

ENGLISH SUMMARY, 2008
METEOROLOGICAL SERVICE

1. Introduction

The responsibilities and functions of the Meteorological Service include the operation of a network of meteorological stations, the provision of weather information for air and sea navigation, as well as the provision of weather and climatological information and consultative services and the publication of reports and studies on weather and climate for the needs of the Cyprus community and in particular for applications to agriculture, conservation and management of water resources, engineering studies and constructions, tourism and industry, renewable energy sources and environmental studies. The Meteorological Service is also responsible for the international cooperation on meteorological subjects under the auspices of the World Meteorological Organization.

2. Activities

Meteorological Offices operate at Larnaka and Pafos airports, the former functioning as a forecasting center. Synoptic stations operate at the two airports, while a radiosonde station for upper-air observations and an actinometric station operate at Athalassa. The Meteorological Service operates a network of about 40 climatological stations, including 20 automatic climatological stations, and about 105 precipitation stations including 5 automatic precipitation stations. The Forecasting unit is equipped with a meteorological radar and a principal ground satellite receiving station. The development of the existing data base and the designing of various reports continued and facilitated the supply of information to users. Two officers attended a training course on the use of the CLIDATA database system which is offered by WMO. The staff attended various training courses in the field of Information Technology and 3 Meteorological Officers attended training courses abroad in the field of forecasting. Finally, two officers attended a workshop in Met Office of UK on the use of the climate model PRECIS which is used for climate change assessments. A number of Meteorological Officers participated in various actions of the European Programmes of COST, PRODIM, RISKMED, EMMA and FLASH.

The Meteorological Service in co-operation with agronomists from the Agricultural Department have completed a work to define less favourable areas, based on various climatological criteria. Furthermore, the Meteorological Service has participated actively on the preparation of the national scheme of desertification. The Climatological Unit has prepared a comprehensive study describing the drought conditions which prevailed during the year 2008, by estimating the standardised Precipitation Indices (SPI) and Reconnaissance Drought Indices (RDI) for all the meteorological stations covering the whole island. Finally, a study has been prepared concerning the extreme rainfall events in Cyprus by construction of the intensity-duration-frequency curves (idf) for all the stations equipped with rain recorders.

The Forecasting Unit has completed successfully the work concerning the certification of the processes involved in the preparation of the forecasts based on ISO 9001:2000.

The Meteorological Service in cooperation with the Agricultural Insurance Organisation have prepared a project concerning the improvements and automation of the Network of the Meteorological Stations. For this purpose 12 Automatic Weather Stations were purchased and they will be installed in various locations of the island in 2009.

Regarding the training of the farmers which was organised by the Department of Agriculture, one officer has presented various issues in the field of Agrometeorology.

Finally, the Meteorological Service has participated in the event of the "Evening of Researcher" organised by the Research Promotion Foundation with the subject of Meteorological Observations.

3. Weather Conditions During 2008

The average annual precipitation in 2008 was 272.3 mm, i.e 54% of normal. This amount is the second lowest ever recorded since 1901. It is also the fourth in a row year with annual precipitation amount well below normal. The distribution of the precipitation in the winter months of the year was uneven. Only September exceeded its normal value. However, its contribution to the annual rainfall total is relatively small. Monthly precipitation in the rest of the months was mostly well below normal. The long dry spells which were recorded during the winter season associated with the low rainfall amounts caused crop reduction and failure.

Monthly mean air temperatures were slightly above normal in May, September and October and more than 1.0 °C in July and December. However, in April, June, August and November they were more than 2.0 °C above normal. Extremely high temperatures were recorded in March when the mean air temperature was 4.1 °C above normal. January and February were the only months with temperatures below normal. Heat wave conditions occurred in mid to late July and by the end of August.

The mean daily sunshine duration for the year as a whole was well above normal. A number of exceptional weather events occurred in various areas during the year, like heavy rains, flooding and severe thunderstorms (May, September, October, November, December), severe hailstorms (May, October, November), strong winds (February, March, August, September, October, November, December), tornadoes (February, August) and suspended dust in the atmosphere (February, March, April, July, August, November, December).