

## INDIA - Floods

Date: June 19 - July, 1983 (FY 83)

Locations: Saurashtra region of Gujarat State, including the districts of Amreli, Bhavnagar, Jamnagar, Junagadh, and Rajkot; Junagadh District was the most seriously affected

No. Dead: 551 as of July 1983 with many persons still missing

No. Injured: Not reported

No. Affected: 800,000 people in 833 villages of 24 districts

Damage: Approximately 62,000 houses and huts were destroyed; 54,000 head of cattle perished; and 89,000 hectares of cultivable land were affected. According to a preliminary survey, total losses were estimated at \$56 million.

### The Disaster

A cyclonic storm on June 19 was followed by four days of continuous torrential rainfall in Gujarat's Saurashtra region. Junagadh District received between 750 mm and 1250 mm of rain during the period June 1 to 24, surpassing all records since 1894. Normal annual rainfall for the region is about 1,000 mm. As a result of the heavy rains, 30 dams overflowed causing widespread flooding in the Amreli, Bhavnagar, Jamnagar, and Rajkot Districts.

Several villages in the Vanthali area of Junagadh District and in the low-lying Ghed area were still inaccessible to vehicular traffic more than a week after the storm. Some areas of the port city of Porbandar, which has no central water outlet, also remained under water as late as July 3 from a combination of rainfall and high tides. The toll of dead and missing mounted rapidly in the first days of the floods, with the fate of thousands of inhabitants still unknown. Many of the missing were eventually accounted for, but at least 551 lives were lost. The highest toll was in the Vanthali sub-district.

Material damage was also extensive. An estimated 62,000 houses and huts were destroyed in the flooding. Thousands of head of cattle perished, stored foodgrains were destroyed, and the mango crop, for which the Vanthali region is well known, was a total loss. All major roads in Junagadh District were breached and several bridges were washed away. An 8 km stretch of road on the Junagadh-Veraval route "just disappeared", according to one account. Authorities predicted it would take a year and a half to fully repair the damaged roads. Communications with Junagadh District were completely cut off and more than 600 villages and major towns were without a power supply. This third flooding disaster in less than three years seriously weakened the urban infrastructure and agricultural economy of the region.

#### Action Taken by the Government of India (GOI) and the Government of Gujarat (GOG)

The Gujarat state government quickly mobilized resources to carry out relief measures, with the Minister of Agriculture in charge of operations. The chief minister and other state officials made an aerial survey of the stricken area and later visited some of the most affected towns.

The Indian defense services were called upon to assist civil authorities in relief and rescue efforts. Air force and navy helicopters airdropped food packets and other essential items to the marooned villagers. Relief teams, assisted by armed forces personnel, were parachuted in to assess damages. The army airlifted motor boats to Porbandar and other inundated areas to facilitate movement of people and relief supplies.

Fifteen health teams covered 318 villages, vaccinating the inhabitants against cholera and taking other measures in an effort to reduce the danger of epidemics. Voluntary organizations helped the police dispose of animal carcasses. Foodgrains and milk powder were rushed to the affected districts and tankers were used to deliver drinking water until normal sources could be restored. Sixty-four relief kitchens were opened to supply cooked food to be airdropped or sent by vehicle. While other communication systems remained disrupted, the Indian Space Research Organization (ISRO) established communications between Gandhinagar, the state's capital, and Junagadh through the Ariane Passenger Payload Experiment (APPLE) satellite.

After touring the stricken area by helicopter and jeep on June 27, Prime Minister Indira Gandhi called for a national effort to assist the flood victims. The central government agreed to release \$10 million to the state to meet relief and rehabilitation needs pending an assessment of the damage by a team due to visit the disaster site.

As of July 3, GOG had dispensed about \$400,000 to the disaster victims and another \$9,000 to the next of kin of the dead. Household kits valued at \$7,000 and food packets worth over \$27,000 had also been distributed. Heavy machinery was moved into the area to begin road clearing operations and 50 large electric pumpsets were sent to Porbandar to carry out drainage operations. The Gujarat cabinet assigned one minister to each area of Junagadh District to supervise and coordinate relief efforts.

Assistance Provided by the United States Government (USG)

U.S. Ambassador Harry G. Barnes, Jr. determined on June 27 that the natural calamity affecting Gujarat warranted USG assistance. He exercised his disaster assistance authority to utilize USG resources in India and announced his attention to make available \$25,000 to the Prime Minister's National Relief Fund for relief efforts in the Saurashtra region.....\$25,000

TOTAL	\$25,000
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Assistance Provided by U.S. Voluntary Agencies

None reported.

Assistance Provided by the International Community

None reported.