

General Studies-3; Topic – Disaster and disaster management

Kerala Floods

1) Introduction

- Kerala faced the brunt of an unprecedented flood, which has almost brought the state to a standstill.
- This is the worst flood Kerala has witnessed in nearly a century.
- India's western coast has received above-average rainfall on account of sustained low-pressure conditions.
- However change in land use patterns and climate change could have contributed to the situation on the ground.

2) Present Crisis

- Besides nature's fury, the situation in Kerala is also a man-made problem.
- Increasing stone quarrying activity in Kerala, along with largescale construction.
- Unregulated growth of illegal constructions, and creation of real estate all over.
- Development activity can increase the chances of landslides.
- Vested interests that do not want any environmental laws to be implemented.
- Many reservoirs in the Western Ghats states are silting up prematurely due to massive encroachment and deforestation of catchment areas.
- Idukki dam is a case wherein the entire catchment was encroached along the dam construction.
- Had the dam reservoirs in Kerala been emptied ahead of the onset of monsoon rains, damages from the floods would have been lower, shows analysis.
- Upstream-downstream conflicts in many river basins.
- Diversion of flows into another river basin after power generation is creating problems of daily flood in the recipient basin and drought in diverted basins.

3) Reasons why the state is facing such a challenge in the floods

- The Kerala disaster essentially has been caused by extreme rainfall since June 1 (42.17% excess in the state, 83.59% excess in Idukki).
- An overflowing Idukki reservoir.
- Geography (10 per cent of the land in the state lies below sea level).
- High population density compared to the all-India density.
- The state does not have a single battalion of the state disaster response force (SDRF), which is mandatory as per the rules to tackle natural calamities.

4) Poor Management

- Several of India's floods, such as Bihar in 2016 and Surat in 2006, were exacerbated by poor dam management.
- Even in the Uttarakhand disaster, uncontrolled construction, large hydropower plants and deforestation were assessed to have aided the scale of destruction.
- In the 2015 Chennai floods, violation of dam safety norms were a critical factor, a CAG report found.

5) Madhav Gadgil Committee Report

- The floods in Kerala have brought the focus back on 2011 report on the Western Ghats that had made recommendations for preserving the ecology and biodiversity of the fragile region.
- Madhav Gadgil has argued that had the report's suggestions been implemented, the scale of disaster in Kerala would not have been as huge as it is.
- He said at least a part of the problem in Kerala was "man made".
- The committee suggested measures to conserve, protect and rejuvenate the entire range of western ghats that stretches over 1500 km along the coast.
- The committee had recommended a ban on certain new industrial and mining activities in the area, and called for strict regulation of many other "developmental" works.
- It recommended that the entire Western Ghats, spread over six states, including Kerala, be declared ecologically sensitive area (ESA).
- Kerala had objected to the proposed ban on sand mining and quarrying, restrictions on transport infrastructure and wind energy projects, embargos on hydroelectric projects, and inter-basin transfer of river waters, and also the complete ban on new polluting industries.
- None of the six concerned states agreed with the recommendations of the Gadgil Committee.
- Later a High-Level Working Group on Western Ghats under Kasturirangan was constituted to "examine" the Gadgil Committee report.
- It suggested that only a third of the Western Ghats be identified as ecologically sensitive area.
- Later Environment Ministry notified certain area in the Western Ghats as ESA.

6) Instances of Extreme Weather

- According to the data base compiled by the Centre for Research on the Epidemiology of Disasters, the instances of extreme weather have gone up from 71 in the 1970s to about 224 in the 1990s and 350 in the first decade of the millennium.
- Since the Uttarakhand flooding, such extreme rainfall events have led to disaster-like situation in India every year.
- The recent disaster that hit Kashmir when the Jhelum river overflowed.
- Odisha bore the brunt of the cyclonic storm Phailin, the worst since 1999.
- In 2010 there was a cloudburst in Leh.

7) Way Forward

- Need to learn lessons from past tragedies, and increase the resilience of disaster-struck areas through sustainable and long-term development that would involve minimal intervention in natural processes.
- There are unjustified human interventions in natural processes which need to be stopped.
- While dams can help control floods, they need to be managed properly.
- A flood management strategy will need to cover flood warnings, flood mitigation, any necessary evacuation and post-flood recovery.
- Special programmes will be needed to help address the trauma of loss of homes and property.