

## Vagaries of the Southwest Monsoon 1950

Although the southwest monsoon of 1950 gave well-distributed and satisfactory rainfall over the greater part of India during the period June to September, it had its vagaries. For, besides a delay in the establishment of the Arabian Sea branch of the monsoon and a pronounced break in the rains in August, there were marked spells of concentrated and exceptionally heavy rain in some parts of the country leading to floods in those regions. Notable among these were the heavy rainfall in the Darjeeling hills in June, in Saurashtra and Kutch during the month of July, in Uttar Pradesh and Bihar in the first fortnight of August and in the Punjab (I) and Kashmir in September.

### Droughts

The monsoon arrived earlier than usual along the west-coast, but remained weak over that area during the whole of June and did not extend effectively into the interior of the country. Most of the Peninsula and the central parts of the country had little rain during that month. The delay in the establishment of the monsoon affected the agriculturists in the Bombay State and the adjoining areas, as sowing operations had to be held up till the first week of July when the monsoon set in. The monsoon was fairly active over the whole country in July but again became weak over the Peninsula. The Peninsula had a spell of practically dry weather from the end of July to the third week of August. West Hyderabad and the adjoining districts of Bombay State which had already a large deficiency in rainfall, were the worst sufferers during this drought. Water-scarcity and fodder shortage were reported from many places in these divisions. However, the heavy rains in the last week of August partially saved the situation.

### Floods

(i) In association with the first advance of the monsoon, a cyclone developed at the head of the Bay of Bengal and caused exceptionally heavy rain in and near the Darjeeling Hills. This cyclone formed with its centre about 30 miles southeast of Saugor Island on 10 June and moving

inland broke up against the Nepal hills by the 13th. Some noteworthy heavy falls during 24 hours caused by the cyclone are given below—

TABLE 1

Date	Station	Rainfall in inches
11-6-50	Midnapore	10.9
12-6-50	Kurseong	20.8
"	Darjeeling	17.9
"	Jalpaiguri	10.3
"	Purnea	10.3
13-6-50	Kurseong	17.0
"	Darjeeling	10.2

These downpours caused heavy landslides in Darjeeling, Kalimpong and Kurseong towns and the adjoining regions (Figs 1 and 2). Nearly one hundred people were killed and several injured as a result of the landslides in the Darjeeling District. A large number of houses was destroyed and the electric and water supply systems were disrupted in Darjeeling which was completely cut off from the rest of the country for a number of days. Vast areas in Midnapore, Cooch Behar and Jalpaiguri districts were submerged when the three rivers, the Mayurakshi, the Cossye and the Tista suddenly overflowed their banks. At least 25 persons are reported to have perished in the floods and over a thousand cattle were carried away in the Jalpaiguri district alone. Most parts of the town of Jalpaiguri, where the flood water of the Tista rose to a record height, were submerged under water for a number of days and food and other necessities of daily life had to be dropped from air for the stricken citizens of that town. Losses in property alone in these regions were estimated at several lakhs of rupees.



Fig. 1 Railway track of Darjeeling Himalayan Railway damaged due to downpour of rain in June 1950 (Photo : *Statesman, Calcutta*)



Fig. 2 One of the major landslides which uprooted the railway line between Darjeeling and Kurseong (Photo : *Amrita Bazar Patrika, Calcutta*)



Fig. 3. Police barracks destroyed by rains in Jullundur Cantonment.



Fig. 4. Cinema Road, Batala, Punjab (I), where life has come to a standstill due to floods in September 1950 (Photo : *Hindustan Times*, *New Delhi*).

(ii) The Arabian Sea branch of the monsoon, which had remained comparatively feeble in June, extended into the interior of the country in the first week of July. With this incursion of the monsoon air, a low pressure area formed over Rajasthan on 11 July resulting in vigorous monsoon conditions in Saurashtra and Kutch. Very heavy rain, ranging from 6 to 18" fell over most of Saurashtra, Rajkot and Bhuj recording exceptionally heavy falls of 15" and 14" respectively during 9 hours ending at 1730 IST on the 13th and Gondal reporting a fall of 18" during the 24 hours ending at 0830 IST on the 14th. Subsequently the low pressure area moved westwards into Sind by the 14th and merged into the seasonal low over Western Pakistan by the next day. Due to the heavy rains, all rivers in the regions were in spate and caused great damage, the worst affected areas being Morvi, Rajkot, Wankanar, Gondal and Jetpur. Communications were paralysed and over 5000 houses were destroyed or damaged. 45 persons were reported to have lost their lives and over 7000 heads of cattle were washed away by the floods in various parts of Saurashtra. Much damage was also caused to standing crops and stored grains.

Parts of Bihar were also affected by floods in the beginning of July. Continuous and locally heavy rain occurred in Bihar in the last week of June and the first week of July. Consequently, the Kosi and its tributaries were in high floods. It is reported that over 300 villages were inundated and communications disrupted in the Darbhanga district.

(iii) The Bay of Bengal branch of the monsoon was vigorous in the first fortnight of August under the influence of two depressions. The first, a land depression which formed over south Bihar, was centred about 50 miles west of Dumka on the 3rd morning. A low pressure wave moving westwards from the Bay of Bengal further accentuated the land depression and it lay over Gangetic West Bengal and north Orissa, the lowest pressure on the 4th morning having been observed at about 70 miles northwest of Balasore. The depression moved westnorthwestwards, lay over Vindhya Pradesh and north Madhya Pradesh on the 6th morning and weakening thereafter, it finally merged into the seasonal trough of

low pressure over the Gangetic plain by the 8th. This was quickly followed by the second depression which formed at the head of the Bay of Bengal on the morning of the 9th with its centre near Lat. 20°N, Long. 89°E. It passed inland into Gangetic West Bengal on the same evening and slowly moved northwestwards upto east Uttar Pradesh by the 12th. Thereafter, it weakened and moved away northwestwards. Under the influence of these depressions the monsoon strengthened over the region extending from Gangetic West Bengal and Orissa to east Rajasthan in the first week of August and in and around Bihar and Chota Nagpur between the 12th and 14th. There were some heavy falls in the Gangetic plains and very heavy falls in the Himalayan foot-hills which resulted in high floods in parts of Uttar Pradesh and Bihar. According to newspaper reports, seven rivers including the the Ganges, the Gogra and Gomti were in spate and inundated about 600 villages in thirteen districts of east Uttar Pradesh. In Bihar the Kosi, the Kamla and the Balan and their tributaries also were in high floods and their surging waters devastated a very large area in the Darbhanga district. Railway lines and roads were breached and hundreds of villages were flooded in that region. The paddy and maize crops were also seriously affected.

The heavy rains in east Madhya Pradesh and Chota Nagpur in the first week of August followed by moderate to heavy rain in Orissa and Chota Nagpur during the second week led to a considerable rise in the levels of the principal rivers and their tributaries in Orissa. The rivers overflowed their embankments, submerged the low lying parts and caused appreciable damage to crops and property.

(iv) In the wake of the great earthquake of 15 August 1950, some of the rivers in Assam had dried up on account of rock slides. The heavy rain which fell in the extreme northwest of Assam during the third week, washed away these rocks and brought down a sudden flood in the rivers, causing a serious dislocation of communications and damage to property and crops in upper Assam.

(v) A low pressure area developed over north Madhya Pradesh and Vindhya Pradesh on 29 August. It moved

slowly westwards upto east Rajasthan before it filled up. This strengthened the monsoon in northern India in the beginning of September and heavy rain occurred in northwest India and the adjoining areas. The rainfall was particularly heavy in the Punjab (I) on 4 September. Locally heavy falls also occurred in Kashmir. The heavy rains caused floods in the Ravi, the Beas and the Sutlej and breaches in the railways and roads all over the State besides landslides in the hills. The worst affected districts were Amritsar, Gurdaspur and Kapurthala where great damage was caused. In Jammu Province, a number of houses collapsed and hundreds of trees were uprooted due to continuous rains. Lines of communications remained cut off for two days.

(vi) The Punjab (I) and Kashmir again experienced very severe floods in the third week of September. A cyclonic storm from the Bay of Bengal struck the Orissa coast on the 13th night and moved westnorthwestwards as a deep depression. On the 18th morning, it was centred 40 miles southwest of Ajmer. Curving towards north, it lay over north Rajasthan with its centre about 50 miles southwest of Delhi on the 19th morning. It broke up over the Punjab-Kumaon hills, on the next day. In association with it, the monsoon strengthened over the region extending from Orissa and Chota Nagpur to Gujarat and Kashmir. Rainfall was exceptionally heavy and concentrated in and near north Gujarat. Ahmedabad Air

Port recorded 21" of rain during 24 hours ending at 1730 IST on the 17th; Ahmedabad City recorded 18" during the same period. This rainfall was the heaviest recorded at that station during the last 57 years. Mount Abu reported a rainfall of 18" on the 18th morning. Locally very heavy rain was also reported from east Rajasthan and the hills and submontane districts of the Punjab (I) between 18 and 20 September. Rail and telegraphic communications were interrupted and hundreds of houses damaged in north Gujarat and Rajasthan due to the heavy rains. The worst affected areas in Rajasthan were Udaipur division and Bikaner where more than 20 persons were reported to have been killed. Extensive damage was caused to property and crops by the floods in the Punjab (I), particularly in Amritsar, Gurdaspur, Hoshiarpur, Jullunder, Ferozepur and Ludhiana districts (Figs. 3 and 4). Nearly 8½ lakhs of acres of cultivated land were reported to have been affected by the floods. Over 2 lakhs of houses had fallen or were damaged and about 70 persons perished under fallen roofs. Rail and road communications were seriously dislocated. Many villages were isolated for a number of days and food had to be dropped by air to the marooned people in the heavily flooded areas. In Kashmir, the Jhelum breached its banks and submerged large areas of the Kashmir Valley. A large number of houses collapsed and thousands were without shelter. The devastation was widespread and the standing crops were seriously affected in Jammu and Kashmir.