

CYCLONE WARNING CENTRES

Relevant for: Geography | Topic: Important Geophysical Phenomenon - Tropical Cyclones

All the 9 coastal states (viz., Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha and West Bengal) and the Union Territories along the coasts (viz., Dadara & Nagar Haveli, Daman, Diu, Mahe, Yanam, Puducherry) and the Island Territories (Lakshadweep & Andaman and Nicobar Islands) have well developed Cyclone early warning systems in place. There are 7 Cyclone warning Centers covering the east & west coasts located at Chennai, Mumbai and Kolkata and four Cyclone Warning Centres (CWCs) at Thiruvananthapuram, Visakhapatnam, Ahmedabad and Bhubaneswar and the Cyclone Warning Division centrally located in IMD Head Quarters at New Delhi.

The responsibility for operational storm warning work for the respective area rests with the ACWCs and CWCs. Area of responsibility of ACWCs and CWCs is shown in the Table below.

Centre

Coastal area*

Maritime State/UT

ACWC Kolkata

State: West Bengal

UT: Andaman & Nicobar Islands

State: West Bengal

UT: Andaman & Nicobar Islands

ACWC Chennai

State: Tamil Nadu

UT: Puducherry

State: Tamil Nadu

UT: Puducherry

ACWC Mumbai

State: Maharashtra & Goa

State: Maharashtra & Goa

CWC Thiruvananthapuram

State: Kerala & Karnataka

UT: Lakshadweep

State: Kerala & Karnataka

UT: Lakshadweep, Mahe

CWC Ahmedabad

State: Gujarat

UT: Dadra-Nagar Haveli-Daman-Diu

State: Gujarat

UT: Dadra-Nagar Haveli-Daman-Diu

CWC Visakhapatnam

State: Andhra Pradesh

State: Andhra Pradesh, Yanam

CWC Bhubaneswar

State: Odisha

State: Odisha

** Coastal strip of responsibility extends upto 75 km from the coast line.*

Various programs are being implemented in IMD under the umbrella scheme “**Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)**” of the MoES. Year-wise allocation and cumulative expenditure for all the 4 sub-schemes of IMD under ACROSS namely, Atmospheric Observation Network (AON), Upgradation of Forecast System (UFS), Weather & Climate Services (WCS) and Commissioning of Polarimetric Doppler Weather Radars (PDWR) during last five years are mentioned below:

(Rs. in Crores)

Year

Budget Estimates

Revised Estimates

Actual Expenditure

2016-17

241.60
166.41
144.08
2017-18
188.75
149.15
134.09
2018-19
186.46
185.89
175.94
2019-20
207.17
224.73
206.04
2020-21
249.22
155.20
150.33

The sub-schemes under ACROSS are aimed at augmenting the observational network, improving the forecasting system and enhancement of Weather & Climate Services. These activities are meant for the entire country including Tamil Nadu. Details of these sub-schemes are as follows:

Atmospheric Observations Network (AON)

Main activities of the program undertaken during 2017-21:

Upgradation of Forecast System (UFS)

Main activities of the program undertaken during 2017-21:

- Upgradation and sustenance of Communication Systems for Data and Product transmission.
- Development of an advanced Operational Forecast System, Delivery System for Forecast and other services.
- Conduct of special campaign for improving Cyclone, Thunderstorm and Fog forecasting through Aircraft reconnaissance and provision of additional observations.
- Integrated Himalayan Meteorological Programme for Western & Central Himalayas.
- Capacity Building, Outreach, Planning and sustenance of specific process related observing systems over India.

Weather & Climate Services (WCS)

Main activities of the program undertaken during 2017-21:

- Setting up of District Agro-Met Units (DAMUs) at all the districts complimentarily with existing AMFUs in the country for extension of Agromet Advisory Services (AAS). Till date 200 DAMUs have been established which includes 115 aspirational districts also.
- Establishment of a state-of the-art Climate Data Centre with integrated advanced Climate Data Services portal for rendering national and regional climate services.
- To upgrade the training infrastructure and facilities to enhance the capacity of the training establishment.

Commissioning of Polarimetric Doppler Weather Radars (PDWR)

The scheme “Commissioning of Polarimetric Doppler Weather Radars (DWRs)” is aimed at augmenting the DWR network over the country to facilitate plugging the existing gaps in the meteorological observational network of radars for most parts of the country, through installation

of eleven C-Band dual polarized DWRs.

All 4 sub-schemes of IMD namely, AON, UFS, WCS and PDWR along with other sub-schemes under ACROSS were evaluated by an Independent Review Committee (IRC) taking the domain experts from various national Institutes/ Departments. The committee appreciated the work being done under the ACROSS scheme in terms of expansion of observation network, running high resolution models in all temporal and spatial scales, carrying out campaign studies for understanding the physical processes responsible for severe weather, generating weather and climate products for various applications, and developing effective communication strategies for timely delivery of services.

The IRC recommended continuation of all sub-schemes under ACROSS from the 14th Finance commission (2017-20) to the 15th Finance Commission, which has been approved recently.

Details of allocation under ACROSS-IMD during FY 2016-17 to 2020-21 are mentioned at part (b).

Cumulative Budgetary Estimates (B.E.) for all four sub-schemes of IMD during the FY 2021-22 are as follows:

FY 2021-22
B.E. (Rs. In Crore)
Revenue
136.40
Capital
119.00
Total (Revenue + Capital)
255.40

This information was given by the Minister of State (I/C) for M/o Earth Sciences and M/o Science & Technology, Dr. Jitendra Singh in a written reply in Lok Sabha today.

SNC / RR

All the 9 coastal states (viz., Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha and West Bengal) and the Union Territories along the coasts (viz., Dadara & Nagar Haveli, Daman, Diu, Mahe, Yanam, Puducherry) and the Island Territories (Lakshadweep & Andaman and Nicobar Islands) have well developed Cyclone early warning systems in place. There are 7 Cyclone warning Centers covering the east & west coasts located at Chennai, Mumbai and Kolkata and four Cyclone Warning Centres (CWCs) at Thiruvananthapuram, Visakhapatnam, Ahmedabad and Bhubaneswar and the Cyclone Warning Division centrally located in IMD Head Quarters at New Delhi.

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