

**RIVER BASIN**

**KOSHI**

**[ NEPAL ]**

**SCHEDULE A**  
**ASSESSMENT OF RIVER BASINS (RBs) IN SOUTH ASIA**

S.No.	Details			Remarks
	<b>Physical features - General information</b>			
1	Total area (km <sup>2</sup> )		27863	Taken from various sources and water resource strategy
2	Geographical location of place of origin		Nepal and Tibet (high Himalayas)	Taken from various sources and water resource strategy. Also see attached basin map.
3	Population (million)		4.9	Taken from the district profile published by . The figures have been adapted from the district information. In some cases the basin boundary fall in two districts and therefore the figures could vary to some extent.
4	Area covered (%)	Nepal	46	Taken from water resource strategy
		India		
		China	54	
<b>Hydrological and land-use features</b>				
5	Average rainfall (mm)		1600	Due to topographical variation within the basins precipitation varies substantially from one location to another. The figures have been taken as average of

6	Temperature (°c)	Min.	5 (average)	high and low rainfall records of two stations representing the basin. Temperature also varies within the basin due to topographical variation. The climate within the basin changes from tropical in the plains to alpine in the high himalayas. We have taken average lowest and average highest temperature within the basin.
		Max.	25 (average)	
7	Average annual yield in (m3)		44.15 billion	Average annual water yield has been calculated based on the information given in various sources including feasibility reports and others.
8	Major tributaries		Arun, Bhote koshi, Tama koshi, Sun koshi, Dudh koshi, Tamor	
9	Cropping pattern		Paddy, wheat, sugarcane, jute, hot weather paddy	due to topographical variation cropping pattern varies considerably from lower areas to the upper areas of the basin. We have taken major crops as reported in the district profile and feasibility reports of hydropower and irrigation projects.
10	Cultivated area (ha)		671961	Taken from the district profile.
11	Non-cultivated area (ha)		411618	

**Ecosystem features**

12	Agro climatic zones	Alpine, tropical, sub-tropical, temperate, cool temperate and mild temperate	Taken from district profile.
13	Major sub ecosystem (zoogeographical zones)		Multiple ecological regions including good habitat for river dolphin and different species of bird
14	Major soil type	Easily eroded unconsolidated soil (sandy soil)/ alluvial soil	Soil types vary from
15	National parks, sanctuaries, lakes, wet lands	Langtang national park, Makalu Barun national park, Kanchanjunga Conservation Area,	ACAP, Langtang National Park, Makalu Barun, National Park, Sagarmatha National Park, Kanchanjunga Conservation Area are in the high himalayas. Sukla Phant Wildlife Reserve, Bardia Wildlife Reserve, Chitawan National Park and Kosi Tappu Wild life Reserve are in the lower part of the basins.

16	Stretches in km		≤500	Sagarmatha national park, Koshi Tappu wildlife reserve
<b>Current status of the resource development and potential</b>				
17	Water availability for Environmental flows	Per capita	8980 m <sup>3</sup>	Calculated on the basis of population and the total flow
		Per hectare	15845 m <sup>3</sup>	Calculated on the basis of basin area within Nepal and the total flow
18	Structures	Major dams/barrages	NA	Taken from Involuntary Displacement and Livelihood: An analysis of Nepal's proposed five high dam projects and various other reports.
			Koshi barrage	
		Proposed dams	Sapta koshi multipurpose project	
	Inter basin transfer system		None	
19	Live storage			
	Major dam	Proposed dam	9.37*10 <sup>9</sup> m <sup>3</sup>	

20	Command area of major dam	NA	
21	Agencies functioning in the basin	Forest department, watershed management department, wildlife, irrigation, drinking water	All governmental departments and orgnaizaion related to water and environemnt are present in the basins. In additon, there are several NGOs and INGOs working in the area. There is no River Basin Organization (RBO) in Nepal to take up basin management activities. However, the basin and its resources are managed by agencies as mentioned.
<b>Key issues and supporting features</b>			
22	Key issues	Mass movement, soil erosion, sedimentation, bishyari, floods, bank cutting, water scarcity during winter	Major environmental issues are seen in all basins. Similalrly, disputes about sources, water sharing, urban river pollution, water allocation, depleting groundwater resources in the valleys have become the key water issues in various palces within the basins
23	Enabling instruments	Nil	
24	River basin organisations		None

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Current use of water

Water is used for Power generation, inland navigation  
and fisheries

**SCHEDULE B**  
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**Nil**

**SCHEDULE C**  
**ASSESSMENT OF RIVER BASINS (RBs) IN SOUTH ASIA**

**Nil**