



पृथ्वी विज्ञान मंत्रालय  
Ministry of Earth Sciences



Years of Service to the Nation  
राष्ट्र सेवा के 150 वर्ष

## IMD@150 : Past, Present and Future

### Stakeholders' Panel Discussion on Weather and Climate Services

Vigyan Bhawan, New Delhi  
15th January, 2024

# Weather & Climate Services

**Weather & Climate Services** are the aide derived from **Weather & Climate Information** that assists individuals and organizations in society for **i) improved ex-ante decision-making** and **(ii) ex-post actions & evaluations** in various spheres of socio-economic sectors

**From a modest beginning with monitoring weather for tropical cyclones over the north Indian Ocean and for Agriculture, IMD has made remarkable progress during the last 149 years in application of Weather & Climate Information to various socio-economic activities**

# Weather forecasting Services to various socio-economic sectors



Monsoon

**Monsoon**



**Agriculture**



**Hydrology**



**Power & Energy**



**Health**



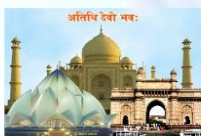
**Aviation**



**Shipping**



**Transport**



**Tourism**



**Sports**



सत्यमेव जयते



**In the service of nation  
since 1875**



**Cyclone**



**Flood**



**Pilgrimage**



**Fog**



**Climatology**



**Disaster Management**



**Defence**



**Mountaineering**



**Fisheries**

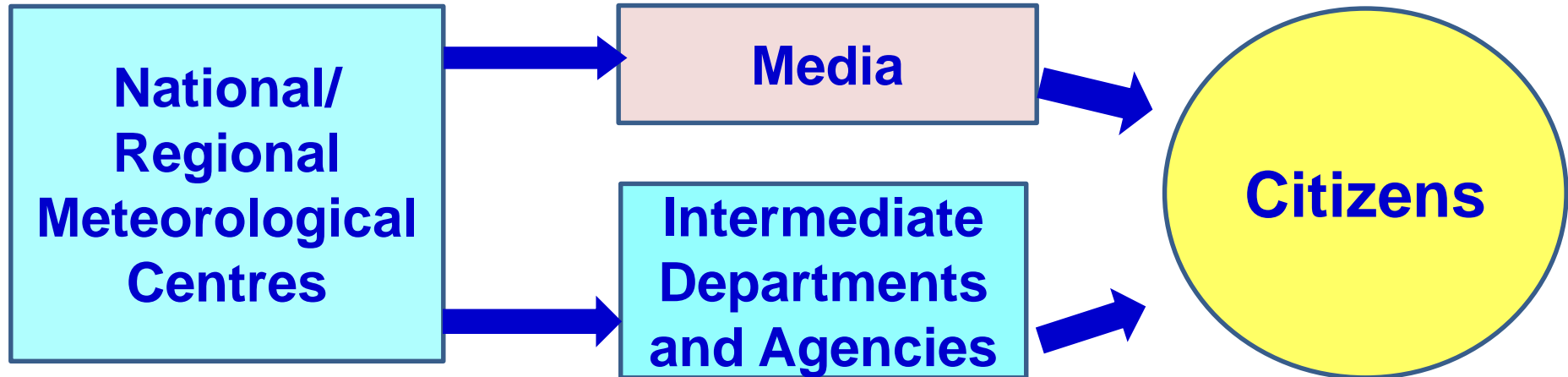


**Urban Development**

# Weather & Climate Service Process

begins with production of weather & climate information AND ends with effective harnessing of favourable situations and minimising the potential losses through timely and effective actions; and post-event evaluation

## The Process Chain



# Components of Public Weather Services

- **PRODUCTION:** Services must be produced, be medium compatible; and the Impacts & Risks be **COMMUNICATED**
- **IMPACTS and ACTIONS:** Should facilitate Target Specific & Impact based defensive and preparatory actions
- **COMMUNICATION:** Forecast message must be transmitted, received **AND** the Information must be passed down the chain with **SUGGESTED ACTIONS**
- **AWARENESS, PREPAREDNESS & FEEDBACK:** Users must be aware of the source, information content, periodicity, its impacts **AND** should be aware of the Resources, Capacity and Preparatory actions on their parts

# The Challenge of Weather & Climate Services

**Production:** Weather & Climate Services should be Medium and Target Specific; Impact based and include suggested actions and be based on optimum Observation System and sound scientific understanding.

All these challenges warrant that **OBSERVATIONS** and **INFORMATION** are Co-Produced with all stakeholders including the Media

# The Challenge of Weather & Climate Services

**Impacts & Actions:** Impacts & Actions should be Jointly Formulated by IMD, Domain Experts (Stakeholders) & **Media**

Following need to be considered while conveying Impacts & Actions

- What **MESSAGE** need to be conveyed, and why?
- Who are **AUDIENCE** of the Message
- How to **SAY (OR WRITE)** the Message
- How to **CONVEY** the Message

Print and Electronic Media can further help convey specific impacts & actions through interaction with **DOMAIN EXPERTS**

# The Challenge of Weather & Climate Services

**Communication:** The Services should be effectively communicated to intermediaries and the end users

## Communication

1. What is happening/will happen?

Contextual for TIME & SPACE scale - IMD

2. Will it affect me?

Impacts - IMD, NDMA, Departments & Organisations

3. What can I do?

Actions by Individual, organisation and Government Bodies  
based on prior information



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# The Challenge of Weather & Climate Services

**Awareness, Preparedness & Feedback:** Adverse impacts of weather partly happen because people vulnerable to these simply do not know how to get out of harm's way or to take protective measures or are not adequately prepared.

The same is true for harnessing potential benefits

**Feedbacks,** (continuous, timely & structured) from the field provide important insight into what could have been done better and how to plough back these into production, impacts and communication systems.

**Thank You**