

RIVER BASIN

PENNAR

[INDIA]

SCHEDULE A
ASSESSMENT OF RIVER BASINS ORGANISATIONS (RBOs) IN SOUTH ASIA

Sr. No.	Details	Response
1	Physical Features - General Information	
1.1	Name of River basin (also indicate regional names)	Pennar River length-597 km. (source-major river basins of India-an overview.published by ministry of water resources- April 1989)
1.2	Relief Map and Index Map of RB with Country/ State/ Province boundary marked to be attached.	Refer Annexure 1
1.3	Geographical location of the place of origin (Country/District)	Andhra Pradesh (48276sq.km) and Karnataka (6937sq.km). Chenna Kesava hills of Nandi ranges of Karnataka(source-major river basins of India-an overview.published by ministry of water resources- April 1989)
1.4	Area (in Sq. Kms.),	55213 sq.km. (source-ibid)
1.5	Population (in Millions); Name of population centers/ Cites (duly marked on the map: refer 1.2) having Population -	Nellore 2.36 lakhs, 1991-Census.(source-ibid)
	(a) More than 0.5 Million - 1 Million	
	(b) More than 1 Million – 10 Million	
	(c) More than 10 Million	

1.6	Approximate areas of upper regime, middle regime and lower regime;	This basin is bounded on the north by Erramala range, on the east by Nallamala and Velikonda ranges of the Eastern ghats , on the south by the Nandidurg hills and on the west by the narrow ridge separating it from the Vedavati valley of the Krishna basin.(source-ibid)
1.7	Country and States (Province) in which the basin lies (indicate % area covered);	Andhra Pradesh (48276sq.km) and Karnataka (6937sq.km). (source-ibid)
2	Hydrological and Land use Features:	
2.1	Average annual rainfall (in mm);	508 to 988mm.(sources-Integrated Hydrological Data Book -Non Classified River Basin. September 2006).
2.2	Maximum-minimum temperatures in Degree Centigrade	15.02 to 40.9 o C.(sources-ibid)
2.3	Average annual yield (discharge) of water in Cubic Meter and the average yield for last past five years	6.86 Cubic km(source-major river basins of India-an overview.published by ministry of water resources- April 1989)
2.4	Major tributaries	Jayamangala, Kunderu, Sagileru,Chitravati, Papagni & Cheyyeru.(source-ibid)
2.5	Percentage shares of major water uses & Surface and groundwater abstraction in percentages (a.) Agriculture,	Surface water-6.86 Cubic km, Ground water-5.35cubic km. (source-ibid)
	(b.) Industries,	D N A
	(c). Domestic,	D N A

	(d). urban,	D N A
	e). environmental flows.	D N A
2.6	Major cropping pattern	Cotton, Sugar, Oil, Rice(source-major river basins of India-an overview.published by ministry of water resources- April 1989)
2.7	Cultivable area under irrigation	D N A
2.8	Cultivable area not under irrigation	D N A
2.9	State other Water Uses- eg. Navigation, power, recreation etc.	Proposal for Srisailam-Pennar Link This is the second link to join Krishna with Pennar and envisages transfer of 2,310 Mcum of water. In this link, no enroute irrigation is proposed. Four mini hydel schemes are proposed in the enroute reaches for utilizing the natural falls of the streams with total installed capacity of 17 MW of power. (Source- http://nwda.gov.in/indexab.asp?langid=1.)
3	Ecosystem Features	
3.1	Agro-climatic zones	Generally dry tropical monsoon climate,upper basin of the Penner is semi-arid,(Source- http://en.wikipedia.org/wiki/Pennar_River)
3.2	Major sub ecosystems (zoogeographical zones)	Dry evergreen forest, as well as tidal wetlands and mangrove. (Source- http://www.answers.com/topic/east-deccan-dry-evergreen-forests).
3.3	Major soil types	Red soils, black soils,sandy soils and mixed soil.(source-major river basins of India-an overview.published by ministry of water resources- April 1989)

3.4	National parks/sanctuaries, lakes, wetlands, etc.	Point Calimere Wildlife and Bird Sanctuary protects a 17.26 km ² . enclave of dry evergreen forest, as well as tidal wetlands and mangroves. Other preserves in the region include Vettangudi Bird Sanctuary (30 km ²) in Sivaganga District of Tamil Nadu, and Nelapattu Bird Sanctuary (160 km ²) on Pulicat Lake in Nellore District of Andhra Pradesh. (Source- http://www.answers.com/topic/east-deccan-dry-evergreen-forests).
3.5	Brief information about the delta region of the basin (area, location, major urban centers in the delta, etc.)	The estuary of the Penner river extends 7km upstream from the Bay of Bengal. Tidal influence and salt water extends further upstream during the November to June dry season. Coastal dunes as high as 7 meters form around the river mouth. Upputeru tidal creek, 15km in length, and Isakapalli lagoon, separated from the Bay of Bengal by the Isakapalli barrier island, 180 m long and up to 3 m high, form the main coastal wetlands. The small boat port of Krishnapatnam lies on Upputeru creek, and is planned to be developed into a deep-water port by 2006. Buckingham Canal, a navigable man-made waterway that runs just behind the coast, allows small boats from the Penner to get to Chennai in the south and the Krishna River delta to the north.(Source- http://en.wikipedia.org/wiki/Pennar_River).
4	Water Quality	
4.1	Prevailing water quality standards (e.g. Class I, II, III.etc, indicating permitted	see attachment.(Source-Central Pollution Control Board)

	uses)	
4.2	Stretches (along the River) in Kms. with water quality classes indicated (may be marked on the map)	see attachment.
4.3	Sources of Pollution, with data indicating quantum and/or severity.	see attachment.
4.4	Prevailing abatement techniques e.g: ETP, STP, legislation, etc.	D N A
5	Current status of the resource development & potential for development	
5.1	Water availability:	224 per capita availability 2005 (Source- http://www.riversymposium.com/index.php?element=06NAIRShadananan)
	a. Per capita water availability (in lpcd)	
	b. Per hectare water availability (in Cubic meters for cultivable command area):	D N A
	c. Availability of environmental flows (Current reserve, if any):	D N A
	d. Availability of ground water/ Average annual ground water abstraction/recharge.	1.27Cubic mtrs(source-major river basins of India-an overview.published by ministry of water resources- April 1989)
5.2	Structures:	Somshila irrigation project 2093.00mcm, (source- http://cwc.nic.in/Integrated_Hydrological_Data_2005/Integrated_Hydrological_Data_2005.pdf)
	a. Major dams/barrages (with utilization categories):	
	b. Proposed dams:	2.17Cubic km (source-ibid).
	c. Live storage of major dams:	4.82 Cubic km.(source-ibid)

	d. Live storage through proposed dams:	2.15 Cubic km.(source-major river basins of India-an overview.published by ministry of water resources- April 1989)
	e. Inter basin transfer systems:	<p>Kurnool Cudappah Canal: A private company started this scheme in 1863. The project envisages transfer of water from Krishna basin to Pennar basin. A 8.23 m high anicut was built on the river Tungabhadra upstream of Kurnool town. A 304 km long canal with a capacity of 84.9 cumecs at its head extends from Krishna to Pennar basin and irrigates 52,746 ha. The scheme was taken over by Govt. of India in 1882. (Source-http://nwda.gov.in/index2.asp?sublinkid=45&langid=1)</p> <p>Proposal:;- Somasila-Grand Anicut Link ,Almatti - Pennar Link Srisailam-Pennar Link: I.(Source- National Water Development Agency).</p>
	f. Any Other:	Proposal for Srisailam-Pennar Link for hydel power generation. (Source- http://nwda.gov.in/indexab.asp?langid=1 .)
5.3	Command area of major dams	D N A
5.4	Agencies functioning in the basins: a. Public agencies/ CSOs which construct/ implement the infrastructures projects: b. Private agencies/ CSOs involved in infrastructure development	Irrigation departments, Hydropower Corporations and Public Works Departments of Karnataka and Andhra Pradesh
6	Management/use/development/opportunity for Private sector participation or privatisation of water resources.	D N A

7	Key Issues:	Basin area lies in the poor rainfall zone, hence frequently hit by famine. Drought-prone Rayalaseema area of Andhra Pradesh lies in this basin.(source-major river basins of India-an overview published by ministry of water resources- April 1989)
8	Enabling instruments- Law/ Policy/ Economic & Financial Measures for introducing IWRM in the basin	National Water Policy. Karnataka State Water Policy, Andhra Pradesh State Water Policy.

SCHEDULE B
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nil

SCHEDULE C
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nil