

## IAG Response, Gujarat Floods August 2024

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On 26th August 2024, the Indian Meteorological Department (IMD) issued a heavy rainfall warning across Gujarat. Between 27th and 30th August 2024, extremely heavy rains in the Saurashtra and Kutch regions caused an immense damage to life and property. Approximately 50% of the state was placed under a red alert, with the remaining areas under orange and yellow alerts. Multiple districts were severely impacted by the torrential rains. The India Meteorological Department (IMD) issued warnings of isolated instances of extremely heavy rainfall over Saurashtra and Kutch on 28 and 29 August, with exceptionally heavy rainfall forecast for Saurashtra and Kutch on 29 August. The region experienced significant rainfall, including 43 cm in Khambhalia (Devbhoomi Dwarka district) and 38 cm in Jamnagar (Jamnagar district).

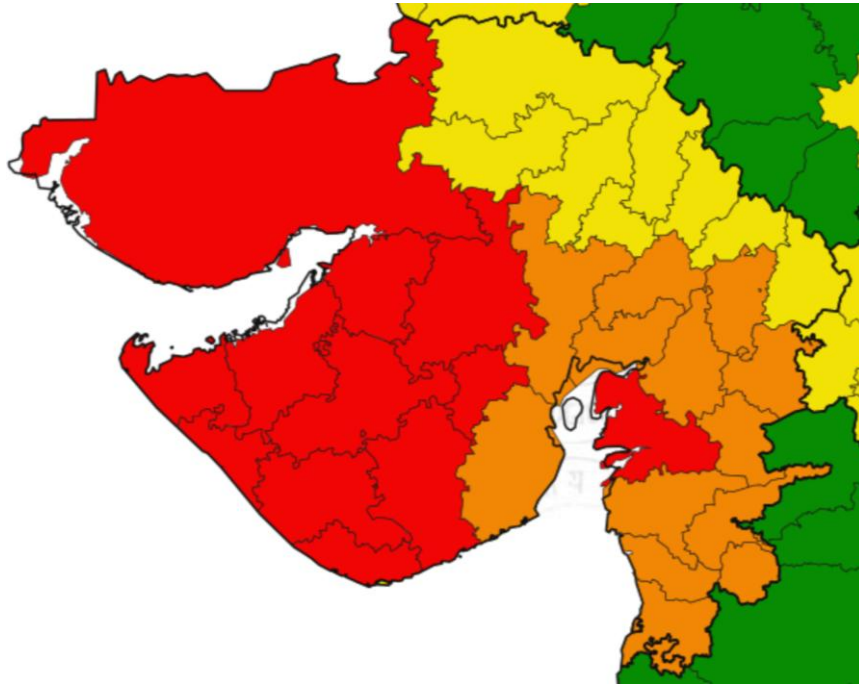
Severe waterlogging was reported across multiple districts, including Vadodara, Maliya, Mundra, Morbi, Saurashtra, Amreli, Jamnagar, Kheda, and Anand, causing significant disruption. In Vadodara, delays in the National Disaster Response Force (NDRF) response raised concerns about capacity and preparedness. Water levels in the affected areas surpassed those witnessed during the 2017 Gujarat floods, exacerbating the situation. Major highways, such as the Bhuj–Ahmedabad Highway, were rendered inaccessible, leading to the redirection of traffic through the Saurashtra region due to road closures in Maliya. These disruptions underscored the need for improved disaster response and infrastructure resilience.

The overflowing of the Vishwamitri River posed a significant hazard for the residents of Vadodara, as heavy inundation led to the closure of all major roads. Compounding the challenge, crocodiles from the river ventured onto the streets, creating an additional hazard for the affected population.

### **Key Highlights of the August 2024 Floods**

- Major parts of coastal Gujarat were on red alert.
- 13 NDRF teams and 22 SDRF teams were deployed in the affected districts to conduct relief and rescue operations.

- 23,000 people were relocated to safer areas and 300 rescued from coastal districts. Over 8300 people evacuated from Vadodara, 1,200 people from Navsari, 800 from Valsad, 200 from Bharuch, 235 from Kheda, and 200 from Botad.
- 75 pregnant women were evacuated, with 45 from Vadodara and 30 from Devbhumi Dwarka, and were relocated to nearby health centres.
- 6 Indian Army columns were active in Dwarka, Anand, Vadodara, Kheda, Morbi, and Rajkot districts.
- Dr Sheetal Mistry, the Chairman of the Vadodara Municipal Corporation (VMC) had appealed to NGOs to join in relief operations. 27 schools have been turned to temporary shelters. VMC was in need of 1.2 lakh food packets.
- Sardar Sarovar Dam recorded a level of 135.27 meters. Narmada river crossed the danger mark of 24 feet at Golden Bridge following the continuous inflow of dam waters from adjoining Madhya Pradesh.
- Urban areas were facing severe water logging and power outages as transformers are switched off due to the possibility of damage.



*Figure 1: Warning from IMD - 50% of state is on red alert. While the rest are in orange and yellow alert.*

The India Meteorological Department (IMD) issued a red alert for most districts in Gujarat until August 30, 2024. Saurashtra and Kutch experienced isolated incidents of extremely heavy

rainfall on August 28 and 29, with some areas recording exceptionally heavy rainfall. Notably, Khambhalia in Devbhoomi Dwarka district received 43 cm of rainfall, and Jamnagar in Jamnagar district recorded 38 cm, leading to widespread challenges across these regions.

## **District Wise Situation**

### **Vadodara**

In Vadodara, 1,147 individuals were sheltered across 20 government schools, including four pregnant women who required special attention. Although the rains had stopped, significant portions of the city remained inundated, with water levels rising near the Vishwamitri River due to the opening of the Dev Dam and inflows from the Ajwa and Narmada Rivers. The situation was further exacerbated by sewage water from the Dev River re-entering the city, creating severe sanitation and hygiene challenges.

The Vadodara Municipal Corporation (VMC) and IAG-affiliated NGOs actively coordinated rescue and relief efforts. A total of 10–12 schools were utilized as temporary shelters for rescued individuals, and approximately 1,000–1,500 people were rescued. Ten IAG-member NGOs worked together to address the crisis. Immediate needs such as potable water, food packets, and blankets were provided to support the displaced population.

### **Anand**

Anand experienced 15 inches of rainfall, leading to severe flooding in urban slum areas. Nearly 2,000 households in these areas were affected, with heavy inundation reported in both Anand and Khambhat. In Golana, residents lost livestock, as they drowned in the floodwaters. The flooding caused road blockages, and villages bordering Anand faced continued inundation due to blocked water flow.

Over the course of two days, the region experienced persistent rainfall, while water and electricity supplies remained inconsistent. Despite these challenges, people in the urban slums of Anand had not been relocated. Efforts to address these issues included assessing immediate needs, and included distribution of ration kits, tents, and first aid kits (including medicines and paracetamol).

## **Palanpur**

In Palanpur, Banaskantha, the rainfall was not as severe compared to other regions. No relocation was needed at that time and as the situation remained manageable. However, government authorities and the District Emergency Operations Centre (DEOC) remained on high alert throughout the event. NDRF teams were deployed and positioned to respond swiftly, ensuring preparedness in case of any further escalation.

## **Kutchh**

In Kutchh, the reported rainfall was as not severe, and the situation was relatively stable. However, some villagers from areas near the Nirona Dam were relocated as a precautionary measure to ensure their safety. The response efforts were carried out effectively to address potential risks in the region.

## **Jamnagar**

Jamnagar experienced heavy rainfall, leading to significant challenges in both urban and rural areas. Rescue operations were carried out in Jamnagar Urban, where 15 people were rescued. However, there were potential needs for further rescue efforts in Jamnagar Rural, though contact with these areas was hindered by severe network and connectivity issues, making it difficult to assess their exact needs.

In the urban areas, water entered households, and the full extent of the damage was still to be determined due to the severity of the rains. Meanwhile, local efforts, including those from the Swami Narayan Mandir and Home Guards, focused on preparing and distributing food packets to affected individuals in the urban areas.

## **Damage Assessment**

### **a) Critical Areas**

Navsari District, particularly the Khergam, Chikli, and Vansda blocks, faced severe flooding, with significant challenges observed in the Dharampur block of Valsad District. These areas were heavily affected by the continuous rainfall and rising water levels.

### **b) Overflowing Water Bodies**

The overflowing of dams and rivers in the affected regions resulted in widespread flooding, compounding the situation and leading to severe inundation in several low-lying areas.

### c) **Infrastructure Damage**

The floodwaters caused extensive damage to local infrastructure. Interior roads were severely affected, electric poles were knocked down, and numerous trees fell, leading to blockages and additional hazards for the community.

### d) **Impact on Agriculture**

The floods severely impacted agriculture, with vegetable crops being particularly affected in several regions. The inundation led to significant crop damage, exacerbating the already challenging situation for local farmers.

## **Resolution**

Consensus on immediate relief efforts in 4-5 critical pockets, including Vadodara, Anand, Bharuch, and Morbi.

- Agreed on providing essential supplies like health kits, food, and tarpaulins to the most affected areas.
- Next steps included continued coordination for flood mitigation and relief delivery.

## **Government Response**

The State Emergency Operations Centre (SEOC) was activated to coordinate and manage the response efforts across Gujarat. Chief Minister Bhupendra Patel conducted virtual meetings with district officials, police superintendents, and senior civic authorities to assess the flood situation and ensure effective management. Schools were ordered closed to mitigate risks to children.

Thirteen National Disaster Response Force (NDRF) teams and twenty-two State Disaster Response Force (SDRF) teams were deployed in the affected districts to carry out relief and rescue operations. A total of 23,000 individuals were relocated to safer areas, and 300 people were rescued from coastal districts. In Vadodara, over 8,300 people were evacuated. Among those evacuated were 75 pregnant women, including 45 from Vadodara and 30 from Devbhoomi Dwarka, who were transferred to nearby healthcare centers for their safety.

The government provided food and shelter for displaced populations in designated temporary shelters, such as schools. In addition, the government prepositioned essential supplies, including Oral Rehydration Solution (ORS), zinc tablets, chlorine tablets, and food packets, for distribution to affected communities.

## IAG Response

To enhance coordination of the response efforts, the Inter-Agency Group (IAG) convener convened a meeting with IAG members from the affected districts. A total of 55 members participated to assess the flood situation and plan immediate actions. Members from the most severely impacted districts were tasked with conducting rapid needs assessments to prioritize the most vulnerable populations. UNICEF Gujarat also participated in the meeting, supporting coordination efforts with DonateKart to ensure the provision of essential supplies. In addition to assessing the needs of the affected populations, the meeting addressed the logistical challenges of delivering necessary supplies to those in need.

A standardized template was utilized to consolidate supply requirements from various affected regions, identifying focal points for distribution (Annex 1). Rations, shelter kits, and blankets were identified as critical needs in the impacted areas. DonateKart promptly dispatched the necessary goods within 36 hours, and distribution began within 96 hours of the meeting.

IAG members, including The Four Legs Charitable Trust, Ujas Mahila Sangathan, Pochabhai Foundation, Sahiyar Stree Sangathan, Jeevantrith, and Green The Blue Charitable Trust, successfully distributed 800 blankets, 2,000 shelter kits, and 1,650 ration kits across four districts: Vadodara, Bharuch, Morbi, and Anand.

As flooding severely disrupted communication and supply chains, resulting in widespread food shortages, four IAG members—The Four Legs Charitable Trust, Sahaj, Sahiyar Stree Sangathan, and Kantibhai—provided rations in parts of Vadodara and Dholka. The enhanced capacity of the IAG members enabled them to independently distribute an additional 1,500 ration kits as part of the flood response. IAG members reached approximately 8000 individuals (3000 females) through this flood response.



### Relief Provided Across Gujarat







# Vadodara





# Ahmedabad

