

MINUTES OF THE 36TH MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 15TH NOVEMBER, 2022 FROM 10.30 PM – 01:30 PM THROUGH VIDEO CONFERENCE.

The 36th meeting of the re-constituted EAC for River Valley & Hydroelectric Projects organized by the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi, was held on 15th November, 2022 through video conference, under the Chairmanship of Dr. K. Gopakumar. The list of Members present in the meeting is at **Annexure-I**.

Agenda Item No. 36.1

Confirmation of the minutes of 35th EAC meeting

Correction in the Minutes of the previous meeting

Ranapur Off-Stream Closed Loop Pumped Storage Project (1200MW) at Village Ranapur, Tehsil Sarangapur & Neradigonda, District Adilabad & Nirmal (Telangana) by M/s Sri Siddharth Infratech & Services (I) Private Limited – Terms of Reference (TOR) - reg.

[Proposal No. IA/TG/RIV/400275/2022; F. No. J-12011/15/2022-IA.I (R)]

Member Secretary informed the EAC that the proposal was considered by the EAC (River Valley and Hydroelectric Projects) in its 35th meeting held during 11th October, 2022. The PP has now requested for following correction in the Minutes of the meeting

S.No.	TOR mentioned in MoM	Correction required as
1	35.2.4. A (x) Details about other projects located on the river basin along with their longitudinal distance between two projects be submitted. In case of more than one project a detailed Cumulative Impact Assessment and Carrying Capacity study covering aspects related to impact of each project on the flow pattern of the rivers and forest and biodiversity shall be conducted through a reputed Government institute having expertise in the area.	Condition to be deleted Justification This is an off stream pump storage projects and is not diverting water from any river for power generation. The project will take one time water from Swarna/Sriram Sagar and use the stored water for power generation. Since the project is not a cascading river basin project, such information is not relevant for the project under consideration.
	35.2.4. A (xi) Identify the sand mining/ quarrying sites in submergence area and downstream of reservoir.	Condition to be deleted Justification This being a pump storage project with two reservoirs located independent of any river course, there are no sand mining/quarrying at the reservoir locations and there is no downstream area as the project is not on any river.
	35.2.4. A (xvii)	Condition to be deleted

	Reservoir/ River banks protection plan all along the submergence need to be prepared and incorporated in EIA/ EMP.	<p>Justification</p> <p>No river is directly involved in the project as this is an off-stream PSP. Submergence area is limited to the area of the upper and lower reservoir, which are not on nay river course, therefore, reservoir/river bank protection work is not applicable.</p>
	<p>35.2.4. B (xxvii)</p> <p>Declaration by the project proponent by way of affidavit that "No" Inter-state issue/ policies issue is involved with any state in the project. Consent from other state for drawing of water from Narmada River, if required.</p>	<p>Condition to be deleted</p> <p>Justification</p> <p>This is a project in Telangana state and one time water will be drawn from Swarna/Sriram Sagar reservoir which are in Godavari basin. Water will be drawn as per the allocation by WRD. Therefore, consent from other states is not applicable.</p>

The EAC after deliberation has accepted the request of the PP and recommended for correction as mentioned above.

Thereafter the minutes of the 34th EAC (River Valley Hydroelectric Project) meeting held on 11th October, 2022 were confirmed.

Agenda Item No. 36.2

Damanganga-Vaitarna-Godavari (Kadva/Dev) intrastate link project at Village Chinchutara, Bhendipada, Vadachapada, Bedukpada, Udhale, Tehsil Mokhada, District Thane (Maharashtra) by M/s National Water Development Agency - Terms of Reference (TOR) - reg.

[Proposal No. IA/MH/RIV/83263/2018; F. No. J-12011/17/2022-IA.I(R)]

The project proponent vide letter dated 7th November, 2022 has informed that they will update the information submitted in Form I and in this regard the project proponent has requested to withdraw the said proposal.

The EAC therefore, **returned the proposal in present form.**

Agenda Item No. 36.3

Expansion of Hydro Power Project from capacity 4X115 MW to 6X115 MW by adding two units of capacity 2X115 MW at Lower Sileru Hydro Power House and improvement of power canal works at Mothugudem, Chintoor (Mandal), District Alluri Sitarama Raju (Andhra Pradesh) by M/s Andhra Pradesh Power Generation Corporation (APGENCO)- Environmental Clearance (EC) - reg.

[Proposal No. IA/AP/RIV/405141/2022; F. No. J-12011/15/2020-IA.I(R)]

36.3.1: The proposal is for grant of environmental clearance to the project for expansion of Hydro Power Project from capacity 4X115 MW to 6X115 MW by adding two units of capacity 2X115 MW at Lower Sileru Hydro Power House and improvement of power canal works at Mothugudem, Chintoor (Mandal), District Alluri Sitarama Raju (Andhra Pradesh) by M/s Andhra Pradesh Power Generation Corporation (APGENCO).

36.3.2: The details of the project submitted by project proponent and ascertained from the document submitted are mentioned below:

- i. The proposal is for grant of environmental clearance to the project for expansion of Hydro Power Project from capacity 4X115 MW to 6X115 MW by adding two units of capacity 2X115 MW at Lower Sileru Hydro Power House and improvement of power canal works at Mothugudem, Chintoor (Mandal), District Alluri Sitarama Raju (Andhra Pradesh) by M/s Andhra Pradesh Power Generation Corporation (APGENCO).
- ii. The project envisages installation of 6 units of 115 MW each out of which 4 units are already installed and commissioned 45 years ago. Works for other two units were completed partially i.e. draft tubes are erected and concreting done up to EL 70 m. The balance works were suspended probably due to paucity of funds. The completion of balance works of two units of 115 MW is contemplated now.
- iii. **Project Components:** Lower Sileru hydropower project was envisaged to utilize the potential energy due to drop in the water level between Donkarayi and Polluru; which is 193.6 m and the quantum of available water is 13.25 TMC. Following are the major project components of existing project:
 - a. Donkarayi dam, a masonry dam of 71.32 m height with FRL at +316.08 m, and an earthen dam of 37.2 m high on the left bank with intake regulator
 - b. A 15.60 km long power canal up to Forebay earth dam with discharge capacity of 123.1 cumec.
 - c. A Forebay earthen dam of 67.06 m high with FRL at + 283.46 m.
 - d. Head race tunnel of 3.23 km long; horse shoe shaped with discharge capacity of 430.75 cumec for six units;
 - e. A surge shaft of 24.4 m dia to take care of instantaneous surge of water. Steel penstocks of 5.5 m dia (2 existing + 1 proposed).
 - f. A surface power house of size 144 m x 25 m for Six units of 115 MW each.
 - g. A 585 m long tail race channel to let in the water from the machines to the river.
 - h. Four Units of 115 MW each are already commissioned
- iv. **Balance works of the project:**
 - a. Installation of 2 units of 115 MW each in the existing power house out of which the following items are already completed.
 - b. Draft tubes with gates are erected for these two units
 - c. Concreting completed up to EL 70M for these two units Installation of a penstock (1 No)
 - d. Both underground and Surface excavation already completed for this penstock

- v. **Terms of Reference (TOR :** Terms of Reference (TOR) vide F. No. J-12011/15/2020-IA.I dated 14th Jan, 2021 with standard TOR and additional TOR.
- vi. **Public hearing :** Public hearing held on **27/07/2022** at Mothugudem, Alluri Sita Rama Raju District, Andhra Pradesh (near project site).
- vii. **Total Land requirement:** As the project is adding two additional turbines in existing powerhouse, no additional land is required for this component.
- viii. **Project Cost/ EMP Cost:** 57963 Lakhs , EMP-197 Lakh
- ix. **Salient features of the project are as follows:**

Project details:

Name of the Proposal	Completion of balance works of two units (2x115MW) at Lower Sileru Hydro Power House and improvement of power canal works.
Proposal No.	IA/AP/RIV/405141/2022
Location (Including Coordinates)	Polluru, Mothugudem, Chintoor (Mandal), District: Alluri Sitarama Raju, State: Andhra Pradesh 17°56'02" N, 81°47'46"E
Company's Name	Andhra Pradesh Power Generation Corporation (APGENCO)
CIN no. of Company/user agency	U40109AP1998SGC109187
Accredited Consultant and certificate no.	R S Envirolink Technologies Pvt. Ltd. Certificate No.: NABET/EIA/1922/SA 0144
Project location (Coordinates/River/Reserv	Near Village: Polluru, Sileru River a tributary of Sabari River
Inter- state issue involved	No
Proposed on River/Reservoir	Sileru River a tributary of Sabari River
Type o f Hydro-electric project	EXPANSION (IMPOUNDMENT)
Seismic zone	Zone - II

1. Category details:

Category of the project	A
Capacity / Cultural command	2X115 MW (Hydro Power Generation)
Attracts the General	No

2. ToR/EC Details:

ToR Proposal No.	IA/AP/RIV/183996/2020
EAC meeting date	02.12.2020

ToR Letter No.	F.No. J-12011/15/2020-IA.I
ToR grant Date	14.01.2021
Cost of project	579.63 Cr.
Total area of Project	nil
Height of Dam from River Bed (EL)	No new dam is proposed to be constructed
Details of submergence area	NA
District to provide irrigation facility(if applicable)	NA
Details of tunnels on upper level& lower level and length of canal (if applicable)	NA
No. of affected Village	0
No. of Affected Families	0
Project Benefits	<p>The estimated design energy for the additional two units of the plant is 525 MU. Cost of generation per unit for first year shall be Rs 3.82 which shall come down to Rs 1.48 by fourth year of operation. Social:</p> <ul style="list-style-type: none"> • Job Opportunities • Business Development • Infrastructure Development
R&R details	<p>The present proposal is only to complete balance work by setting up two additional units of 115 MW each by utilizing the existing infrastructure of Lower Sileru hydropower project, where four units of 115 MW each are under operation. Infrastructure required to operate all six units was put in place at that time which includes Donkarayi dam, power canal, forebay dam, surge shaft, Penstocks (2 nos) powerhouse and tail race channel. However, only four units were installed that time due to some constraints.</p> <p>There is no requirement of land acquisition for construction of various components, including infrastructure facilities as except for installation of two units of 115 MW each and a penstock, all other required infrastructure is already existing.</p>
Catchment area/ Command area	<p>Catchment Area of existing Donkarayi dam: 4908 km²</p>

Types of Waste and quantity of generation during construction/Operation	Municipal Solid Waste- Bio degradable (127Tons), Non degradable (45 Tons)
Material used for blasting and its composition as per DGMS standards.	No blasting activity proposed.
Is Projects earlier studied in Cumulative Impact assessment & Carrying Capacity studies(CIA&CC)for River in which project located. If yes then c) E-flow with TOR/ Recommendation by EAC as per CIA& CC study of River Basin. d) If not the E-Flows maintain criteria for sustaining river ecosystem.	Average Inflows in to the Donkarayi Reservoir is about 88.02 Cumecs and average D/s releases is about 50.71 Cumecs. It is inferred that there would be adequate releases available in the river even after utilizing water for proposed additional two units of 115 MW each therefore no additional e flow release has been proposed.
Details on provision of fish pass	NA
Project benefits including employment details(no of employee)	300
Area of Compensatory Afforestation (CA)with tentative no of plantation.	Since, there is no requirement of any forest land diversion for construction of various components, including infrastructure facilities as except for installation of two units of 115 MW each and a penstock, all other required infrastructure is already existing. Hence, requirement of preparation of Compensatory Afforestation is not
Previous EC details	NA
EC Compliance Report by R.O,MOEF&CC	NA

3. Electricity generation capacity:

Powerhouse Installed Capacity	4X115 MW (Existing), 2X115 MW(Proposed)
Generation of Electricity Annually	525 MU (proposed)
No.of Units	2X115 MW (proposed)

4. Muck Management Details:

No. of proposed disposal area/(type of land- Forest/Pvt land)	As the entire power house as well as penstock alignment was excavated earlier and thus there is no scope of muck generation during the installation of 2 units of turbines in the power
Cross section of proposed muck area, Height of muckwith slope.	NA

Distance of muck disposal area(location),from muck generation sources(project area)/River, HFL of proposed muck disposal area.	NA
Total Muck Disposal Area	NA
Estimate Muck to be generated	NA
Transportation	NA
Monitoring mechanism for Muck Disposal Transportation	NA

5. Land Area Breakup:

Private land	0
Forest Land	0
Submergence area/Reservoir area	0
Land required for project components	There is no requirement of land acquisition for construction of various components, including infrastructure facilities as except for installation of two units of 115 MW each and a penstock, all other required infrastructure is

6. Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/Environmental	Yes/No	Details of Certificate /letter/ Remarks
Reserve Forest/Protected Forest Land	No	Nearest protected area is Papikonda National Park which is more than 20 km away from project site location.
National Park	No	
Wildlife Sanctuary	No	
Archaeological sites monuments/historical temples etc	No	
Additional information(if any)	-	

Availability of Schedule-I species in study area: No

7. Public Hearing(PH)Details

Advertisement for PH with date	25.06.2022
Date of PH	27.07.2022
Venue	At premises of existing Lower Sileru HEP, Polluru village, Chintoor Mandal, Alluri Sitarama Raju district, Andhra Pradesh
Chaired by	Project Officer, ITDA, Paderu & Additional District Magistrate. Alluri Sita Rama Raju

Main issues raised during PH	<ul style="list-style-type: none"> • Medical health camps to be conducted and tests and medicines to be given free of cost • Employment for local people to be top priority • Drinking water facilities to be provided in every village • CC roads to be laid • Functional hall to be renovated and to be permitted free of cost to those who celebrate their functions in Mothugudem and Polluru villages • Street lights to be provided from Mothugudem to power house • Grant of contract works upto Rs 10 lakh to local people • APGENCO to allocate 15% CSR funds for development of panchayats • Top priority to be given to local people in employment
No. of people attended	148

8. Brief of baseline Environment:

Particulars	Details			
Period of baseline data collection/Sampling period.				
(Air, noise, water, land)	Parameters	Summer/ Pre-Monsoon	Monsoon	Winter
Flora and fauna of the	Soil	May 2020	July-August 2020	January 2021
Aquatic ecology, etc.	Air Environment	May 2020	July-August 2020	January 2021
	Noise & Traffic	May 2020	July-August 2020	January 2021
	Water Quality	May 2020	July-August 2020	January 2021
	Vegetation	May 2020	July-August 2020	January 2021
	Fauna surveys	May 2020	July-August 2020	January 2021
	Socio-economic survey	January 2021		

Brief description on hydrology and water assessment as per the approved Pre-DPR:	The Average Inflows in to the Donkarayi Reservoir is about 88.02 Cumecs and average D/s releases is about 50.71 Cumecs when 4 units are working. No additional water is proposed to be required for this additional 2 units as these units are proposed to run at peak hour generation using same quantum of water i.e Morning- 6 AM to 10 AM & Evening- 6PM TO 10 PM..
Additional detail(If any)	-

9. Court case details:

Court Case	No
Additional information(if any)	-

36.3.3: The EAC during deliberations noted the following:

The proposal is for grant of environmental clearance to the project for expansion of Hydro Power Project from capacity 4X115 MW to 6X115 MW by adding two units of capacity 2X115 MW at Lower Sileru Hydro Power House and improvement of power canal works at Mothugudem, Chintoor (Mandal), District Alluri Sitarama Raju (Andhra Pradesh) by M/s Andhra Pradesh Power Generation Corporation (APGENCO).

The project proponent has not prepared the EIA report as per the compliance of Terms of reference granted by the Ministry. The study for the e-flow and CAT Plan, Dam Break analysis, Disaster management Plan and Fisheries management plan has not been carried out as per the additional ToR no. iii. and v. Also, as the EIA/EMP report has been prepared only for the proposed additional unit, however, consolidated EIA/ EMP report should be prepared as per the additional ToR no. viii.

36.3.4 *The EAC after detailed deliberation on the information submitted and as presented during the meeting expressed that following are the deficiencies which required for further consideration of the project. It was desired that PP may submit the revised EIA/EMP report with below mentioned information:*

- Impact on the fish habitat downstream of the tailrace discharge need to be assessed by the way of hydro-dynamic modelling simulating the present scenario when 4 turbines are running as well as when 6 turbines would be running after expansion to carry out the damage assessment due to increase in water afflux and altered flow regime.
- Presence of Schedule I faunal species in the study area need to be re-assessed with the help of forest and wildlife department and a detailed site-specific wildlife conservation plan for Schedule –I species need to be prepared and submitted to Wild Life department for their approval and implementation.

- Catchment area treatment plan needs to be prepared for the directly draining catchment of Donkarayi dam to identify vulnerable areas requiring treatment and shall contain biological as well engineering measures with budget and schedule for implementation.
- An assessment of siltation aspect in Donkarayi reservoir over project operation phase of the existing project along with study of reservoir periphery to be carried out to identify land slips etc which will help in ascertaining need of reservoir rim treatment, accordingly a reservoir rim treatment plan to be prepared.
- A fisheries management plan needs to be prepared and implemented by project proponent through state fisheries department. Project proponent should undertake a study through CIFRI/reputed government institute to assess adequacy and effectiveness of the fish conservation plan and prepare and implement the plan as per the recommendation of the institute.
- Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the Ministry's OM F.No.22- 65/2017- IA.III dated 30th September, 2020 shall be submitted. Point-wise time bound action plan needs to be prepared for implementation of queries raised and commitments made during public consultation process with physical targets and financial provisions.

The EAC therefore **Returned** the proposal in present form.

Agenda Item No. 36.4:

Teesta River Basin Study in West Bengal by M/s. West Bengal State Electricity Distribution Company Limited (WBSEDC Ltd) - For consideration of approval- reg.

36.4.1 The Study of Cumulative Impact Assessment (CIA) & Carrying Capacity Study(CCS) of Teesta Basin for West Bengal portion was initiated at the instance of MOEF&CC, Government of India while according prior Environmental Clearance to Teesta Low Dam –V HEP in May 2013, with the main focus on the impacts resulting from implementation of hydro power projects in the Teesta basin in West Bengal. The CIA&CCS of Teesta Basin for Sikkim portion has already been completed in 2007.

2. The study was carried out in Teesta river and its tributaries (Rangit, Rammam, Reang Khola) flowing in the hilly terrain of West Bengal. This study focus on the various impacts resulting from implementation of hydro power projects in the Teesta River basin & its tributaries in West Bengal portion. Total 11 Hydro-electric projects (commissioned/ construction/proposed) of Teesta River Basin including the projects on Rammam River and Rangit River were included in the Teesta River basin study.

3. The proposal for Teesta River Basin Study in West Bengal was considered and recommended the ToR of proposed studies by EAC in its 70th EAC meeting held on 10th-11th December, 2013.

4. EAC has considered study Report in its following meetings:

- a) The Interim Report was appraised by EAC(RIV&HEPs) in its 96th Meeting held on 11th and 12th August 2016 .
- b) The draft Report was appraised by EAC in its 22nd meeting (on 27.02. 2019) and deferred the proposal (**MoM attached at Annexure-A**) with requirement of additional information as below:
 - i. Detailed report on phytodiversity (algae, Lichens, bryophytes Pteridophytes, gymnosperms & angiosperms) endemism, RET species, species from CITES list based on primary and secondary data has to be provided as it is an important data for conservation and sustainability in future. Biodiversity has to be looked carefully in any EIA report.
 - ii. The present RBS has to be linked with the Teesta RBS in Sikkim which has already been completed long before. It was suggested that the last project on Teesta river in the state of Sikkim shall be configured with the first project on Teesta river in West Bengal for the aspects of Environmental Flow releases, Free Flow stretch and other parameters.
 - iii. The total number of hydroelectric projects (operational, under construction and proposed) to be considered in the RBS shall be finalized and freeze in consultation with the state government. No other HEPs shall be considered once the RBS is finalized.

The information submitted by the M/s WAPCOS w.r.t. observations raised by the EAC members are as under:

- i. Detailed list of phytodiversity (algae, Lichens, bryophytes Pteridophytes, gymnosperms & angiosperms), RET species along with species from CITES was presented.
- ii. A total Six HEP was considered in the Teesta Basin Report of Sikkim Portion on Teesta River, which submitted in year 2006. The Last HEP on Teesta River in Sikkim State is Teesta Stage-VI HEP and its Power House is on Sikkim and West Bengal Border. The Teesta Stage-VI HEP starting from Power is also considered in the Teesta Basin Report of West Bengal Portion and the Free Stretch between TWL

of Teesta VI HEP & FRL Teesta Intermediate HEP (which is first project on Teesta River in West Bengal) is about 1.4 km.

- iii. It was informed by WBSEDCL representative in EAC meeting that State Government of West Bengal has given its concurrence on the recommendation of Basin Study Report. Department of Power & NES, Govt. of West Bengal, conveyed its concurrence on the recommendations of the Draft Teesta Basin Study Report regarding development of HEPs (Operation, under Construction and Proposed) considered in the CIA&CCS of Teesta River Basin report in West Bengal for final acceptance vide letter No. PO/O/C-III/4M- 13/2017 dated 18.04.2019. Therefore, the EAC did not take separate cognizance for acceptance of the recommended HEPs from the Govt. of West Bengal separately.

5. The EAC deliberated on the information submitted by the WEBCOSE addressing the points mentioned as above in its 22nd EAC meeting held on 27.02.2019. After detailed deliberations on the study report, and complied report on the observation of EAC, the following recommendation were made by the EAC during 23rd meeting dated 23.04.2019 (**enclosed as Annexure-B**):

- i. Free flow stretch will be available for a stretch of 27.97 km out of a total stretch of 51.55 km on main Teesta river.
- ii. The Teesta Low Dam V HEP has been accorded TOR Clearance by EAC of River Valley Project of Ministry of Environment, Forest & Climate Change in 2013 vide letter No-J-12011/39/2012-IA.I, dated 23.08.2013. The validity of TOR is for 4 years, and the project proponent will have to get fresh TOR since the earlier ToR is no more valid now.
- iii. It is recommended while appraising Teesta Low Dam V HEP for TOR Clearance, that the NBWL Clearance, which was a condition in the TOR Clearance in the year 2013, should still continue. In addition, additional studies to assess the impacts on Mahananda Wildlife Sanctuary should also be considered, while appraising the project for TOR Clearance. Impacts on Elephant migratory route is one such study. Likewise, special study on impacts on flora and fauna of the sanctuary during construction phase can also be recommended.
- iv. Four hydroelectric projects are operational/ under construction for which provision of Environmental Flows has not been made. Only spills in monsoon months are expected on those days, when discharge is higher than rated discharge. The four hydroelectric projects operational/ under construction are as follows:

Teesta Stage-VI HEP (500 MW)
 Teesta Low Dam-III HEP (132 MW)
 Teesta Low Dam-IV HEP (160 MW)
 Jorethang Loop HEP (96 MW)

- v. Free flow stretch for about 4.124 km is available in HEP's located on river Great Rangit.
- vi. It is recommended that in addition to spills in monsoon season for Teesta Low Dam- IV HEP an Environmental Flow of 1.25 cumec be released by project proponent, which should be maintained in all the non-monsoon months.
- vii. In absence of sufficient data on river cross-section for Teesta Stage-VI and Teesta Low Dam-III HEP which are located upstream of Teesta-IV Low Dam HEP, a discharge of 1.25 cumec be released in non-monsoon months as Environmental Flows, in addition to the spills in monsoon season.
- viii. As mentioned earlier, Rammam-II & Rammam-III are under operation and construction stage respectively. However, for Rammam-I and Rammam Intermediate HEP Environmental Flows have been recommended as per the following Norms:

Monsoon Season	30% of average Discharge of monsoon season for 90% DY
Non MNL season	25% of average Discharge of Non-Monsoon Lean season for 90% DY
Lean Season	20% of average Discharge of lean season for 90% DY

- ix. It is recommended to change the layout of Rammam Intermediate HEP to ensure that free stretch is available between TWL of Rammam-I HEP and FRL of Rammam Intermediate HEP.
- x. The recommended Environmental Flows for HEPs for which cross sections are available are given in Table-.

Table-: Recommended Environmental Flows for 90% DY for various HEP

Month	Teesta Low Dam (I&II)	Teesta Intermediate
Monsoon Season	20% (61.64 m ³ /s)	20% (147.56 m ³ /s)
Lean season	15% (3.78 m ³ /s)	15% (69.12 m ³ /s)
Non-Monsoon Non-lean season (April-May)	20% (22.52 m ³ /s)	20% (64.34 m ³ /s)
Non-Monsoon Non-lean season (October-November)	23% (12	23% (34.13 m ³ /s)

- xi. As per the NGT order on Environmental Flows, the minimum Environmental Flows for lean season shall be as 15% of average discharge of lean season for the last project in Teesta River falling in Sikkim i.e. Teesta Stage VI HEP. The recommended Environmental Flows for Teesta Stage VI HEP is 15% of average discharge of lean season i.e.16.06 m³/s.

6. The proposal was recommended by EAC for approval of the CIA and CCS of Teesta river basin in West Bengal in the 23rd EAC meeting (27.04.2019). Thereafter, Govt of West Bengal was requested by MOEF&CC, vide letter dated 26.10.2021, for submission of final compiled report to MoEF&CC. Accordingly, Govt. of West Bengal has submitted compiled report of Cumulative Impact Assessment (CIA) & Carrying Capacity Study(CCS) of Teesta River Basin in West Bengal after incorporation of the comments raised by EAC during 22nd EAC meeting vide letter dated 17.05.2022.

7. The report has already been recommended by earlier 23rd EAC meeting. But modified final report (May 2022) after incorporated suggestions /recommendations during 22nd EAC (27.02.2019) has not appraised in the EAC meeting. Therefore, before considerations for accepting the modified report of the CIA and CCS of Teesta river basin in West Bengal (May 2022), the compiled report of the CIA and CCS of Teesta river basin in West Bengal may be considered for approval by the EAC.

36.4.2 The EAC during deliberations noted the following:

The Cumulative Impact Assessment (CIA) & Carrying Capacity Study(CCS) was carried out in Teesta River Basin (Teesta river and its tributaries (Rangit, Rammam, Reang Khola)) in West Bengal Portion flowing in the hilly terrain of West Bengal.

The earlier EAC after examining the compliance of their observations raised during 22nd meeting (27.02.2019) had recommended the CIA & CCS in its 23rd EAC meeting held on 27.04.2019 with certain suggestions /recommendations, but the compiled final report after incorporating the suggestions /recommendations was submitted by the WBSEDC Ltd in May 2022 and the same has not been appraised in the EAC meeting.

The EAC after detailed deliberations decided that since the present EAC was not involved in the whole process of framing the TOR of the study and deliberations held for finalizing the study report it would be appropriate that the WBSEDC Ltd along with M/s WAPCOS, who conducted the study, may be invited in the next meeting to present the compiled report submitted in May, 2022 before the EAC before making any recommendation for acceptance of the study report. The WAPCOS may explain the aspects like migratory fish path and presence of breeding ground of fishes in the Cumulative Impact Assessment (CIA) & Carrying Capacity Study(CCS).

The EAC was also of the view that Cumulative Impact Assessment (CIA) & Carrying Capacity Study(CCS) conducted for any River basin may have its relevance for a definite period. There may be certain variations in river basin ecology and river morphology i.e. slope of river, drainage pattern of river, catchment area, depth of river, water availability, e-flow, cross section of the river etc. which play a direct role in deciding carrying capacity of the river basin. The EAC therefore recommended to the Ministry to have a consultation with experts/expert institutions in order to examine the need of fresh river basin study over a period of time for the river basins for which Cumulative Impact Assessment (CIA) & Carrying Capacity Study(CCS) has already been done.

The meeting ended with vote of thanks to the Chair.

ATTENDANCE LIST

Sr. No.	Name & Address	Role	Attendance
1.	Dr Gopa Kumar	Chairman	P
2.	Dr. A. K. Malhotra	Member	P
3.	Shri Ashok Kharya	Representative of CWC	P
4.	Dr. A. K. Sahoo	Representative of CIFRI	P
5.	Shri Sharvan Kumar	Representative of Central Electricity Authority (CEA)	P
6.	Dr. J. A. Johnson	Representative of Wildlife Institute of India (WII)	P
7.	Shri Yogendra Pal Singh	Member Secretary	P

APPROVAL OF THE CHAIRMAN

From: kgopa@isc.ac.in

To: "Yogendra Pal Singh" <yogendra78@nic.in>, jaj@wii.gov.in, ajitkumarmalhotra463@gmail.com, "amiya saho" <amiya.sahoo@icar.gov.in>, amiya7@gmail.com, "Ashok Kumar Kharya" <ceenvtmgmt@nic.in>, "bijayaketan panigrahi" <bijayaketan_panigrahi@gmail.com>, "chandrahas deshpande" <chandrahas_deshpande@welingkar.org>, dchandrahas@gmail.com, "Ashok Kharya, Chief Engineer" <kharya-cwc@nic.in>, mukesh@iitk.ac.in, lnand@rocketmail.com, "kn shenoy" <kn.shenoy@manipal.edu>, Dirhpa3@gmail.com, udaykumary@yahoo.com, "Dr. Vijay Kumar" <vijay.kumar66@nic.in>, "director ciferi" <director.ciferi@gmail.com>, "director ciferi" <director.ciferi@icar.gov.in>

Cc: "Saurabh Upadhyay" <saurabh.upadhyay85@gov.in>, "Saurabh Kumar" <saurabh.9@govcontractor.in>, mkkd@rediffmail.com

Sent: Monday, November 28, 2022 9:51:27 AM

Subject: Re: draft MOM of the 36th EAC (RV&HEP) meeting held on 15.11.2022-reg.

Dear Dr Yogendra

Yes I approve this. Kindly ask also others opinion.

With regards

Gopakumar

Get [Outlook for iOS](#)
