

Functions of the Department of Hydromet Services (DHMS)

- Is the national center for weather, climate and water resources in Bhutan To establish and operate national hydro-meteorological network for data collection including setting up of flood/GLOF EWS.
- To provide reliable and timely hydro-meteorological information needed by various agencies for :
 - natural resources policy formulation and planning for effective management of water resources for domestic, agricultural, commercial, industrial, recreational, and ecological uses.
 - hydropower planning, development and operation as well as for other water related infrastructures;
 - planning for Agricultural, Construction, Tourism Health Sector and other Environmental Sectors
 - Provide information and services for Disaster Risk Reduction
 - Weather and climate forecasting, flood forecasting and warning services to minimize the loss of life and property as a result of hydro-meteorological related hazards, such as floods, droughts, windstorm, snow avalanches, GLOF etc.;
- To establish institutional linkages and coordinate with international organizations such as WMO, UNESCO, SAARC/BIMSTEC, ICIMOD etc.
- To maintain national, bi-lateral, regional, and international cooperation related to hydro-meteorology as well as exchange of data;
- To enable the development of resource pool of qualified professionals/specialist/experts in the field of hydrology and meteorology.
- Planning, coordinate and conduct research related to hydrology, meteorology, climatology, water resources, snow, glaciers, climate change etc.

Planning, Coordination and Research Division (PCRD)

- Planning and designing of hydro-meteorological monitoring station network required for hydropower planning, flood and weather forecasting as well as for the other sectoral needs;
- Prepare fiscal budget (capital works) and Five Year Plans for the department in coordination with other divisions;
- Provide Technical Sanction to implement works by the department;
- Monitoring and Evaluation of plans, programmes and activities of the department;
- Coordination for programs and projects that are inter-divisional in nature
- Process (analysis), archive hydro-meteorological data and maintain control of quality and security of the archived data;
- Publication of reports, bulletins and data year book for record and dissemination;
- Maintain department's common database, web page and servers and update them including network connection (LAN) between divisions and sections under the department;
- Act as focal point for releasing hydro-meteorological information to national and international agencies and donors through the head of agency.

- Improve methods, procedures and techniques in hydro-meteorological application including station network design, specification and standardization of instruments, and database management system;
- Provide technical support and operation of small scale hydrology including research and development related to land use planning and watershed planning and management studies;
- Coordinate and follow up requests from other agencies, ministries, projects related to hydro-meteorology services and products;
- Coordinate and undertake applied research and development in the field of hydro-meteorology and water resources, climate change impacts etc
- Evaluate staffing patterns and needs for redistribution of human resources and recruitment of technical and support staff in coordination with HRD Division.
- Maintain inventories of existing skills and training needs based on present and future programs; and develop specialized training to meet program requirements;
- Organize trainings and refresher courses for staffs based on needs of other division.

Hydrology Division (HD)

- Administer and implement operational hydrology plans, programmes and activities;
- Establish new hydrological, flood/GLOF monitoring and warning and sediment sampling stations;
- Monitor and maintain overall operation of communication facilities including hydrological equipment and other electro-mechanical facilities, for data acquisition;
- Transmit real time data from the monitoring stations to Data Processing Unit and also to National Weather Forecasting and Warning Centre (NWFFWC) to prepare flood forecasting and warning;
- Collection of low flow data from east-west tributaries to better understand the flow regime of rain fed rivers and streams.
- Ad-hoc measurements of rivers and streams based on the request of other agencies.
- Maintain a hydrological and sediment database and undertake primary data processing in coordination with PCRD and submit data in electronic form to the PCRD for compilation in a central database archive for further processing (statistical analysis.. etc), dissemination and publication.
- Prepare and provide timely flood forecasting and warning services to mitigate flood related disasters;
- Transmit flood information to the National Emergency Operation Center (Department of Disaster Management), Hydropower Power Generation Companies, and related agencies. Sharing and exchange of real time hydro-meteorological data with other countries and other regional and international organization to which Bhutan is signatory.

4. Snow & Glacier Division (S&GD)

- To formulate policies, plans and programs related to snow and glacier monitoring in Bhutan;
- To manage & coordinate the general operations of the snow and glacier monitoring networks in consultation with other divisions of the Department;

- Establish new snow gauging and glacier mass balance stations of the country;
- Initiate and conduct snow surveys and measurements across country
- To coordinate with national line agencies pertaining to snow and glacier monitoring works, data collection etc.
- Initiate and conduct studies and researches on Snow and Glaciers in the country
- To maintain National, Regional & International cooperation related to cryosphere science, data collection, data sharing, etc.
- Provides technical inputs and support to the RGoB on various issues, strategies and prospects related to country's water resources, climate change specially related to snow and glaciers component.

Meteorology Division (MD)

- Administer and review the implementation of meteorological plan, programmes and policies of the department;
- Provide daily weather forecasts information to the public based on observation and study of different models;
- Research and studies on long range forecasts, prepare seasonal forecasts (monsoon outlook) annually for information to public;
- Study/observation of extreme weather events like cyclone and heavy rainfall for press release and timely information to public. Analysis and research works on climatic data for specific purposes.
- Planning of meteorological network and establishment of new stations. Operation and maintenance of existing meteorological network (9 real time AWS, 20 Class A, 61 Class C stations) across the country;
- Meteorological data collection, quality control, archiving and database management. Provide climatic data and services to the Government for planning of developmental activities including private sector for specific studies and projects;
- Data processing in coordination with PCRD for archive in a central database for statistical analysis, dissemination and publication;
- Maintain agro-meteorology and related information database required for RNR Sector in future;
- Collect and provide aviation forecasts services in future.