

Pakistan: Flood Impact Assessment

In September 2014, severe and late monsoon spell, coupled with major water discharges through the eastern rivers, especially in Chenab, resulted in massive floods in Azad Jammu & Kashmir (AJ&K), Punjab and landslides in Gilgit-Baltistan (GB) at an unprecedented scale, both in terms of volume and spatial coverage. Despite forecasts of below-average rainfall, heavy downpours began in first week of September 2014, which damaged crops, infrastructure and human settlements, thus adversely affected national economy directly and indirectly.

According to available estimates, 367 persons lost their lives, more than 2.5 million people were affected by the floods and rains, and 129,880 houses were partially damaged or fully destroyed. Over 1.0 million acres of cropland and 250,000 farmers were affected, in most cases resulting in the loss of standing food, fodder or cash crops. The estimated cost of the recovery effort was US\$439.7 million. The total flood damages/losses estimated for 2014 are presented in Table-1.

Table 1: Flood Damages

Province/ Area	Damages (Rs. billion)	Damages (US \$ billion)	Damages (in percentage)
Punjab	41.15	0.41	94.74
AJ&K	2.85	0.03	5.26
Total	43.90	0.44	100

Source: NDMA Damages & Recovery Needs Assessment Report (2014)

This table indicates that Punjab suffered the highest losses at 94.74 percent followed by Azad Jammu & Kashmir 5.26 percent of the total damages.

Housing

Around 101,515 houses were affected in 16 districts of Punjab and some 28,365 houses were affected in the 10 districts of Azad Jammu & Kashmir.

Impact on Agriculture, Crops and Livestock

Agriculture is one of the most flood affected sector. At the time of the flood, crops especially cotton, rice and sugarcane were ready to harvest. According to National Disaster Management (NDMA), around 1 million acres of standing crops were destroyed. Extensive damages were reported in Jhang, Muzaffargarh, Multan and

Sargodha Districts. Loss of standing crops not only affected the income bases of farmers, but also impacted overall production. SUPARCO estimates indicated around a 217,000 ton reduction in rice production, 726,000 tons in sugarcane production and 250,000 bales of cotton were lost due to the 2014 floods. Along with this, loss of seed stocks and agricultural tools, destruction of irrigation channels and land erosion further deteriorated the agriculture sector.

Livestock is considered a secondary source of income and also fulfills household food and nutrition needs. Significant losses in the livestock sectors were also observed due to the floods. Overall 1,925 small and large ruminants were reported to be lost due to floods, with higher losses in Neelum, Bhimber Haveli and Kotli districts in AJ&K and Sialkot,

Gujranwala, Hafizabad and Gujrat districts in Punjab.

Household food security

Household food security was also affected by the floods, mainly due to the loss of food stocks. Multi-sector Initial Rapid Assessment (MIRA) findings indicate that 37 percent of households lost most of their food stocks. Livelihood losses further reduced their economic access to food and 62 percent of households didn't have sufficient resources to buy food after the floods. The fishery and forestry sectors also suffered losses, which impacted house hold food security.

Non-Farm Livelihoods

Floods in September 2014 have damaged the non-farm livelihoods due to loss of assets, damage to infrastructure and disruption due to

non-accessibility to market and loss of services. The Multi-Sector Initial Rapid Assessment (MIRA) of September 2014, conducted jointly by NDMA and the UN indicates the following situation on ground:

- Around 40 percent of the markets across the impacted areas were not functioning.
- Only around 38 percent of the households surveyed have adequate resources to buy food.
- 55 percent of the households reported agriculture as their primary source of income. 12 percent have livestock as their main source of livelihoods. Non-farm livelihoods comprise 33 percent of total affected population.

The sector wise breakups of the estimates of flood damages during 2014 are reported in Table-2.

Table 2: Flood Damages by Sectors

Sectors	Damages (Rs.billion)	Damages (US\$ billion)	Damages (in percentage)
Community Physical Infrastructure	17.16	0.17	39.09
Housing	12.59	0.13	28.67
Crops	10.91	0.11	24.85
Livelihoods	2.74	0.03	6.24
Disaster Risk Resilience	0.35	0.003	0.80
Livestock	0.23	0.002	0.53
Total	43.9	0.44	100

Source: NDMA Damages & Recovery Needs Assessment Report (2014)

It reveals that Community Physical infrastructure sector suffered the major losses at 39.09 percent followed by Housing sector 28.67 percent, Crops 24.85 percent and Livelihoods

sector 6.24 percent of the total damages. It is also observed that Livestock sector suffered the lowest losses at 0.53 percent.