

Pre-cyclone exercise meeting on 5th April, 2022

India Meteorological Department (IMD) organized the on-line pre-cyclone exercise meeting on 5th April, 2022 under the chairmanship of Dr. Mrutyunjay Mohapatra, Director General of Meteorology (DGM), IMD to review the preparedness, take stock of requirements, plan for the cyclone season April-June, 2022 and share new initiatives by IMD with stakeholders. Various national and state level disaster managers including experts from Ministry of Home Affairs (MHA), National Disaster Response Force (NDRF), National Disaster Management Agency (NDMA), Department of Fisheries, Central Water Commission (CWC), Indian Air Force (IAF), Indian Navy (IN), Ministry of Port & Shipping, Ministry of Oil Industry, Ministry of Defence, Ministry of Ports, Shipping & waterways, Ministry of Food, Ministry of Steel, Ministry of Heavy Industries, Ministry of Railways, Oil & Natural Gas Corporation, All India Radio, Doordarshan, Council for Scientific & Industrial Research (CSIR), Coast Guard, Directorate General of Hydrocarbons, Government of West Bengal, Odisha, Andaman & Nicobar Islands, Andhra Pradesh, Tamil Nadu, Puducherry, Kerala, Karnataka, Goa, Maharashtra, Gujarat, sister organizations of IMD including National Centre for Medium Range Weather Forecasting (NCMRWF), Indian National Centre for Ocean Information Services (INCOIS), Indian Institute of Technology (IIT) Delhi, Area Cyclone Warning Centres of IMD at Chennai, Mumbai, Kolkata, Cyclone Warning Centres at Bhubaneswar, Visakhapatnam, Thiruvananthapuram & Ahmedabad, Radar centres at various coastal states and experts of IMD at Delhi Office participated in the meeting.

DGM, IMD in his opening address touched upon various issues from forecasting to last mile connectivity and discussed the areas that require improvement in particular customized sector specific advisories as per user's need. He informed the participants that IMD has achieved significant improvements in observational network, modeling capabilities and forecasting techniques. As a result, there has been a paradigm shift in the cyclone forecasts in terms of track, landfall, intensity and adverse weather including heavy rainfall, strong wind and storm surge.

He also briefed the participants on the new developments in warning services including:

- a) utilization of GIS platform for displaying various warning products for easy interpretation by the users,
- b) Memorandum of Understanding among DGH, IMD, INCOIS, Oil Industry Safety Directorate (OISD), Directorate General of Shipping (DGS) and Indian Coast Guard (ICG) for development of customized location specific impact based warnings for offshore industries from cyclone season, 2022
- c) implementation of Web based Dynamic Composite Risk Atlas & Decision Support System – a tool developed by NDMA in collaboration with IMD for generation of quantitative information on impacts associated with landfalling cyclones and warning dissemination through mobile app to affected people,
- d) introduction of pre-genesis forecast with a validity of next 3 days from deep depression over Andaman Sea in March, 2022,

- e) introduction of distance & direction of selected stations from forecast track upto next 120 hours in tabular form to help disaster managers, media & general public visualize the distance & time when the cyclonic disturbance would come close to a particular station,
- f) introduction of various mobile apps (Damini for lightning forecast, Mausam & the India Government' s Umang for weather forecast including cyclone warning and Meghdoot for agrometeorological advisories),
- g) Common Alert Protocol for warning dissemination.
- h) free registration facility available on Regional Specialised Meteorological Centre (RSMC) website www.rsmcnewdelhi.imd.gov.in to receive cyclone alerts
- i) crowd sourcing through mobile app and web page to share realtime situation associated with a weather event (https://city.imd.gov.in/citywx/crowd/enter_th_datag.php).

DG IMD informed the participants that India is at par or rather better than many other leading International cyclone warning centres in terms of forecast accuracy and services. He also insisted upon developing a foolproof triggering and response mechanism with active participation from all stake holders to further minimize loss of lives and properties. He informed the stake holders that IMD is ready to provide customized forecast to various industries and stake holders with an objective to minimize loss to property and ensure disaster resilient infrastructure.

Dr. Ananda Kumar Das, Head, Cyclone Warning Division made a presentation on the current status, new initiatives and future plans of IMD for further improving the services and providing sector specific advisories. In his presentation Dr. Das highlighted that IMD has a highly developed observational system, modeling capabilities, high end decision support system to compare, comprehend & analyse various atmospheric & ocean parameters and generate user specific impact based forecast. He discussed the role & position of IMD as a regional leader in the south Asia, middle east and southeast Asia in terms of sharing of observations, model guidance, warning services to neighbouring countries and marine community in the North Indian Ocean.

As an outcome of accurate warnings there have been:

- ❖ reduction of loss of life to less than 100 in recent years not only over India but also over 13 WMO/ESCAP Panel Member countries in the region due to any landfalling cyclone
- ❖ savings to government exchequer towards carrying out evacuation of coastal population, payments to kins of dead etc.
- ❖ savings to various sectors.

The stake holders participating in the meeting appreciated IMD for providing accurate and timely advisories which helped in effective management of cyclones in recent years. Deliberations and discussions with active participation from all the stake holders were held during the meeting and there were a number of good suggestions from the stakeholders to further improve liasioning between service providers & stake holders and last mile connectivity.
