

JMA/WMO Training workshop on Calibration and maintenance of Meteorological Instruments in RA II (Asia)

**Headquarters of JMA, Tokyo and Regional instruments Centre (RIC)-
Tsukuba ,Japan 19 -22 February 2013**

Country report of

SRI LANKA



N.A.Meththasinghe

Meteorological Officer

Department of Meteorology – Sri Lanka



SRI LANKA

Land Area: 65,610 Sq. km

Population: 19.6 Million

Pop. Density: 309 per sq.km

Literacy rate: 91.8 %

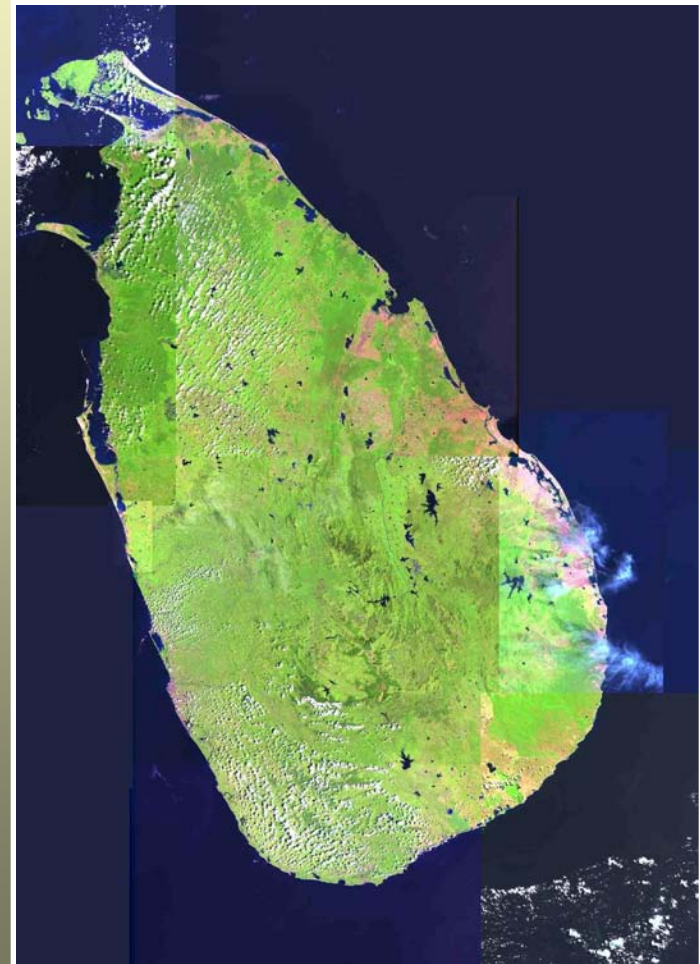
Ethnic Mix:-

Sinhalese: 74 %

Tamil: 18 %

Muslim: 7 %

Others: 1 %

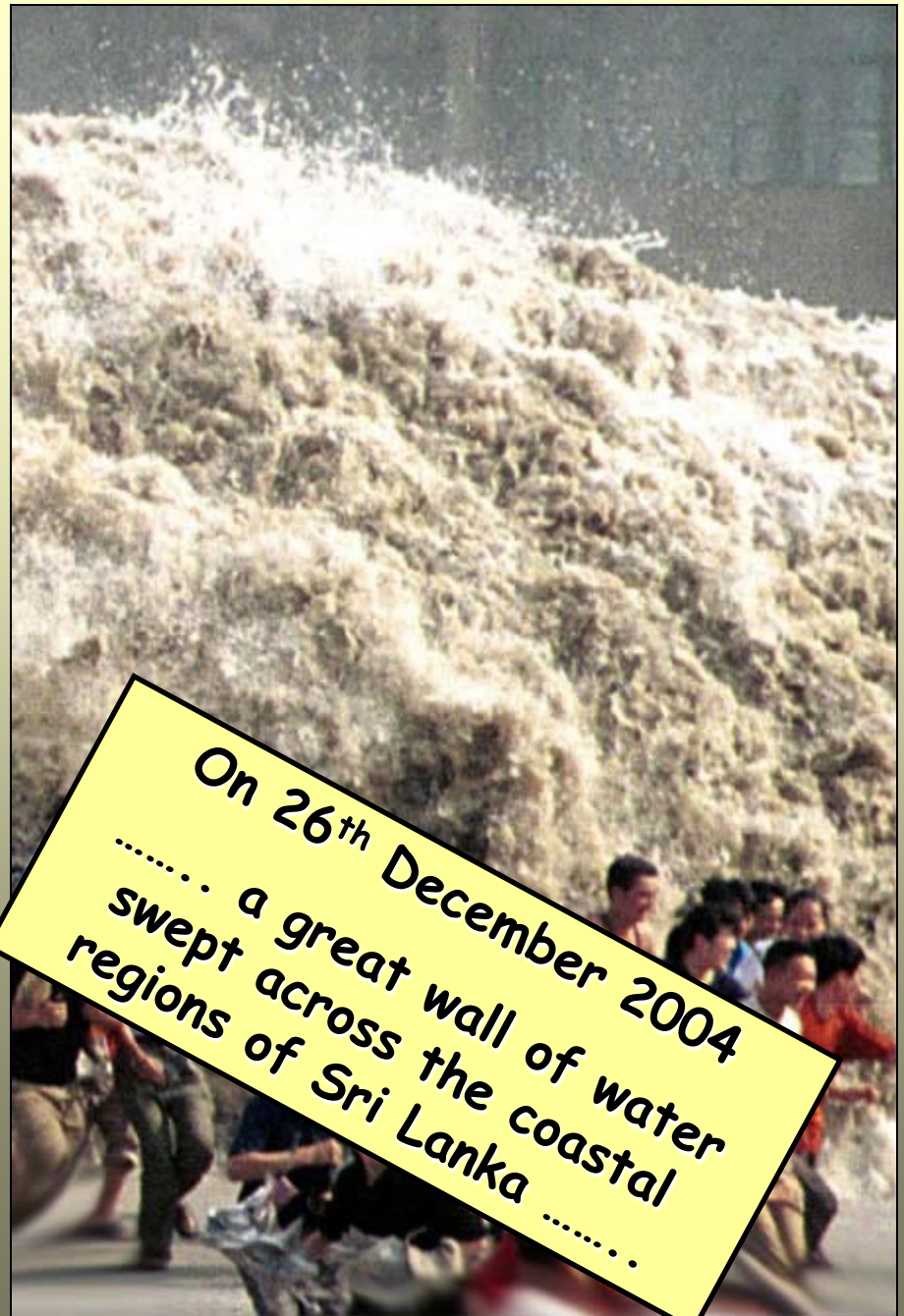


TSUNAMI

death toll > 31,000

missing > 6,000

homeless > 450,000



On 26th December 2004
..... a great wall of water
swept across the coastal
regions of Sri Lanka



Worst Train Tragedy in the History



Natural Beauty



Highlands of Sri Lanka



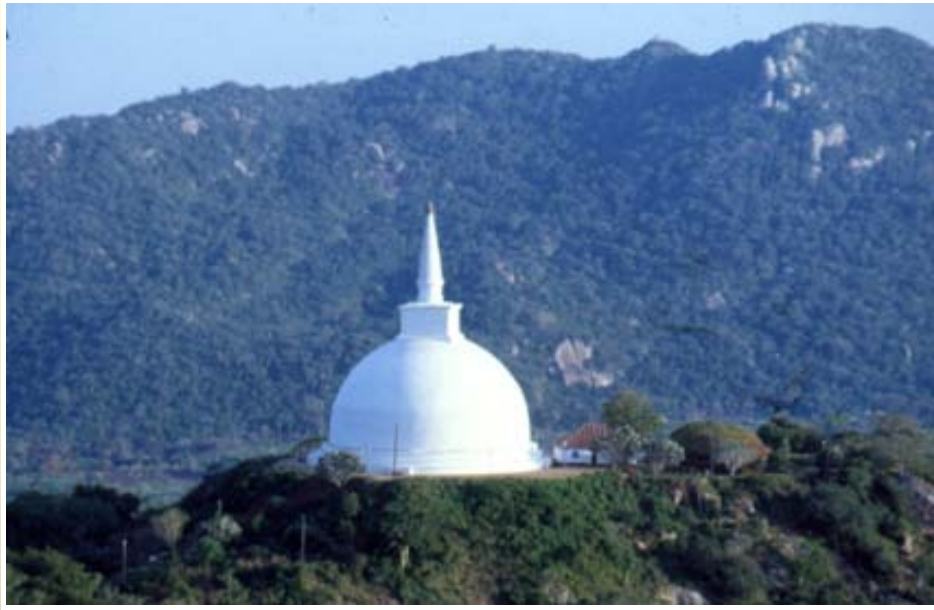
Golden Beaches.....





**Scenic
Beauty**

Buddhism is the religion of most Sri Lankans





Elephants

In

Sri Lanka



Elephant Orphanage Pinnawela, Sri Lanka



The original objective of establishing the orphanage inclined more towards tourism, but it soon became a conservation and educational centre. With the help of local and foreign elephant experts, Pinnawela started a scientific captive-breeding programme for elephants.





Sri Lanka's hill capital **KANDY** (488 m from the msl) is, perhaps, its most beautiful town.



The focal point of the town is the golden-roofed Dalada Maligawa, where the sacred tooth relic of the Buddha is enshrined.



Kandy Esala Perahara or the Annual Pageant of the Temple of Tooth Relic





**Dancers
at the
Kandy
Esala
Perahera**

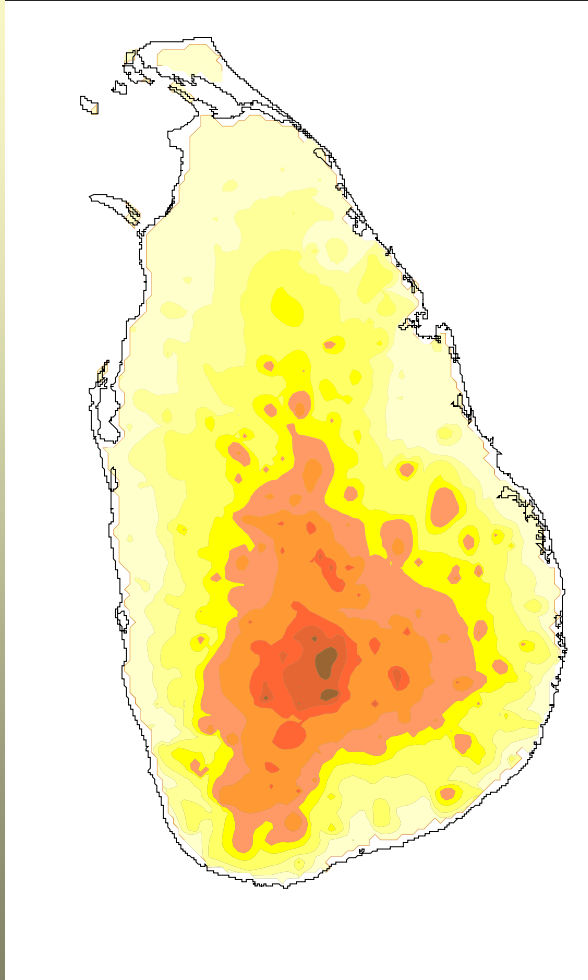


Sri Lanka is famous for itsTEA



Tea, rubber, and coconut exports dominated commercial activity in the country up to 1970s.

Topography and Climate



Topography:

Between 5° 55' to 9° 51' North latitude

Between 79° 42' to 81° 53' East longitude

Characterized by South Central Highlands

Mt. Pidurutalagala – 2524 m a msl

Mild Climate

Average Rainfall: 1860 mm/year

Range of rainfall: 950 – 6000 mm

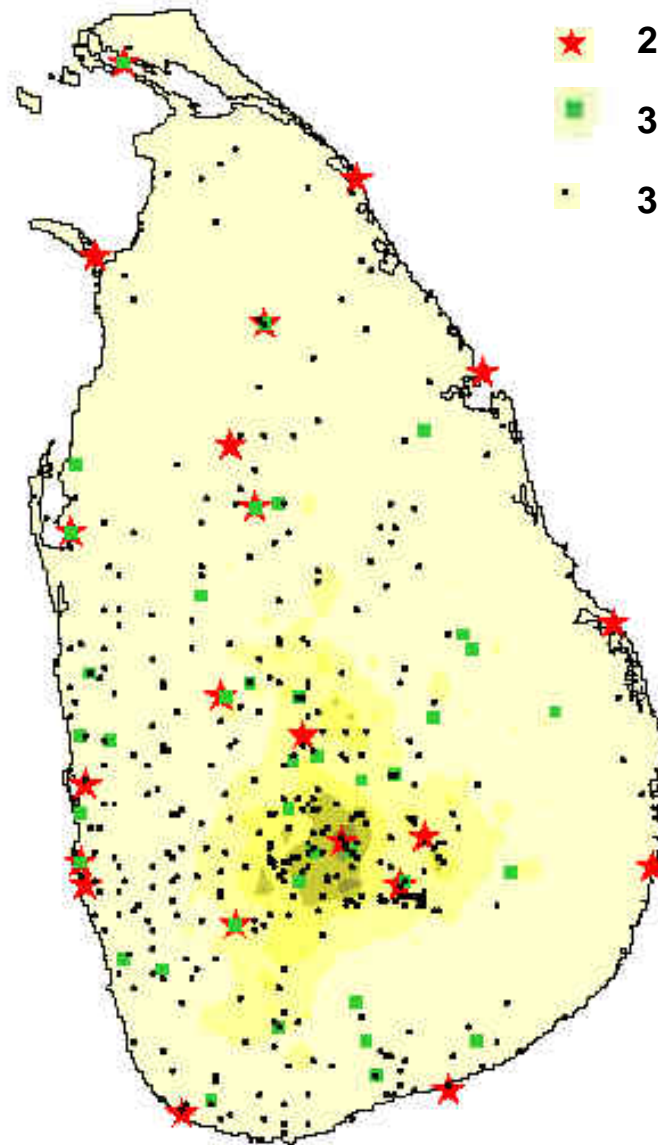
Mean Temperature: 27.5 C (lowlands)

Lower Temperatures in the highlands

CLIMATOLOGICAL SEASONS

- There are four Climatological Seasons
 - **Southwest Monsoon** (May to September)
 - **Northeast Monsoon** (December to February)
 - **1st Inter Monsoon** (March & April)
 - **2nd Inter Monsoon** (October & November)

Meteorological Station Network



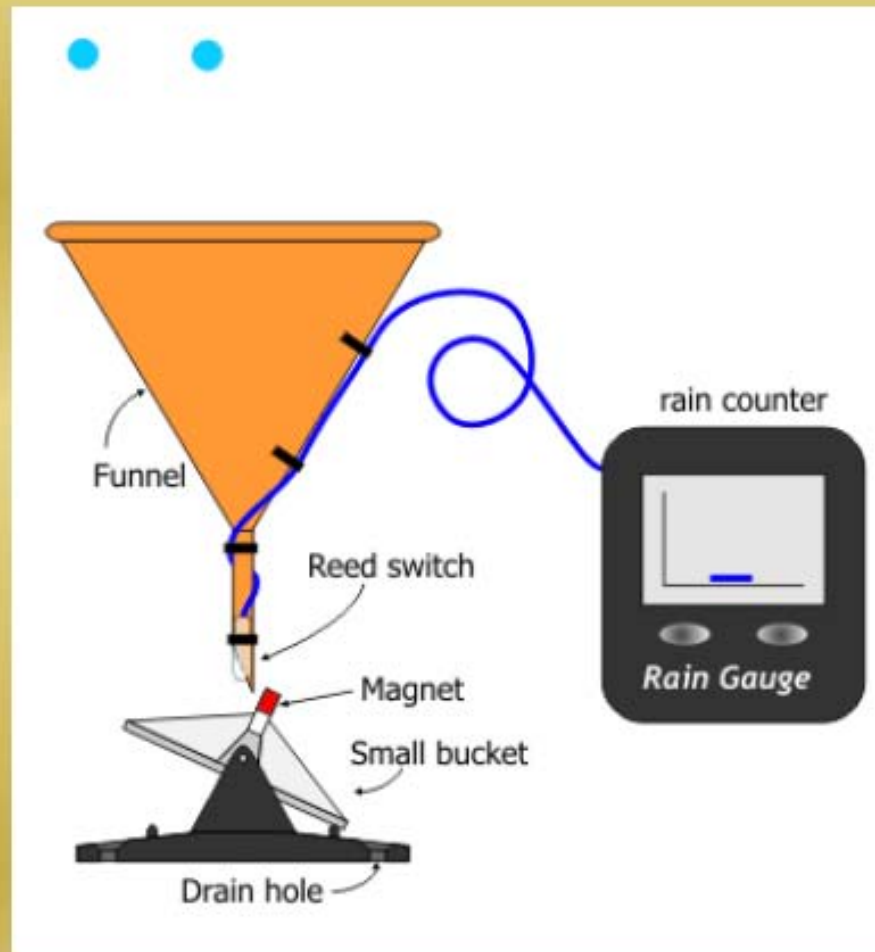
- ★ 22 Principal Meteorological Stations
- 38 Agrometeorological Stations
- 375 Raingauge Stations





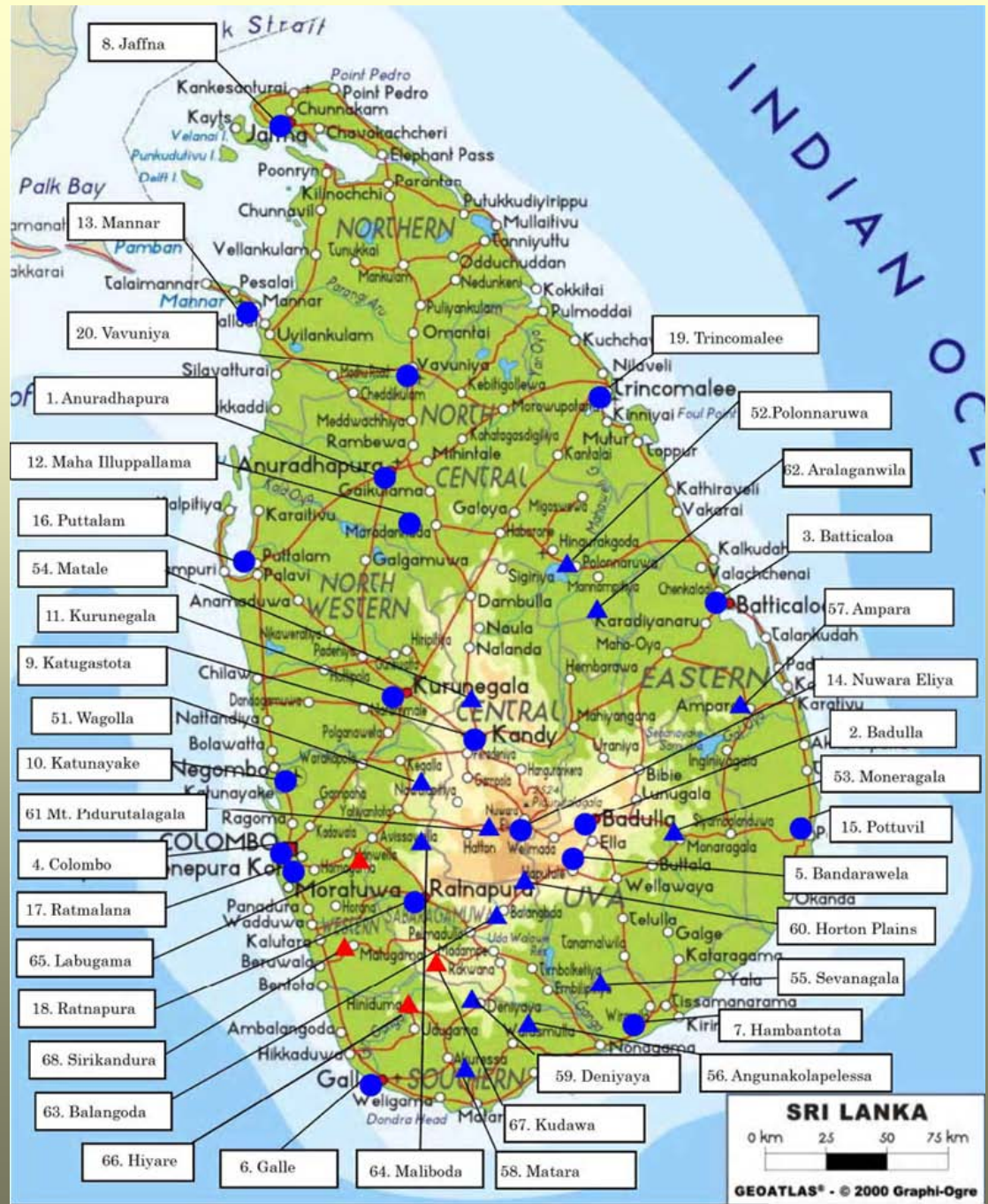


Automated Rainfall Measurement



Tipping Bucket Arrangement

38 automated weather stations



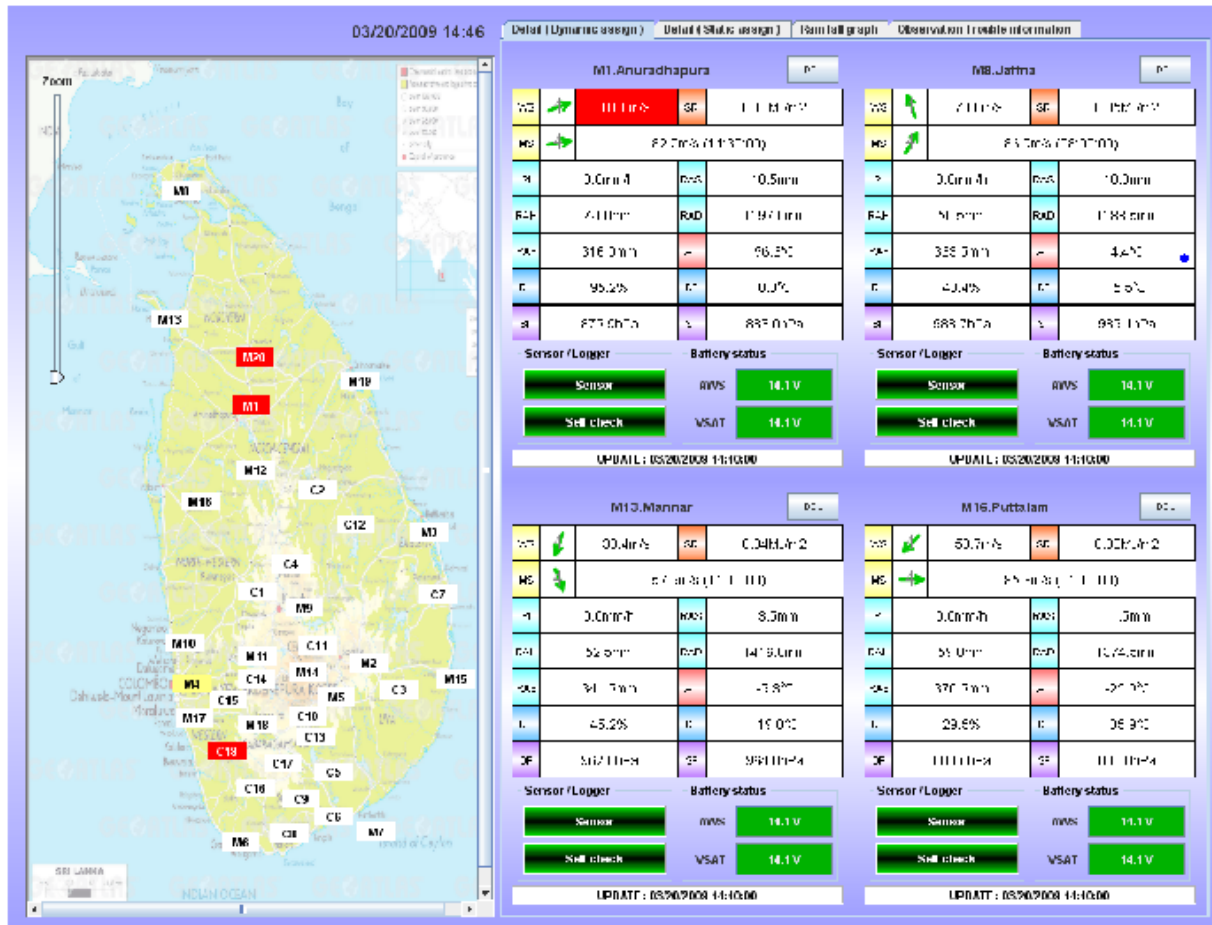
AWOS



hp 1702



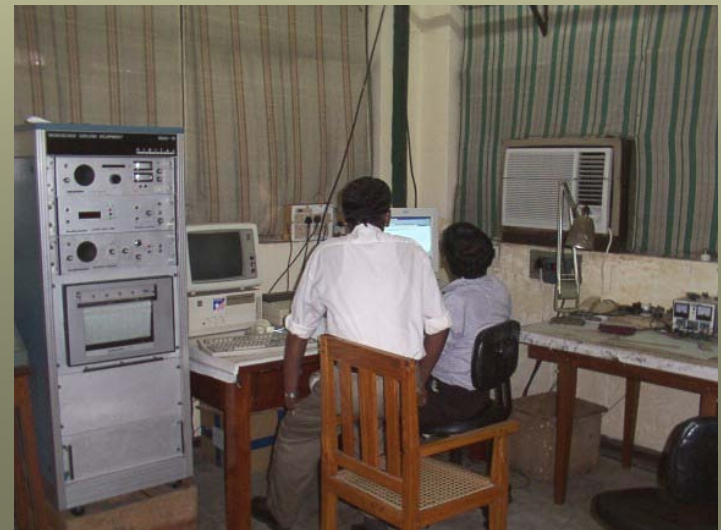
IMPROVED OBSERVATION NETWORK WITH 38 AWS



Upper Air Observations – Pilot Balloon



Upper Air Observations – Radar/Radiosonde















Surface observation

- **The 22 meteorological offices, observing Atmospheric pressure, air temperature humidity, wind direction and speed, cloud conditions, visibility, weather.**
- **These data used for weather forecasting; are also archived and processed for climatological values.**

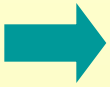
Upper air observation

- **Three times a day, Pilot balloons ; from Colombo, Mannar, Polonnaruwa, Hambantota**
- **Once a day, Radar Radiosond balloon ; from National Meteorological Centre (NMC) at Colombo around 16:30 SLST. It reads atmospheric pressure, temperature, relative humidity and winds.**

Instruments used in measurements

- Pilot balloon observations** :- **Optical theodolite**
Garat German
- Upper air observations** :- **Radar equipment**
Japan
Radiosonde equipment Japan
- Sun shine** :- **Campbell stokes sun shine recorder**
Mk IV England
- Global radiation** :- **Pyranometer USA**
with NRG data logger
- Air Temperature** :- **Ordinary thermometer** } **England**
Maximum thermometer }
Minimum thermometer }
Temperature range
-20°C to 55°C





Soil Thermometers

**:- Temperature range -10°C to 55°C
England**

Wind

**:- Cup counter Anemometer
Casella, Munro England
Electrical Anemograph MK IV
Munro England
Wind Vane Locally made**

Pressure

**:- Barometer kew type England, South
Africa
Digital Barometers Casella, England
CPG 2400 mensor USA**

Self recording instruments

**:- Barograph Open scale, Micro England,
Japan, Germany, USA
Thermograph England, Japan, Germany
Hygrograph England, Japan, Germany**

Evaporation

:- Class A evaporation pan Locally made

Role of Instrument Division

- **Maintenance & calibration of instruments with the conformity of standards of practices and providing of calibrated instruments to observation centers.**
- **Routine inspections of all instruments at meteorological stations, agrometeorological stations and rainfall stations.**
- **Make arrangements to prepare necessary supporting equipments and the housing for the meteorological instruments.**

Testing, calibrating and Comparision of Instruments



Thank You

Thank You

