

② In the context of climate change, India needs to devise long-term flood management policies. Analysis.

Flood prone areas of India
→



⇒ Around 75L ha in India are flood prone.

Global climate report 2021 → point out that India is prone to 7% of disaster due to rapidly changing climate.

Factors of Flood.

Natural causes

IPCC → says that climate change is aggravating and the future disasters, rainfall is going to only increase.

Rainfall → Monsoon rainfall can produce 80% of usual, hence the carrying capacity of river to carry sediments will decrease, causing flood.

Anthropogenic

unplanned urbanisation → Lack of investment in flood resilient structures encroachment into

riparian zone, poor drainage infrastructure.

Encroachment into wetlands and buffer zones increases the sedimentation & chances of flooding.

Frequency of Floods.

Rashtriya Barga Ayog \rightarrow data shows from 40 mha
(National flood commission)

the flood prone zone have increased 14% to 45.6 mha
according to ~~2011~~ 2011 study; Floods are only 2nd most
disaster after cyclones causing major damage

Effects of flood

CWC report shows loss of lives increased to 1815 in
2019,
due to floods

Economic Loss \rightarrow crop damage and Infrastructure
 \rightarrow leading to annual loss of \approx ₹ 6400 crore.

On nation \rightarrow India is losing 0.46% GDP due
to damages caused by flood.

Need for Long term planning.

Disaster Preparedness plan

GIS - Zonal mapping using satellite
images

River flood management policy - to create river embankments, prevent encroaching, creating dykes, dams, buffer.

NDMA guidelines on national urban flooding policy 2016 has to be implemented effectively; creation of National Flood Management Authority to coordinate in flood management as a long term policy decision.

National Disaster Management database will help in policy making for long term policies.

Approach for both pre and post disaster management and policies need to give equal importance to both.

Thus the piecemeal approach of creating embankment has to be shifted to long term as the recent climate ~~change~~ ^{patterns} is rapidly changing and due to increasing ^{global} temperature.