

## The Problem with Monsoon

### What is the issue?

The recent flash floods and landslides in Kerala is a matter of concern as variations in the monsoon pattern and intensity are increasingly witnessed.

### What is the recent happening in Kerala?

- The torrential rain in Kerala has killed at least 35 people so far and red alert has been declared for 10 dams including Idukki.
- It has caused alarm as the Northeast monsoon lies ahead.
- The IMD has issued an alert for more heavy rainfall in Kerala from October 20.
- The Health Department has sounded an alert against the outbreak of infectious diseases due to heavy rains.
- The inundation of towns in 2018 and mudslides in 2019 had catastrophic effect in the State.

### What is causing frequent floods in Kerala?

- **Relief** -Kerala hosts a vast stretch of Western Ghats with almost no break between severe spells of rainfall.
- **Cloudburst phenomenon** - Mini cloud bursts are marked by intense short spells, which may not exceed 10cm in one hour.
- For example, Mini cloudburst caused 2019 floods in Kerala.
- **Human intervention** - Illegal quarrying and mining activity has resulted in stones and rubble silting the streams and rivers thus increasing the magnitude of the damage.
- Timber felling, improper tree cutting has also had an adverse impact.
- **Premature silting up of reservoirs** - Premature silting up of reservoirs especially in the steep valleys in the Western Ghats is a major concern.
- **Unplanned constructions** - The construction of Athirappilly dam on the Chalakudy river in Kerala's Thrissur district has been strongly opposed.
- **Unscientific and improper water management** - poor management of reservoirs as happened in 2018 floods aggravates the situation
- **Inefficient legal framework** - The Kerala Conservation of Paddy Land and Wetland Act, 2008 has not been able to prevent construction of

houses and other buildings in paddy fields and riverbeds

### **What efforts have been taken to minimise the losses?**

- The Kerala government has upgraded its Orange Book for Disaster Management, which includes the standard operating procedures (SOP) and protocols for disaster management in the state.
- **Disaster management at taluk-level-** As part of an Incident Response System, individual officers at district and taluk level have been assigned to handle any emergencies.
- 33 hazard prone zone maps have been given to local bodies for increased preparedness.
- **Multiple weather inputs** - The state is taking inputs from IMD, Skymet, IBM, etc. for situational awareness.
- **Resilient Kerala Program** - The Government of India, the Government of Kerala and World Bank has signed a loan agreement of USD 250 million to boost disaster preparedness.

### **What measures have to be taken for increased preparedness?**

*According to an estimate by researchers in 2017, quarrying area in Kerala accounts for over 7,157 hectares, much of it in central districts that were hit later by mudslides.*

- Nurturing the health of rivers by proper silting
- Keeping the rivers free of encroachments
- Ending mining and deforestation in unstable areas
- Avoiding incompatible constructions
- Accurately mapping the hazard zones
- A more benign development policy treating nature as an asset
- Implementation of **Madhav Gadgil committee** report on Western Ghats

*Gadgil report (2011) recommended designating the entire hilly region of Western Ghats as an Ecologically Sensitive Area.*

*The Kasturirangan panel that was constituted to examine the Gadgil report recommended reducing the area to be protected ecologically in Western Ghats to only 37 per cent.*

- Following best practices - For instance, **Hakku initiative** in Hyderabad

involves a team of six people to identify and visit risk-prone areas and pushes them towards solutions.

**Source: The Hindu, Economic Times**

