JMA/WMO Training Workshop on
Calibration and maintenance of Meteorological instruments in RA II (ASIA)

Country Report

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Summary

1. Observation

There are 22 meteorological offices in the country for making the synoptic observations (atmospheric pressure, air temperature, humidity, wind direction and speed, cloud conditions, visibility, weather). There are 36 automated weather stations (Donated by Japanese government, 38 agro meteorological stations and 375 rainfall Stations Island wide. These data are used for weather forecasting and then also archived and processed for the provision of climatological information and date supply.

Three times a day, pilot balloons are released from four meteorological stations Colombo, Mannar, Polonnaruwa and Hambantota. Three times a week 100gr balloon with a Radio sonde are released from National Meteorological Centre (NMC) at Colombo 0600UTC. It reads atmosphere pressure, air temperature and humidity at altitude upto about 20km. Usually balloons burst at this altitude.

2. Instruments

Instruments used in measurements are barometer, thermometer, anemometer, sunshine recorder, rain-gauge and evaporation pan. Self recording instruments are barograph, thermograph, hygrograph, actinography and pluviograph

3. Role of Instrument Division

The instrument division is responsible for maintenance of standards of practices, by providing sensitivity calibrated instruments to observation centers. Staff makes routine instrument inspection of all meteorological stations, Agro meteorological stations and rainfall stations. Most of the rainfall stations and agro met stations are not manned by meteorological personnel and therefore instrumentation and maintenance are looked after by this division. The division plays an important role as a link between the user branches and the operational meteorological service.

4. Testing, Calibrating and Comparison of Instrumentations

Barometer comparisons are done with casella fourteen type MK II standard Barometer (No 3963) which was compared with regional barometer RA-II AT Calcutta, India in 1987. Barometer comparisons are usually done in every 3 years time.
Thermometers are compared with a standard thermometer.

5. Challenges in calibration of instruments:

There are no calibration laboratory, Wind tunnel and calibration chambers at the department. Shortage of both trained and untrained man power is also a major challenge for visiting the Meteorological offices all over the country. However, steps have been taken to recruit new scientists, electrical technicians and Meteorological Technicians.

6. Suggestions:-

The standard barometer should be calibrated with international collaboration. Fully equipped laboratory with wind tunnel and calibration chambers should be established. A mobile laboratory is also a very important requirement. These suggestions are already included in the new restructuring proposals.