India Floods 2017

Floods have been a recurrent phenomenon in India that lead to huge losses to lives, properties, livelihood systems, infrastructure and public utilities. As a matter of fact, 12% of the total landmass of the country (40 million hectare) is flood prone.

Furthermore, as on August 18, 2017, 25 states in the country are susceptible to floods, the most vulnerable States are Assam, Bihar, Uttar Pradesh, Gujarat, West Bengal, Madhya Pradesh, Odisha, Andhra Pradesh, Maharashtra, Punjab and Jammu & Kashmir. Similarly as many as 137 districts are vulnerable to floods.

In the recent years, the vulnerability of the states to floods has increased exponentially, mainly due to unplanned development, high population density & settlement of people in flood plains, old infrastructure, weak river embankments and also increase in extreme events, including high rainfall in a short duration. In July 2017, India experienced yet another wave of flooding due to excessive rains in the monsoon season. The states of Assam, Gujarath, Rajasthan, Odisha, Madhya Pradesh, Tripura and West Bengal faced massive floods in many parts, which led to human casualties in hundreds, extensive damage to infrastructure and also severely affected the animals. The Inter-Ministerial Central Team visited Assam to take stock of situation, and Prime Minister Mr. Modi himself visited Gujarat flood affected areas. It shows seriousness at the apex level.

The cumulative rainfall was recorded in excess, in June and July 2017, in most States of India. In India, Central Water Commission is Nodal Agency for flood forecasting. They have at present 221 Flood Forecasting Stations spread across 24 States & UTs. They are expected to provide flood advisories to State Governments with help of IMD. Country also has National Guidelines for Management of Floods (2008, NDMA). However there is a long way to go for flood prevention and mitigation in India. It's high time to take concrete actions by all concerned agencies on the ground to address this pertinent issue.

Gujarat Floods
Incessant torrential rain due to simultaneous activation of Arabian Sea and Bay of Bengal low-pressure systems (a rare phenomenon) has resulted into floods in many part of Gujarat this year. Districts of Banaskantha, Patan, Rajkot, Surendranagar, Ahmedabad, Morbi, Gandhinagar, Kutch, Mehsana and Valsad are hit by the large-scale flooding. Banaskantha and Patan are among the worst-hit districts in the state due to heavy rains and flooding of the Banas and Sipu rivers. Dhanera block Banaskatha district was worst affected and was inaccessible therefore the damages are estimated to be higher in the block as reported by IAG members.

The floods have impacted lives and livelihoods, including education and public transportation by damaging roads, highways, rail lines and airports. Besides the State Disaster Response Force and fire brigade personnel, the National Disaster Response Force (NDRF), the Air Force and the Army were deployed for the rescue of marooned villagers. According to state administration officials, 54,517 people were shifted to safer places over the last one-week due to flooding of low-lying areas.

So far, 119 deaths have been reported from across the state since monsoon began. Torrential rain and flooding, especially in north and Saurashtra, have resulted in at least 25 per cent loss in kharif sowing across crops such as cotton, groundnut, castor, pulses, guar and cereals. About 492 villages have no power supply, out

1 NDMA Guidelines 2008
2 BMTPC Vulnerability Atlas 2007
3 Flood Management Module, NIDM, 2012
4 Central Water Commission Website
Number of deaths reported by State Control Rooms and National Control Room as on 31st July 2017

<table>
<thead>
<tr>
<th>Name of State</th>
<th>No of reported deaths due to floods, heavy rainfall</th>
<th>Source of information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gujarat</td>
<td>218</td>
<td>Gujarat State Emergency Operation Centre (SEOC)</td>
</tr>
<tr>
<td>Assam</td>
<td>82</td>
<td>National Disaster Management Authority (NDMA), Ministry Of Home Affairs (MHA)</td>
</tr>
<tr>
<td>West Bengal</td>
<td>39</td>
<td>West Bengal Control Room</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>43</td>
<td>NDMA, MHA</td>
</tr>
<tr>
<td>Uttarakhand</td>
<td>19</td>
<td>NDMA, MHA</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>9</td>
<td>NDMA, MHA</td>
</tr>
<tr>
<td>Odisha</td>
<td>4</td>
<td>NDMA, MHA</td>
</tr>
</tbody>
</table>

of which 418 villages are in Banaskantha district.9

After conducting an aerial inspection of the area with his team, Prime Minister Narendra Modi has announced some ex-gratia of Rs 2 lakh for the family of deceased persons, Rs 50,000 for those who have suffered injuries, apart from a Rs 500 crore relief package for the deluged districts.10 A day after Prime Minister Narendra Modi announced compensation of Rs 2 lakh for flood victims, the state government on Wednesday declared that it would pay Rs 4 lakh ex gratia to the kin of the deceased.11

Latest reported figures by the State Emergency Operation Center, Gandhinagar (27.07.2017):

**No of deaths:** 126 (of which 43 died in the district of Banaskatha)

**Evacuations:** 54516 (of which 34043 are from Patan and Banaskatha districts)

**Electricity:** 753 villages lost electricity. Electricity in 526 villages has been restored.

Information on roads closed: 5 national highways, 156 state highways and others and 550 roads under Panchayats

Cattle loss: 881 in Banaskatha district

According to the state authorities, more than 15 teams of National Disaster Response Force (NDRF) and Air Force, Army and Navy teams are involved in rescue operations in the inundated areas.

The Air Force has airlifted more than 1000 people from villages which were completely cut off as roads and railway networks were damaged, making the villages inaccessible. The Air Force has deployed over a dozen choppers for rescue works. Total number of people who were rescued is above 10,000 by agencies like NDRF, Navy, Army and even BSF.

Moreover, more than 50,000 people were relocated by the various agencies and authorities from vulnerable and low lying areas in Morbi, Jamnagar, Rajkot, Surendranagar, Patan, Banaskantha, Ahmedabad, Gandhinagar and Aravalli districts.

The central government has announced an interim package of Rs 500 crore besides compensation of Rs two lakh to the families of those who have died in the floods. In a heartbreaking incident, 18 members of a same family killed in floods in a village in Banaskantha.

With clear weather, the state government has launched a massive survey to assess damages caused by floods in the affected areas.

So what is the way out? It is high time floods are explained in today's context. What they are and what they mean to India's growing economy; in addition to increasing vulnerability of India's development to floods. The myth that floods are rural problem is not true any more. Towns and his cities such as Bengaluru, Mumbai and Chennai face repeated floods.

A rapid review is needed to institutionalise flood risk reduction in India, including review of water policies, and flood risk reduction plans and projects; review of operational guideline of Dam and river basin management, and more detailed, realistic, time based sectoral and hotspot plans.

– Mehul Pandya with Amit Tuteja of AIDMI.

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