

Rainfall

The rainfall varies temporally and spatially across the basin. The south-west monsoon brings rains in the summer months while the winter rains are caused by the storms in Jammu & Kashmir. Mean annual rainfall of the study time period is 896 mm for the basin.

During the study period (1985 to 2015) maximum rainfall was recorded as 1315.6 mm in 1995-96 and minimum as 512.6 mm in 2000-01.

Temperature

The Indus basin faces variability in temperature from upper portion of the basin to the lower portion of the basin. The difference may be due to variation in topography of the basin. The temperature goes below 0°C in the upper part of the Indus basin, whereas the temperature rises above 40°C in the lower part of the basin.

3.6.2 Ganga-Brahmaputra-Meghna

a) Ganga

The Ganga basin outspreads in India, Tibet (China), Nepal and Bangladesh over an area of 10,86,000 sq.km. In India, it covers states of Uttar Pradesh (28.68%), Madhya Pradesh (21.65%), Rajasthan (11.22%), Bihar(12.86%), West Bengal (8.37%), Uttarakhand (6.38%), Jharkhand (6.04%), Haryana (1.59%), Chhattisgarh (2.20%), Himachal Pradesh (0.71%) and Union Territory of Delhi (0.18%) draining an area of 8,38,803 sq.km which is nearly 26% of the total geographical area of the country (Figure No 3.15). The basin lies between East longitudes 73°2' to 89°5' and North latitudes 21°6' to 31°21' having maximum length and width of approximately 1,543 km and 1,024 km. The basin is bounded by the Himalayas on the north, the Aravalli on the west, the Vindhyas and Chhotanagpur plateau on the south and the Brahmaputra Ridge on the east. Mean annual rainfall of the study time period is 1,007 mm for the basin.

River Ganga rises in the Gangotri glacier in the Himalayas at an elevation of about 7,010 m in the Uttarkashi district of Uttarakhand. At its source, the river is called as the Bhagirathi. It descends down the valley upto Devprayag where after joining another hill stream Alaknanda, it is called Ganga. The total length of river Ganga (measured along the Bhagirathi and the Hooghly) up to its outfall into Bay of Bengal is 2,525 km. The principal tributaries joining the river from right are the Yamuna and the Sone. The Ramganga, the Ghaghra, the Gandak, the Kosi and the Mahananda join the river from left. The Chambal and the Betwa are the two other important sub-tributaries. The major part of basin in Indian Territory is covered with