

RECURRENT NATURAL DISASTER – FLOOD

An Introduction

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RECURRENT DISASTER

- **FLOOD** is the most frequent, recurrent natural disaster that has been damaging and destroying human life and property since the time immemorial.
- In India, the Himalayan rivers account for nearly 70 % of the flood damages.

What is FLOOD ?

- When there is heavy rainfall (precipitation), **water level in the river rises above the banks and spills out of the bank to the low lying areas.**
- **This natural process of over – flow of water from the bank of river crossing danger mark is termed as FLOOD.**
- **In normal words, people speak the Overflow of Water from river as Flood.**

- Sometimes due to high stage in rivers, the water encircles low-level areas on either side of the river.
- Small floods are produced by less intense and less frequent rains.
- Technically, FLOOD is the function of the total amount, intensity and distribution of precipitation as referred to Hydrologic Cycle.



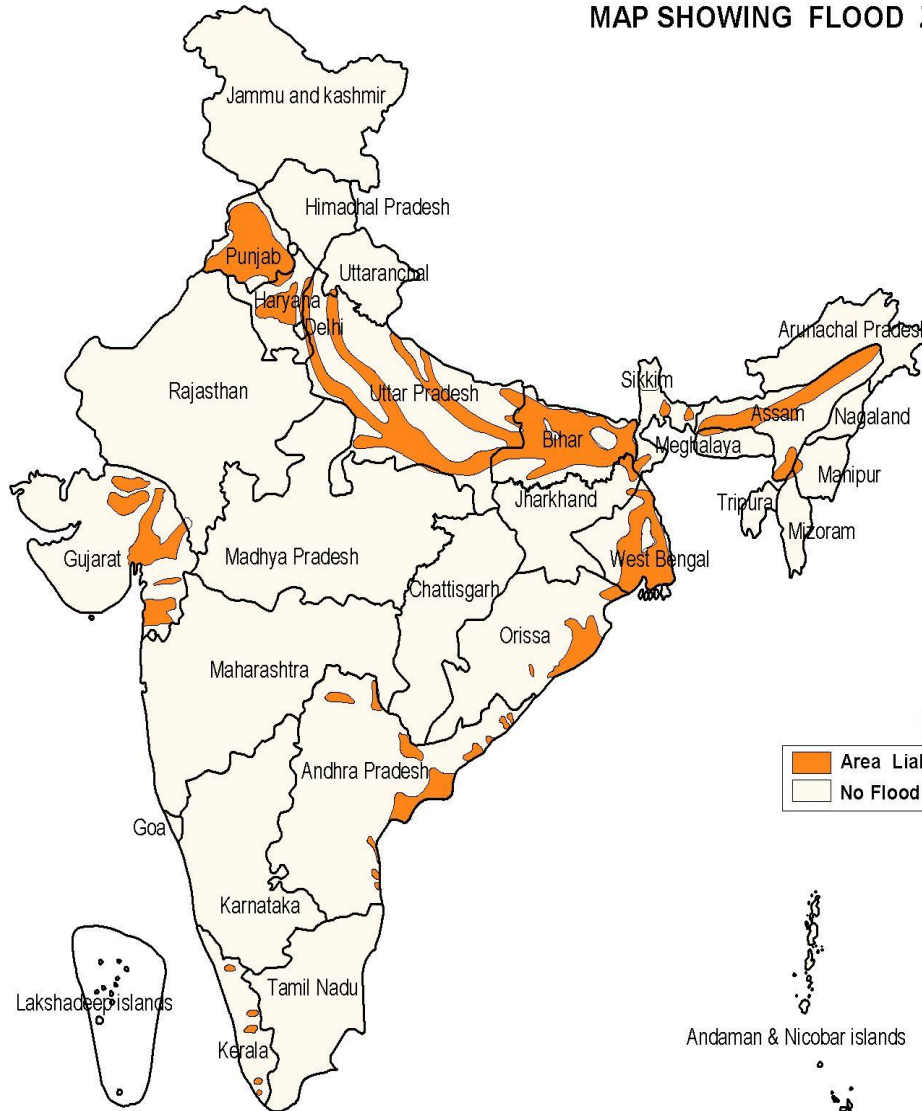
CAUSES OF FLOOD

- × **Tremendous pace of urbanisation, accelerated by continuous exodus of rural population to the urban areas, has increased both magnitude and frequency of floods in a few square kilometers.**
- × **The land along the waterfront of river has been turned out to be more and more in demand, with the result that the flood plains are rapidly being encroached by the growing population.**
- × **In some cases, even rivers themselves are being narrowed by silting and dumping, thus causing water to overflow the river banks.**

□ *Many of the Indian states such as Assam, West Bengal, Bihar, Odisha U.P., M.P., Punjab, Haryana, Gujarat, etc. face the disastrous mayhem of floods almost every year as a routine affair during the monsoon period when the rives are in spate.*

□ **A map of India depicting the Flood Zones of India is shown in the next slide as follows:**

MAP SHOWING FLOOD ZONES IN INDIA



LEGEND

- Area Liable to Flood
- No Flood Zone or Area Protected

250 0 250 500 Kilometers

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Disclaimer : All efforts have been made to make this image accurate. However UNDP do not own any responsibility for the correctness or authenticity of the same. Source: BMTPC, India

Even hilly terrain of the Himalaya like that of Jammu and Kashmir is very much prone to this natural disaster of Flood.

These floods create havoc for the inhabitants of the adjoining areas.

From destroying the standing crops to demolishing the houses, miseries perpetrated by flood are innumerable

Let us go to the saga of regular flood disaster of North Bihar

in India which basically serves as the catchment's area of high flood discharge of the rivers originating from the mountainous terrains of Nepal.

These rivers, such as Ganga, Bagmati, Gandak, Lakhandei, Adhwara groups, Mahananda, Kosi, Kamla and others, are scripting a grievous saga of omnipotent turbulence along the flood plains of Bihar.

Map of the Flood Zones in Bihar is shown in the following slide.

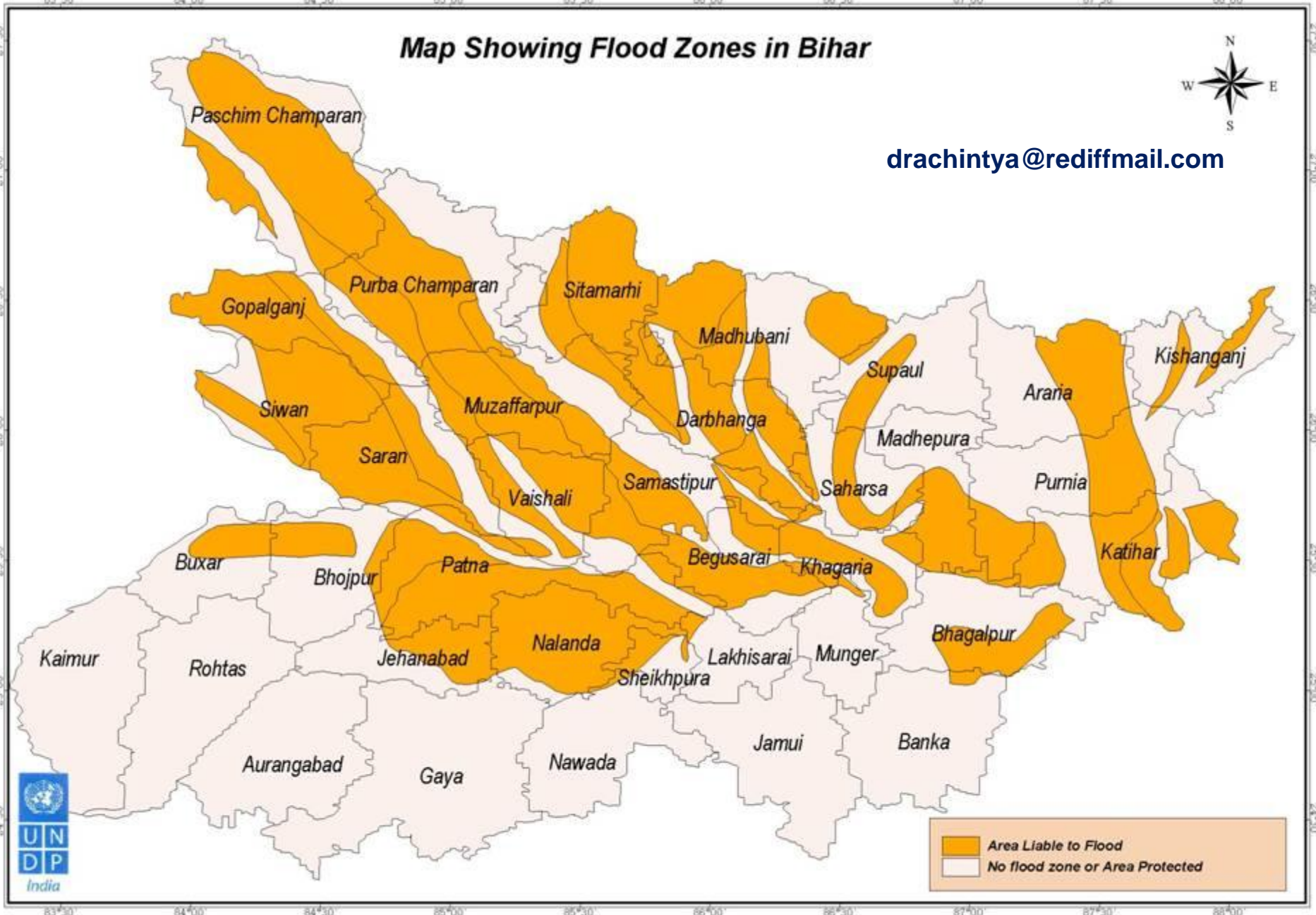
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Map Showing Flood Zones in Bihar



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	Area Liable to Flood
	No flood zone or Area Protected

Disclaimer: This map was collated based on the data/information compiled by the Ministry of Urban Development and Poverty Alleviation; UNDP has not verified the accuracy of information of the Map. Source: BMTPC, India

• FLOOD IN BIHAR

- Total Land Area of Bihar: 94.183lac hectare
- Total Flood Affected Area: 68.80lac hectare
- Hence, Flood Affected Area =
About 70% of total land.

#Region of North Bihar = 51.462 lac hectare

Flood Affected in North Bihar = 44.46 lac hectare

#Devastation in the form of SANDS-PLAY and LAND DEGRADATION = 2.80 lac hectare out of 68.80 Flood affected Area

- Recent Flood of North Bihar has hit
- 2087 Panchayats of 160 Blocks
- About 15 million people have been affected
- Crops in 113 lac hectare field were ruined.
- More than 5 lac dwellings washed away.
- Several highways&railways lines damaged.
- Damage amounts to over Rs.200 million.
- REASONS ARE MANIFOLD
 - # Non-maintenance of Embankments
 - # River channels not taken care of
- When embankment fails, Damage gets Multiplied & greater than that in past.




- During every monsoon, while these rivers are restlessly biting into the embankments; the villagers too are tirelessly working. The arrival of the fatal flood results in exodus.
- Rickety cots, rattling pans and pots, and even home-made stuffs are being piled on bullock carts.
- Tractors-trailers too are pressed into service. Thatched huts are carted away to makeshift camps



- Most of the farmers have to lose their farms and many houses are drowned.
- Millions of people have to suffer for want of shelter, food and sanitation, least to talk of their cattle and other belongings most of which meet their watery graves.

- The villagers know that this inevitable episode is only a matter of time against which they are racing to retrieve as to what they can.
- **They build homes, not merely houses. What they are getting dismantled are only houses; home is now under the open sky for men, women, and children and even for dumb cattle.**

- ✘ Govt. and administration have a tough time to care for millions of villagers who are normally found alone in their hopeless fight against the nightmare that flood has brought for them.
- ✘ **Disasters cannot always be prevented but their effects can certainly be mitigated.**
- ✘ **It has widely been accepted that mitigation flood disaster is not entirely possible and non-returnable.**



× It is , therefore, of utmost importance to analyse the problem of flood disaster in an integrated way with respect to hydraulic, hydrological and geological aspects so that floods may be so controlled that the damage does not exceed an acceptable limit.

Hence

× For the recurrent disaster like flood, the prone areas can be earmarked and suitable mitigation provisions be made accordingly.

◆ **Last but not the least,
the accountability**

should be devolved on every citizen
to carry on mitigation
measures such that
constructed facilities will not
be subjected to undue danger
**as far as human and material
safety are concerned.**



THANK YOU

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