

Brahmaputra River System

Brahmaputra is the one among the mightiest rivers of Asia. It is a transboundary river. River Brahmaputra is called Yarlung Transpo in Tibet. It emerges from Angsi Glacier, on the northern side of the Himalayas in Burang County in south western part of Tibet Autonomous Region (TAR) at an altitude of 4877 m. It flows, through southern Tibet in easterly direction for a longer length, at an average height of 4000 m. At its easternmost point, the river bends around Mount Namcha Barwa and forms the Yarlung Tsangpo Canyon. The total length of Brahmaputra River is 2906 km and the river drains an area of 580000 sq km. River Brahmaputra makes very rapid descent from its origin in Tibet and after travelling a distance of 1625 km, enters India in the state of Arunachal Pradesh at Mechuka at an elevation of 660 m. It is known as Siang in the upper and Dihang in lower reaches in Arunachal Pradesh. It flows from left at Kobo, Assam. Afterwards, it enters Assam and is called Brahmaputra. Its width expands in plains and becomes as wide as 10 km. It is joined by Subansiri in Lakhimpur District from the right and Kameng (Jia Bharali) in Sonitpur District of Assam. At Tekeliphuta, in Lakhimpur District, Brahmaputra River bifurcates into channels- the northern Kherkutia Suti (ultimately joins Subansiri River) and southern channel (main Brahmaputra River). Brahmaputra River is rejoined by bifurcated channel (Subansiri) at Bedetighat at a distance of about 100 km from Tekeliphuta to form the world's largest inhabited river island Majuli.

Brahmaputra River, after traversing a length of 918 km (Arunachal Pradesh-278 km and Assam 640 km), enters Bangladesh at Dhubri. It is joined by Teesta and then by Jaldhaka through right bank. Below confluence with Teesta it again bifurcates into two branches. The western stream contains major flow and is known as Jamuna. The eastern branch, initially dominant, is rightly called old Brahmaputra. Yamuna River merges with Padma – the Ganga of India at Goalundo and old Brahmaputra joins Meghna River – Barak River of India, near Dhaka. Ultimately Padma and Meghna Rivers join at Chandpur and flow as Meghna into Bay and Bengal.

Brahmaputra River has a drainage area of 240000 sq km in Indian Territory. Central Water Commission has established and been maintaining two Gauge and discharge observation sites on main stem of Brahmaputra River at Pasighat and Jogoghopa. The Water Resources Department, Government of Assam established two Gauge and Discharge observation sites- one at Pandu (near Guwahati, Continuing) and the other at Bechamara (now discontinued). The uppermost observation site is at Pasighat, Arunachal Pradesh and lowermost at Jogighopa, Assam. Maximum, minimum discharge data and annual average yield of the four hydrological observation sites are tabulated in Table-2.

Table-2 Discharge at different observation sites of Brahmaputra River

Sl. No.	Observation site	Average Annual Maximum Discharge (cumec)	Average Annual Minimum Discharge (cumec)	Average Annual Average Yield (mcum)	Remarks
1	Pasighat	29643 (recorded 18-08-1962)	1076 (recorded 28-01-1954)	185102.29	1949-1962 1976-1978

2	Bechamara	29710 (recorded 17-08-1980)	1001	268936.58	1976-1983
3	Pandu	72794 (recorded 23-08-1962)	1757	494357.19	1955-1982
4	Jogighopa	78450 (recorded 31-07-1972)	2015 (recorded 22-02-1977)	537066.67	1955-1957 1971-1977

Out of total average annual surface surface water yield of 1869 bcm of the Indian River System, contribution of Brahmaputra River System is estimated at 537 bcm.

Brahmaputra River has high steep slope in its initial stage and bed slope becomes mild in the plains of Assam. River bed levels at certain important locations are furnished in table-3.

Table-3 Bed levels of different Important Location of Brahmaputra River

Sl. No.	Location /Reach	Chainage from Indo Bangladesh Border (km)	Elevation(m)	Slope	Channel width (km)	Remarks
1	Indo Tibet Border	918	660	1:515		Not available
2	Kobo	640	120	1:3700	6.70	At confluence of Lohit & Dihang
3	Dibrugarh	580	92	1:5595	9.25	
4	Neamati	480	72	1:6425	9.55	
5	Tezpur	335	50	1:6750	4.50	
6	Guwahati	205	30	1:8875	1.20	At Pandu
7	Dhubri	0	8	1:14650	3.70	