

METEOROLOGICAL STATION

The selection of the meteorological station sites was based on the following criteria:

- ❖ Elevation criteria, in order to avoid deviations of the recorded amount of precipitation
- ❖ Security, ease of access and infrastructural criteria, so that each station to be placed near well guarded public buildings
- ❖ Surveying criteria, as specified by the requirements of the World Meteorological Organization – WMO

According to the WMO guidelines, for the monitoring of weather events in a local scale (e.g. storms), the sitting of the stations is considered of major importance, since the inaccuracy of measurements due to inadequate representativeness, can be considerably larger to the one expected by each station separately. Therefore the range of each station should not exceed 10 km at maximum.

Measuring sensors

All stations are properly equipped to automatically record every 10 minutes the following variables:

- ❖ Precipitation
- ❖ Temperature (max, mean, min)
- ❖ Relative Humidity
- ❖ Wind speed, gust and direction
- ❖ Solar radiation
- ❖ Net radiation
- ❖ Sunshine duration

Sensors supporting system

Except from the rain gauges, all other sensors are placed on a stainless 6-meter weather mast, that holds to wind speeds up to 150 knots and with the appropriate, by the Greek regulations, lightnings protection system.

For the proper functioning of each station, the required power supply is provided through a solar panel, which is installed on the

All stations are placed on land with even slopes, covered with grass, or a surface representative of the neighboring area, and surrounded by fencing, to block off trespassing.

The sites were selected to be far from trees, buildings, walls or other obstacles in present, as well as in the future. The distance of all obstacles from the rain gauges was selected to be at least twice the obstacle's height according to the WMO specifications.

weather mast. By that, each station can be supplied for a period of at least 15 days with completely cloudy weather.

A data logger is installed on each station. This unit records in specified time intervals the measurements of all sensors, connected to it and stores them temporarily. Via mobile telephony, all measurements are transmitted to the central data base.

The general disposition of the stations sensors is as follows:



- [1] Anemometer and windvane (wind direction sensor)
- [2] Sunshine duration meter
- [3] Pyranometer
- [4] Solar panel
- [5] Temperature - humidity probe (thermograph)
- [6] Net radiometer
- [7] Data logger
- [8] Secondary rain gauge
- [9] Primary rain gauge