

# Floods in India

The floods in India have caused and led to major upheavals. It has caused the loss of lives, the economy, and the source of income for the residents. According to research by the National Commission on Floods, 12 percent area accounts for flood-prone areas in India, out of the total areas.

- The major types of floods include Coastal floods, River Floods, Flash Floods, Urban Floods, and Ponding Floods.
- The four major regions that are flood prone are Central India and Deccan, Ganges, Brahmaputra, and Northwest.
- There are various agencies that have been managing and combating the issues of floods to safeguard lives and livelihoods.
- Since India is devastated by floods for different reasons each year, it is important to capture the broad reasons and work on them to minimize the floods and boost economic growth.

## Effects of Flood in India

According to figures presented in the Rajya Sabha, India's financial losses from floods across the country in 2018 totaled around Rs 95,000 crores.

- As per government data, Flood in India caused the deaths of 1,653 people on average each year between 1953 and 2011.
- This also led to losses of Rs. 3,612 crores in residential property, government property, and crop damage.
- The statistics and figures give a clear picture of how the floods affected India, resulting in humongous economic loss and deaths.
- India witnessed some major floods in the past years in Patna, Kerala, Chennai, Kashmir, and Uttarakhand.

## Major Causes of Flood in India

The major reasons that play a crucial role in onsetting natural calamities like Floods in India include heavy rainfall, deforestation, unplanned urbanization, etc. Deforestation has accelerated soil erosion rates, which also contributes to the lower water absorption capacity of the ground, resulting in floods.

- Cyclones occur in the coastal districts of India, including the regions of Orissa, Tamil Nadu, Andhra Pradesh, and West Bengal, and are frequently followed by significant rainfall, resulting in floods.
- Unplanned urbanization has worsened the drainage and garbage disposal systems, leading to the decreased carrying capacity of rivers and floods.

## Types of Floods in India

**Flood management** in India is determined by numerous factors such as the surge in sea levels, rainfall, frequency of floods, and the intensity of floods. There are different types of floods, it also depending on the regions of the floods.

- Flooding along the coast
- Flash Floods or ones that occur suddenly
- Flooding in the urban areas
- Fluvial/River Floods
- Ponding or Pluvial Flooding

## Flood Management in India

If the aim is to deal with natural calamities, getting forecast information can be a huge benefit to minimize the loss. This collected information helps the government and other agencies take action to be prepared for the upcoming calamity. Here are the ways of flood management in India-

- India has the **India Meteorological Department (IMD)**, which is a dedicated body concerned with gathering information regarding cyclones, rainfall, storms, etc.
- The National Disaster Management Authority (NDMA) and the National Disaster Response Force (NDRF) are government bodies that perform all the important duties to rescue or send relief to the affected regions amidst the Flood in India.
- The Central Water Commission (CWC) is a government agency dedicated to monitoring river discharge measurements and water levels in dams. This helps to grasp the possibility of a potential flood.

## Regions Of Floods In India

There are three major regions that are prone to flood in India. These include Central India and Deccan, Ganges, Brahmaputra, and Northwest. Tidal flooding, major erosion of the coasts, perpetual rainfalls, and landslides are the causes of floods in these regions.

- **Deccan and Central India-** This region witnesses the consequences of cyclones that lead to floods in the area. The factors affecting are surge in the level of the sea, tidal flooding, and erosion of the coastal regions.
- **The Ganga-** The incessant rainfalls supplemented with earthquakes lead to the undermining of the riverbeds. These factors lead to this region as a flood-prone area.
- **Brahmaputra-** The landslides, earthquakes, and heavy rainfall obstruct the natural way of the river.
- **Northwest-** The floods in this area are augmented by the lack of a proper drainage system.

## Urban Floods

Urban floods have been witnessed in the country, in the states such as Patna, Chennai, and Mumbai. The major causes of urban floods include improper planning of the drainage systems and expansion of the cities with adequate strategy and planning.

- Climate change, and globalization are the supplement to the causes of urban floods.
- The improper garbage disposal systems have also augmented the causes.
- The factors pertaining to economic, social, and political perspectives also affect the policies that further aggravate the causes.

## Ways To Control Flood In India

There are numerous ways through which floods can be prevented and controlled in the area. The flood warning mechanisms can be put to use for getting information and planning to minimize the effects of natural calamities.

- One such device that can be put to use is IFLOWS [Integrated Flood Warning System].
- The mangroves act as a natural remedy for cyclones. The conservation of mangrove trees is highly effective and essential in order to prevent cyclones in coastal areas.
- The policies and laws can be strengthened in order to prevent the degradation of natural resources. Land policies can be strengthened.