Province, the best-known structure and symbol of pre-Christian Armenia.
- Finances: The workshop was sponsored by EUMETSAT and co-sponsored for one dinner and the tour on 20 September by the Armenian Hydromet Serevice.
- For administrative matters the responsible person from EUMETSAT was Ms. Regina Hoefenmayer.

A high level organization of the workshop including: logistics, facilities for presentations, coffee breaks, social events, and transportation.

Zarmandukht Petrosyan, Local co-organiser
Head of Meteorological Centre Armenian Hydromet Service

4) Scientific program of the 5th SALGEE

- The scientific program of the workshop was developed in the frame of WP 4 of the implementation of the SALGEE Project 2016-2017 in accordance to EUMETSAT P.O.Number/Date 4500014394/18-October-2016.
- Lecturers are selected and invited by Julia Stoyanova
- The SALGEE secretary (Dr. Julia Stoyanova, NIMH Bulgaria) was the chairperson of the 5th SALGEE Workshop.

The work on the EUMETSAT P.O. 2016 was framed in 4 Work Packages, aimed to contribute the development of the workshop agenda, and to illustrate by case study examples practical use of multimission satellite systems in terrestrial drought assessments and its environmental response, including:

Work Package 1: Construction of satellite data sets from EUMETSAT geostationary and NASA/NOAA polar orbiting satellite missions for land applications

Work Package 2: Combined use of geostationary and polar orbiting missions of EUMETSAT and NASA/NOAA for detection/ monitoring of thermal anomalies on land surface

Work Package 3: Terrestrial state analyses and forecasts. Heat waves and drought effects/fire risk.

Work Package 4: Elaboration of the draft programme for the 5th SALGEE Workshop & further development of the SALGEE web page

Some of the potential lecturers were prevented to attend the workshop but other presenters covered their talks (see the agenda, **Appendix 1**), i.e.:

Martin Wooster was replaced by his colleague Weidong Xu from King's College, UK

Florian Pinault replaced Dominique Career, Meteo France.

5) 5th SALGEE Workshop structure

The agenda of the 5th SALGEE Workshop covers a broad scale of MSG applications related to different aspects of the complex heat waves-drought problem and corresponding environmental response provoked by weather and climate extremes. In general we followed the scope of the preceding SALGEE WS, covering the problem of drought and vegetation fire but broadening the aspects of their study by using information from different satellite platforms. The agenda (see **Appendix 1**) included seven general sessions based to the following respective topics:

Topic1: EUMETSAT activities in Land Surface Analyses (*covering overview lectures of the activities in LSA SAF, SALGEE in the scope of the forthcoming CDOP-3, including also Armenia experience in land surface analyses.*)

Deputy Minister of Emergency Situations of the Republic of Armenia opened the Workshop. The Director of the Hydromet service Mr. Levon Vardanyan attended this introduction session and gave opening talk too. SALGEE Secretary (Dr. Julia Stoyanova) and LSA SAF representative (Luis Pessanha) accent on the work of SALGEE in the domain of CDOP-3 phase.

Topic 2: Observation of land surface from space

An overview of LSA SAF products in current use and forthcoming during the CDOP-3 is presented. Accent is given on LST product and possibilities to be derived by infrared and microwave sensors.

Topic 3: Fire detection and monitoring – multimission

