

Department of Meteorology

1. VISION

A centre of Excellence in Weather and Climate related services

2. MISSION

Provide services pertaining to Meteorology, Aeronautical Meteorology, Marine Meteorology, Hydro Meteorology, Agricultural Meteorology, Climatology, and Astronomy to government agencies, private sector and the general public in keeping with national interest and international standards.

3. OBJECTIVES

The objectives of the Department are

- To provide weather services to the general public, the agricultural and energy sectors, fisheries, shipping and other interested parties.
- To provide weather services to national and international aviation in accordance with the technical regulations stipulated by WMO and ICAO.
- To provide climatologically, agro meteorological and limited astronomical, magnetic and time services.
- To encourage study and research in meteorology, climatology, climate change and allied subjects.
- To receive Tsunami information and issue warnings to the general public.

4. GENERAL

The Department functioned under the purview of the Ministry of Disaster Management and Human Rights during the year.

5. STAFF

HR Planning, Recruitments Job analysis Employee Testing and Selection Training and developments are two types:

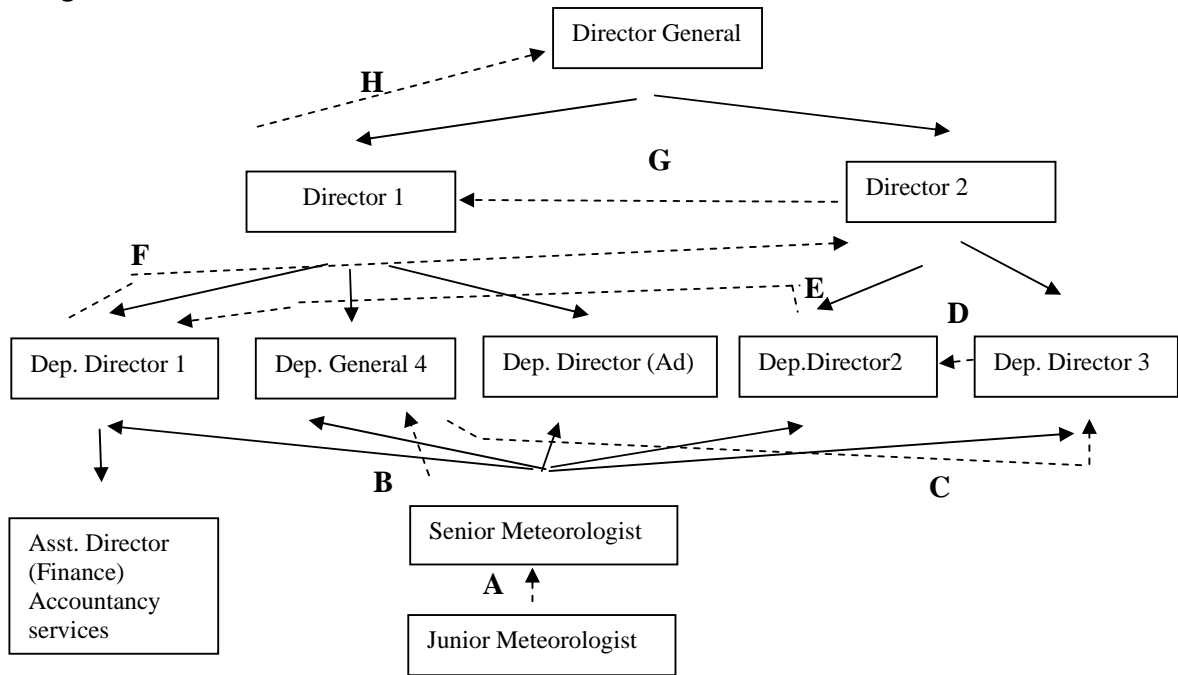
1. Combined government service
2. Direct Recruitment for the Department

Combined government service: Director Administration, Deputy Director Administration, Assistant Director Administration, Administration Officer, Director Finance, Deputy Director Finance, Assistant Director Finance, Finance Officer, Management Service Assistance and Accounts Service Assistance.

Direct Recruitment for Department: Director General, Director (several Meteorological Section) Deputy Director (several Meteorological Section), Assistant Director (several Meteorological Section)

Technical officers, lab officers, Electronic Engineers, Civil Engineers, Internal Audit, Finance assistant, Drivers, Labours etc.

Organization Structure



Promotion Flow: A → B → C → D → E → F → G → H

The following delegation and distribution of duties will be operative with effect.

Director -1: Human Resources Development, Policy Planning, Finance, Supplies, Tender, Administration and other services, Research, IPCC and CCCS activities, Hydrometeorology and Computerization of Data, Circuit Bungalows.

Director - 2: Operation Meteorological Services, Activities of WMO/ESCAP Panel, SAARC & SMRC activities, Weather Summaries, Weather Reports, Media Weather Reports.

Deputy Director – 1: Astronomy, Time, Planning and Development Activities, Transport, Aid Projects, Welfare activities (Budget, Finance, Supplies, Tender, Audit Queries, Budget Reports, Loans)

Relevant Branches/Division:

Establishment Branch, Account Branch, Supplies Branch, Stores and General Branch

Deputy Director – 2: Weather Forecasting, Weather Queries, Weather Synopsis, Implementation of WMO and ICAO regulation, Aviation Forecasting, Telecommunication and Electronics

Relevant Branches/Division:

National Meteorology Center, Communication Center, Telecom and Electronic Division, Met Office

Deputy Director – 3: Training, Research, IPCC and CCCS activities, WMO and other related Questionnaires, IOTWS activities, coordinating with DMC, Library, Publications, Rainfall, CLICOM, Data Archiving, Annual Reports.

Relevant Branches/Division:

Research Division, Rainfall Division, Computer Division, CCCS, Library

Deputy Director – 4: Observational network, Instruments/Equipments, Radar, Exhibition, Publicity, Data Climate, Agro met, Visits to the Department, Trade Union.

Relevant Branches/Division:

Climate, Data, Agro Meteorology, Regional Meteorological Offices, Workshop, Record Room, Draughtsman's Section, Binding and Carpentry section, Radar/RS Section

Deputy Director (Administration): General Administration, Recruitment, Transfers, Disciplinary matters, Administrative reports

Relevant Branches/Division:

Establishment Branch

Assistant Director (Finance): Budget, Finance, Payments, Stores, Supplies, Tenders, Audit Queries, Loans, Progress reports and other financial related matters.

Relevant Branches/Division

Accounts Branch, supplies Branch, Stores, General Brach.

Director – 1 will be covering the duties of Director Finance and Director Administration and Deputy Director1 will be covering the duties of Deputy Director Finance and Deputy Director Administration

One Government Management Service Assistant was transferred into the Department on 08.02.2007 while one officer in the same service was transferred out on 01.01.2007.

One KKS was transferred into the Department on 07.02.2007 while one KKS was transferred out on 01.01.2007.

The SLAS Deputy Director (Administration) and Administrative Officer posts were still vacant throughout the Last 50 years.

Recruitment: This Department is Base on Scientific Services; all the internal Interviews for the recruitment to be made by public service commission.

Meteorologists are selected for internal and external recruitment only Science graduates by a written test. And technical staff selected for A/L Science or Maths Candidate only.

All meteorologists trained by the senior meteorologists or foreign trainers. They gain better knowledge on Meteorological Science. All Technical Staff trained by the senior meteorologists locally.

SCHOLARSHIPS, TRAINING AND SEMINARS

(a) Training/ Seminars and Workshops

Designation	Seminar/Workshop	Funding Agency
Director 1 or 2	Asian Water Cycle Symposium, Tokyo, Japan IOC/IOTWS Transition Workshop Bangkok, Thailand	Tokyo University USAID
Deputy Director/ Director	Regional Program on Advanced Seismology, Kuala Lumpur, Malaysia WMO Symposium on Public Weather Services (PWS) a key to service deliver Geneva, Switzerland	USAID WMO
Deputy Director	Regional Program on Advanced Seismology, Kuala Lumpur, Malaysia	USAID
Deputy Director	Seminar on Tsunami Disaster Mitigation Tokyo, Japan Regional shearing of Tsunami best practices, Bali, Indonesia	JMA USAID
Deputy Director	Training in Storm Surge Forecasting, New Delhi, India	Tropical Cyclone Panel
Meteorologist	Tsunami Science and Preparedness, Seattle, USA Asia Pacific Regional Workshop on GEOSS, Beijing, China	USAID WMO/ CHINA
Meteorologist	Training in the field of Disaster Management, Perugia Italy Workshop on the use of NWP and satellite products for day to day weather forecasting, Male SIGMET Seminar for Asia/Pacific, Bangkok, Thailand	Italy Govt. of SL WMO/ ICAO
Meteorologist	UNFCCC Asian Regional Workshop on adaptation, Beijing, China Regional Workshop on climate risk management, Kathmandu, Nepal. Seasonal Prediction of South Asian Monsoon, Trieste, Italy	UNDP UNDP ICTP
Meteorologist	Seasonal Prediction of South Asian Monsoon, Trieste, Italy Extreme Weather events in the context of Climate Change, New Delhi , India	ICTP British Council
Meteorologist	KOICA Group Training in Information and Communication Technology for meteorological personal, Seoul, Korea CLIMSOFT Training Workshop, Ho Chi Minh City, Vietnam	KOICA WMO
Meteorologist	Workshop on Aviation Meteorology, Beijing, China	WMO

Meteorologist	Training in Operational Cyclone Forecasting, , New Delhi, India KOICA Group Training in COMS data, Seoul, Korea	Tropical Cyclone Panel KOICA
Meteorologist	Group Training in GTC Meteorology, Tokyo, Japan	JICA

(b) International and Regional Meetings

Director General	IOTWS/ICG4 and WG 5 Meeting, Mombassa, Kenya Scientific Planning Group Meeting of APN, Hawaii, USA WMOC ongress, Geneva, Switzerland APN Steering Group Meeting, Tokyo, Japan Session of Inter Governmental Panel on Climate Change (IPCC),Valencia, Spain	IOC/UNESCO APN Govt. of SL APN IPCC
Director	Intergovernmental Panel on Climate Change (IPCC) Working Group II Meeting, Brussels, Belgium ICG/IOTWS WG5 Meeting, Jakarta, Indonesia Expert Meeting on NMHS Participation in Disaster Risk Reduction (DRR), Geneva, Switzerland	IPCC IOC/IOTWS WMO
Director	Session of the Intergovernmental Panel on Climate Change (IPCC) Working Group I, France Meeting to finalise the MoU of association for the establishment of the BIMSTEC Centre for Weather and Climate, Islamabad, Pakistan	IPCC Govt. of SL
Deputy Director /Director	Technical Conference on Management of Meteorological and Hydrological Services in RAIL, Islamabad, Pakistan the WMO/ESCAP Panel on Tropical Cyclones, Male	WMO Govt. of SL
Deputy Director	Expert Meeting on Gender Management, Geneva, Switzerland WMO/IOC Workshop on the GTS for effective exchange of tsunami warnings related information and other warning in the Indian Ocean, Bangkok, Thailand	WMO WMO
Deputy Director	International Conference on Secure and Sustainable Living, Social and Economic Benefits of Weather, Climate and Water, Madrid, Spain	WMO
Deputy Director	Session of Intergovernmental Panel on Climate Change (IPCC) Working Group II and IPCC, Bangkok, Thailand	IPCC

(c) Scholarships and Local Training

Thirteen officers participated in various Training Programmes organized at the Institute of Government accounting and finance. In addition six and two officers were trained at the training centre at the Ministry of Public Administration and the Department of State Language respectively. Ten officers were trained for the use of Lanka Government Network (LGN) at ICTA. Seven officers were train at SLBC for improving their presentation capability and one at National Youth Service Council for Quantity Surveying and Estimates.

(d) Seminars/Workshops/Awareness Programmes Conducted:

One Climate Change Awareness Seminars was conducted by the Centre for Climate Change Studies (CCCS) at Kukuleganga, in the Kalutara district.

All Meteorologists followed under the activities.

6. DEVELOPMENT ACTIVITIES

Initial construction work of two new meteorological offices and quarters at Polonnaruwa and Monaragala was commenced in December and plan to be completed in 2008/2009. Main gate barrier was constructed at the entrance to the department premises, in order to improve the security with in the department.

Some repairs at Galle and Bandarawela meteorological offices and at the head office were completed.

Water and electricity were supplied to the newly constructed Mannar meteorological office which was constructed using NECORD Fund.

Improvement to the head office sewerage system was awarded to the National Water Supply and Drainage Board.

Aluminium partitioning to the GTS server room in the communication centre was completed.

Meteorological equipments (Two Theodolites, one Mercury Barometers, two Rainfall Recorders and one Digital Barometers) were purchased as supplement to improve the observation network.

Purchased twenty automated telemeter rain gauges with solar panels for monitoring real time rainfalls

A finger scanner for registering attendance is also purchased

GTS system was upgraded for the fast reception of meteorological information and Tsunami alert bulletins with the support of US government.

Cabinet approval for the purchase of Doppler Radar was obtained and the MOU has been signed between WMO and the Secretary, Disaster Management and Human Rights in order to purchase the system with the technical support of WMO. Rs.160 million has been released to WMO Trust Fund as a part payment for Doppler Radar.

7. SURFACE OBSERVATIONS

24-hour watch on the weather was maintained at Anuradhapura, Batticaloa, Colombo, Galle, Hambantota, Katugastota, Katunayake, Nuwara Eliya, Puttalam, Ratmalana, Ratnapura and Trincomalee meteorological stations. However the observation at Trincomalee, Vavuniya, and Jaffna were distrupted in some days due to security reasons. Observers at the Trincomalee meteorological office located in the Naval Base Trincomalee had to be withdrawn in August 2006, and the observation are carried out by the Sri Lanka Navy thereafter. 16-hour watch was maintained from 0530 hours to

2130 hours at Badulla, Bandarawela, Kurunegala, Maha Illuppallama, Mannar, Pottuvil, Jaffna and Vavuniya,. At meteorological stations meteorological parameters such as pressure, temperature, humidity, wind, visibility, clouds were observed at the standard hours 00,03,06,09,12,15,18 & 21 UTC according to the technical guidelines stipulated by the WMO and transmitted to the National Meteorological Centre in Colombo immediately afterwards.

8. UPPER-AIR OBSERVATIONS

Radar wind observations were done at Colombo to determine the wind speed and direction at different heights in the lower atmosphere. These observations were done at 0600 hours UTC using 100g balloons and at 1200 hours UTC using 350g balloons.

Radiosonde Observations performed at Colombo at 1200 hours UTC for the determinations of pressure, temperature and humidity at different heights in the lower atmosphere were not possible during the year due to non-availability of radiosonde/ consumables that are supplied by India Meteorological Department under a bilateral agreement.

To supplement the radar wind observations, pilot balloon observations were done at Colombo at 0000 hours UTC and at 0600 and 1200 hours UTC when radar observations had to be cancelled due to technical and other reasons. Pilot balloon observations were also done at Hambantota and Puttalam at 0000, 0600 and 1200 hours UTC.

9. NATIONAL METEOROLOGICAL CENTRE (NMC)

The National Meteorological Centre continued to supply weather forecasts and bad weather warnings to the public, domestic aviation and shipping. A special weather bulletin for the Fisher folk Radio Programme was supplied throughout the year daily to the Ministry of Fisheries. The Department of Meteorology is responsible for reception of Tsunami information from two interim centres, PTWC and JMA and issuing Tsunami Warning to the general public.

10. METEOROLOGICAL TELECOMMUNICATION CENTRE

All national and regional meteorological data required at the NMC for weather forecasting purposes were received in this division. Meteorological data from a number of selected stations, within the Island were transmitted to the New Delhi Regional Telecommunication Centre for re-transmission to other National, Regional and World Meteorological Centres. The slow speed Colombo/New Delhi 50 baud leased line GTS satellite circuit was upgraded to 256 kbps line through internet cloud in June for fast reception of Meteorological data and Tsunami related warning and advisories. Technical assistant for GTS upgrade was provided by USAID, under Indian Ocean Tsunami Early Warning Program.

INSAT satellite imagery and data receiving system donated by India is still non-operational due to a technical problem. HRPT receiver of NOAA imageries was defective during the year. Upgraded SADIS – 2G WAFS data system is commissioned in January 2007.

11. KATUNAYAKE AIRPORT METEOROLOGICAL OFFICE

The meteorological office at the Bandaranaike International Airport, Katunayake supplied all meteorological information required for international flights, operating through Katunayake and for those using the Colombo Flight Information Region. Services

provided to the aviation became fast and efficient with the up grading of the Katunayaka GTS system and the installation of SADIS-2G system in June at the Meteorological office.

12. RATMALANA AIRPORT METEOROLOGICAL OFFICE

The main function of this office was to provide weather information required for domestic flights operating through this airport and conducting the routine observation. Route and area forecasts were obtained from the NMC in Colombo and supplied to the SLAF and other domestic flight operators.

13. CENTRE FOR CLIMATE CHANGE STUDIES

Research activities conducted by the Centre for Climate Change Studies have also been given under item number 22. Meteorological Research.

14. AGROMETEOROLOGICAL STATIONS

Data from 37 agro meteorological stations were collected and processed. The parameters measured were maximum and minimum temperatures, minimum on grass temperature, rainfall, evaporation, sunshine duration, wind speed and direction and soil temperatures at 05cm, 10cm, 20cm and 30cm depths below the surface. Weekly rainfall and cumulative rainfall for the Yala and Maha seasons, together with percentage offsets for further processing were supplied to the Food and Agricultural Organization (FAO).

15. RAINGAUGE STATIONS

The network of rain gauge stations comprised over 480 stations scattered throughout the island. These were maintained in collaboration with a number of other governmental and non- governmental institutions and many voluntary observers. Rainfall was measured daily at 0900 hours at these stations and the reports were sent to this Department at the end of the month for processing. Reports were obtained daily from about sixty of these stations by telephone for weather forecasting purposes. Sixteen new rain gauge stations were started with a few more revived, during the year.

16. COMPUTER DIVISION

The CLICOM system worked very satisfactorily during the year. Data entry work was slowed down due to two existing vacancies out of four Data Entry Operators. However data entry of synoptic observational data (three-hourly) of all meteorological stations and updating of daily rainfall and temperature data of meteorological stations and daily rainfall data of all rain gauge stations continued. Issue of meteorological data to users in digital as well as in printed formats continued.

17. SUPPLY OF CLIMATOLOGICAL DATA

The Department continued to provide climatological data, which have been accumulated systematically over the years, for a large number of feasibility studies/planning of development projects in various sectors.

Climatologically data were also supplied to researchers and university students for their studies and to the Central Bank, Census & Statistics Department and several District Secretariats for their planning/development work and publications.

18. SUPPLY OF ASTRONOMICAL DATA

Times of sunrise, sunset, moonrise, moonset, lightning up times, visibility of planets, visibility of new moon, phases of the moon and circumstances of eclipses were computed and supplied to the Government Printer, the daily press, and other users. Astronomical information was supplied to many users. This information was also included in the Department's web site <http://www.meteo.slt.lk>. A senior officer of the Department served as a member of the Poya Committee.

19. TIME SERVICE

Standard clocks were maintained using International time signal broadcasts although the clocks are very much obsolete in the present context.

20. SEISMOLOGICAL STATION

The obsolete seismograph continued to be not operational. Although the responsibility on the subject lies with the Geological Survey and Mines Bureau, information on past records of seismic activities was supplied to users during the year under review.

21. METEOROLOGICAL RESEARCH

1. Analysis of long term trends of T-mean, T-max and T-min (annual and seasonal) at meteorological stations in Sri Lanka
2. Investigation of predicting onset of southwest monsoon in Sri Lanka using Indian Monsoon Index (IMI) and aerial rainfall in southwest quarter of Sri Lanka
3. Analysing monthly rainfall forecast using CPT (Climate Predictability Tool) software for all districts

Several research studies were also conducted in association with the Centre for Climate Change Studies. Some of the topics studied are,

1. Simulation of 2001 Drought in Hambantota and past droughts in Kurunegala area using Standard Precipitation Index (SPI)
2. Developing seasonal weather forecasting model for different districts using Climate Predictability Tool (CPT)
3. Calculation of present temperature trend for the whole island
4. Use of MM5 model to develop forecast charts for short range weather forecasting
5. Statistical downscaling of surface temperature from the global model field variables of NCEP.

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