

RIVER BASIN
MAHAKALI
[NEPAL]

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

Physical features - General information			
S.No	Details		Remarks
1	Total area (km ²)		5317 Taken from various sources and water resource strategy
2	Geographical location of place of origin		Nepal and India (higher Himalayas) Taken from various sources and water resource strategy. Also see attached basin map.
3	Population (million)		0.8 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	35
		India	65
		China	-
	Hydrological and landuse features		

5	Average rainfall (mm)		947	Due to topographical variation within the basins precipitation varies substantially from one location to another. The figures have been taken as average of high and low rainfall records of two stations representing the basin.
6	Temperature (°c)	Min.	13 (average)	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.	26 (average)	
7	Average annual yield in (m3)		na	Average annual water yield has been calculated based on the information given in various sources including feasibility reports and others.
8	Major tributaries		Chamelia rivers, Surnaya gaad	
9	Cropping pattern		Paddy, wheat, maize	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)		109117	Taken from the district profile.
11	Non-cultivated area (ha)		40953	

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)		Na	
14	Major soil type		NA	Soil types vary from
15	National parks, sanctuaries, lakes, wet lands		Royal Sukla Phant Wildlife Reserve	ACAP, Langtang National Park, Makalu Barun, National Park, Sagarmatha National Park, Kanchanjanga 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		223	
Current status of the resource development and potential for				
17	Water availability	Per capita	NA	Calculated on the basis of population and the total flow
		Per hectare	NA	Calculated on the basis of basin area within Nepal and the total flow
		Environmental flows	NA	

18	Structures	Major dams/barrages	Sarada barrage	Taken from Involuntary Displacement and Livelihood: An analysis of Nepal's proposed five high dam projects and various other reports.
		Proposed dams	Pancheswar High Dam	
		Inter basin transfer system	None	
19	Live storage	Major dam	NA	
		Proposed dam	6.56*109 m3	
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.
	Key issues and supporting features			
22	Key issues		Soil erosion, landslides, floods, bank cutting, water scarcity during winter, water sharing between India and Nepal,	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		Wildlife law, forest law, watershed law, water resource strategy	
24	River basin organisations		None	
25	Current use of water		Water is used for power generation, fisheries, irrigation, navigation, nature reserve etc.	

**SCHEDULE B
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Nil

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

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