

DEPARTMENT OF METEOROLOGY

1. INTRODUCTION

The Department of Meteorology handles matters that concern the weather and climate. Its mission is to provide information related to weather and climate to all economical and social activities of the country in order to achieve high quality of services, the general welfare of the public and the protection of life and property of its citizens. In order to achieve these, Cyprus Meteorological Service runs its own forecasting models and operates a network of 143 rainfall, 22 climatological, 3 synoptic and 40 automatic stations, one upper air station, 17 actinometric stations, 2 UV stations, one satellite station and soon 2 meteorological radars for replacing the old one situated in the area of Kykkos. The automatic stations have a telemetry system for the collection of the measurements and the input of the data in databases.

The Department of Meteorology is a member of EUMETNET and the World Meteorological Organization and a full member of the economic interesting group ECOMET since the 1st of January 2013. The Meteorological Service participates also to the MEDARE climate rescue program under the aegis of the World Meteorological Organization and has signed a memorandum of understanding with the Serbian Hydrometeorological Service regarding seasonal forecast products and a memorandum of understanding with the Cyprus Institute. Close collaboration with the Hellenic National Meteorological Service (HNMS) still exists. During 2013, the Department connected with WMOs Information System – WIS.

The main activities of the Meteorological Service include the following:

- The operation of the network of meteorological stations for the collection of essential meteorological data.
- The quality control of meteorological data collected and their storage in a special database.
- The issuances of general weather forecasts for Cyprus which are uploaded on the official web page, in the Service's Voice Response System and are distributed to the local media.
- The issuance of weather forecasts and warnings for the needs of nautical and aeronautical operations.
- The publication of reports and studies on weather and climate.

- The systematic observation of climate change in Cyprus.
- The provision of meteorological data and advisory services for the needs of various sectors of economy; in agriculture, in the development and management of water resources, in tourism and industry, in technical studies and constructions, in renewable sources of energy and in environmental studies.

Apart from the Central Offices in Nicosia, the Meteorological Service maintains Meteorological Offices at the Airports of Larnaka and Paphos where synoptic meteorological stations operate and the employees work on shifts on a 24-hour base. Furthermore, the Meteorological Service maintains offices at Athalassa where observations of the upper atmosphere are carried out.

In order to achieve its set goals, the Meteorological Service is organized in the following three sections:

Section of Climatology and Applications of Meteorology

Section of Synoptic and Aeronautical Meteorology

Section of Technical Support

2. ACTIVITIES DURING 2013

The activities of the Meteorological Service with regards to the development of skills of the personnel and the activities and services that were provided by each Section are presented below:

2.1 Personnel

During 2013, officers of the Service attended courses regarding aeronautical meteorology, seasonal forecasting, satellite meteorology and data homogenization. Also, officers of the Service attended courses regarding safety issues, GIS, first aid, ISO 9001:2008, management, radar remote sensing, EDAMS and European Severe Storm Test bed.

2.2 Section of Climatology and Applications in Meteorology

In the Section of Climatology, for 2013 the usual activities were conducted. Staff of the Service was working for the creation of a common database for the meteorological stations and for the creation of a database concerning

extreme weather events. During the year, officers of the Sector gave lectures to various institutions and conferences while also publishing papers in the Ministry's magazine, television and radio programs. In 2013 the ISO 9001:2008 quality system for the Sector was in full operation, the Sector became a full member of the ECOMET economic interest group and continued to participate in the MEDARE data rescue program. During 2013, the Sector has also proposed the new charging system of the Department.

2.3 Section of Synoptic and Aeronautical Meteorology

In the Section, for 2013 the usual activities were conducted, the new WMO guidance for the number of staff serving the aeronautical sector was applied and the Amendment 76 of Annex 3 to the Convention on International Civil Aviation was also applied. The Sector participated in Sigmet Monitoring, installed a new RVR and cloud base measurements system, operated a TAF verification software and applied an alternative operation for the Aerometweb through VPN. Finally, the Sector continued the application and upgrading of the ISO 9001:2008 quality system. During 2013 and due to staff shortage, upper air measurements were only available for five out of seven days of the week.

2.4 Section of Technical Support and Computerization

In 2013, 17 competitions were proclaimed and quite a lot granted, while quite a few granted during the last couple of years were still in progress. From the granted competitions, purchase of spare parts and consumables, for meteorological instruments and purchase of services, resulting in from the participation of the Meteorological Service in various European programs were performed. Among the granted competitions were the installation of the RVR system in Paphos Airport and the implementation of the AWOS maintenance contract. During 2013, one of the main aims of the Sector was the in time installation of the Meteorological Radars. Also, a frequent periodical inspection and maintenance program was implemented on the network of a total of 33 automatic climatological and 5 automatic rain-recording stations. Meteorological Service is still cooperating with 130 volunteer observers. Finally, the Sector is working on implementation of the ISO 9001 quality system, planned for completion and implementation during first half of 2014.

3. PARTICIPATION IN RESEARCH PROGRAMS

Meteorological Officers of the Service participated in various research programs that are financed by the European Union or the Institution of Promotion of Research. New proposals were submitted for competitions during 2013.

The programs that the Service continued to participate during 2013 were the research Project E-WAVE, the SATFLOOD Project, the Research Project AGWATER and the research program MOWE-IT.

4. WEATHER CONDITIONS DURING 2013

The total rainfall in the free area of Cyprus during this year (from January up to December 2013) was 294.9 mm or 59% of normal (1961-1990) (Table 1). This rainfall amount was the fourth lowest since 1902. Rainfall above normal was recorded in April, May and September while in the remaining months, the amount of rainfall was well below normal.

The mean air temperature for the year as a total was 2.3°C higher than normal. Finally, the mean daily sunshine duration for the year as a whole was slightly below normal.