MINUTES OF THE 49TH MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 24TH JULY, 2023 FROM 10:30AM- 05:30PM THROUGH VIRTUAL MODE.

The 49th 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 24th July, 2023 through virtual mode, under the Chairmanship of Dr. A. K. Malhotra list of members present in the meeting is at **Annexure**.

Agenda item No.49.1:

Confirmation of the minutes of 48th EAC meeting held on 26th – 27th June, 2023.

Agenda item No. 49.2:

Expansion of Krishna Koyna Lift Irrigation Project from 1,09,127 to 1,35,627 CCA at Village Jath, Taluka Ananthagiri and Araku Valley, District Sangli & Solapur, Maharashtra by M/s Department of Irrigation, Government of Maharashtra – Environmental Clearance (EC) – reg.

[Proposal No. IA/MH/RIV/431564/2023; F. No. J-12011/5/2009-IA.I (R)]

49.2.1: The proposal is for grant of Environmental Clearance (EC) to the project for expansion of Krishna Koyna Lift Irrigation Project from 1,09,127 to 1,35,627 CCA at Village Jath, Taluka Ananthagiri and Araku Valley, District Sangli & Solapur, Maharashtra by M/s Department of Irrigation, Government of Maharashtra.

49.2.2: The project proponent and the accredited Consultant M/s MITCON Consultancy & Engineering Services Ltd, made a detailed presentation on the salient features of the project and informed that:

i. The proposal is for environmental clearance to the project for Expansion of Krishna Koyna Lift Irrigation Project from 1,09,127 to 1,35,627 CCA at Village Jath, Taluka Ananthagiri and Araku Valley, District Sangli & Solapur, Maharashtra by M/s Department of Irrigation, Government of Maharashtra.
ii. The project proposal was considered by the Expert Appraisal Committee (Hydro River Valley Sector) in its 40th meeting held during 25.01.2023 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-12011/5/2009-IA.I (R) dated 6th March 2023.
iii. The project is listed at S.N. 1 (C) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
iv. Ministry had issued EC earlier vide letter no. vide letter J-12011/2/89-IA, dt. 01/06/1989 for ICA 68908 ha. and latest approval is for ICA 40219 ha vide letter no. J-12011/5/2009-IA.I, dt. 01/07/2009.
v. Land requirement details are as below

Nature of Land involved in (Ha)	Area Existing in Ha	Additional Area Proposed in Ha	Total Area required after expansion in Ha
Non-Forest Land	**3589.71**	**32.33**	**3622.04**

Forest Land	**12.83**	**2.67**	**15.5**
Total	**3602.54**	**35.00**	**3637.54**

- 10 ha Green belt has been developed. Provision for Ecology & Biodiversity /Green Belt Development is Rs. 755.58 L and will do plantation around project periphery

vi. The estimated project cost is

Existing Project: Rs. 6393.19 Cr.
Proposed Expansion: Rs.1879.17 Cr.
Total Cost: Rs. 8272.36 Cr.

Total capital cost earmarked towards environmental pollution control measure is Rs. 80189.58 L and the Recurring cost (operation and maintenance) will be about Rs. 109.00 L per annum.

vii. Total Employment will be 50 persons as direct & 145 persons indirect after expansion. The project proposes to allocate Rs. 400/- L @ of 0.25 % towards CER (as per Ministry's OM dated 1st May 2018).

viii. There are 6 Sacred groves/ protected areas.

ix. Ambient air quality monitoring was carried out at 13 locations during March 2022 to May 2022 and January 2023 to March 2023 and the baseline data indicates the ranges of concentrations as: PM_{10} (32.3 to 76.5 µg/m3), $PM_{2.5}$ (10.8 to 25.6.µg/m3), SO_2 (5.9 to 20.9 .µg/m3) and NO_2 (4 to 24.6 µg/m3).

x. Details of Solid waste/ Hazardous waste generation/ Muck and its management

Sr. No	**Type of material**	**Total generated quantity in excavation in cum**	**Total generated quantity in excavation in Mm^3**
1	Soft Soil	190965	0.19
2	Hard murum & soft Rock	448375	0.45
3	Hard Rock	3074668	3.07
		3714008	**3.71**
	Muck is in scattered reaches of 386 km & 88333 ha area		

xi. Details of Material required for PDN Component, utilization of excavated material and material from borrow area

Sr. No.	**Type of material**	**Required quantity in cum**	**Excavated material to be utilized**	**Material from borrow area**	**Unutilized excavated material**
1	Soft	190966	190966	0	
2	Hard Murum and Soft rock	448375	448375	0	
3	Hard Rock	1568106	1568106	0	
	Total in cum	2207447	2207447	**0**	

	Total in mm3	**2.21**	**2.21**	**0**	Nil

xii. The total 2.21 Mm^3 material is required for construction of 2.21 Out of 3.71 Mm^3 muck generated, 2.21 Mm3 muck will reutilized for construction. The balance material will be utilized for generation of Crushed Metal (10 mm & 20 mm), crushed sand, Approach roads, Conveyance roads, Pump House backfilling, refilling of low laying area and local bunds of agriculture land.

xiii. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 17.05.2023. The main issues raised during the public hearing are related to water scarcity and when all the storages/ tanks in 65 villages of Extended Jath schemes will be filled.

xiv. The project proponent has informed that they have requested IRO, Nagpur vide letter dated 22.02.2023 and reminder vide dated 05.07.2023 for certified compliance report. The Member Secretary, MPCB vide letter dated 28.07.2023 has forwarded the certified compliance report of existing EC.

xv. Status of Litigation Pending against the proposal, if any. – Not any

xvi. The salient features of the project are as under: -

EAC Meeting Details:

EAC meeting/s	49th Meeting Agenda Id: EC/AGENDA/EAC/625598/7/2023
Date of Meeting/s	18.07.2023
Date of earlier EAC meetings	Meeting ID: IA/RIV/13427/25/01/2023 25 Jan 2023 (15:30 PM to 17:30 PM)

Project details:

Name of the Proposal	**[Proposal No. IA/MH/RIV/431564/2023; F. No. J-12011/5/2009-IA.I (R)]**
Location (Including coordinates)	Longitude: 74° 30' (East) Latitude: 16° 50' (North)
Inter- state issue	No
Seismic zone	III

Category details:

Category of the project	A
Provisions	Irrigation to draught prone area Sangli district
Capacity / Cultural command area (CCA)	Krishna Koyna Lift Irrigation Project

Scheme	**ICA in Ha**	**CCA in Ha**	**GCA in Ha**	**Remark**
Takari LIS	27,430	44358	52128	Existing EC

	Mhaisal LIS	81,697	138745	154896	Existing EC
	Mhaisal Extended Jath LIS	26,500	88333	103921	Proposed Expansion
	Total	**1,35,627**	**271436**	**310945**	
Attracts the General Conditions (Yes/No)	Yes, interstate boundary adjacent to the command area				

Electricity generation capacity:

Powerhouse Installed Capacity	Solar Energy Proposed to Install : 200 MW
Generation of Electricity Annually	200 MW
No. of Units	1
Additional information (if any)	Total electricity requirement will be 138.75 MW however, we are installing solar project having capacity 200 MW

EC Details:

Cost of project	Existing Project: Rs. 6393.19 Cr Proposed Expansion: Rs.1879.17 Cr. Total Cost: Rs. 8272.36 Cr.
Total area of Project	**Scheme** / **ICA in Ha** / **CCA in Ha** / **GCA in Ha** / **Remark** Takari LIS: 27,430 / 44358 / 52128 / Existing EC Mhaisal LIS: 81,697 / 138745 / 154896 / Existing EC Mhaisal Extended Jath LIS: 26,500 / 88333 / 103921 / Proposed Expansion Total: **1,35,627** / **271436** / **310945**
Height of Dam from River Bed (EL)	NA
Length of Tunnel/Channel	Length of Proposed Tunnel: 1360 m (Raising Main) Length of new pipeline proposed: 190 km Length of Distributaries 386 km (pipe dishnet)
Details of Submergence area	NA
Types of Waste and quantity of generation during construction/ Operation	**Domestic Waste:** **Name of Waste** / **Source** / **Qty (TPA)** Dry Waste / Labour Colony / 0.9 Wet Waste / Labour Colony / 0.53 **Excavation Waste**

	Name of Waste	**Source**	**Qty (Tonn)**
	Muck	Excavation & Tunnel Work	85872
E-Flows for the Project	NA		
Is Projects earlier studies in Cumulative Impact assessment & Carrying Capacity studies (CIA&CC) for River in which project located. If yes, then e) E-flow with TOR /Recommendation by EAC as per CIA&CC study of River Basin. f) If not the E-Flows maintain criteria for sustaining river ecosystem.	NA		

Muck Management Details:

No. of proposed disposal area/ (type of land- Forest/Pvt. land)	4 numbers of disposal area (Government owned land) 1. Jath LIS Stage I 2. Jath LIS Stage II 3. Jath LIS Stage III 4. Jath LIS Stage IV
Muck Management Plan	Mode of Disposal : Excavated material will be utilised in filling and road work (IP and SR)
Monitoring mechanism for Muck Disposal	Environmental Management Cell (EMC) shall monitor mechanism of muck disposal

Land Area Breakup:

Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	**Yes/No**	**Details of Certificate/ letter/ Remarks**			
Reserve Forest/Protected Forest Land	Yes	**Sr. No.**	**Name of the Grove**	**Deity**	**Tahsil**
National Park	No	1	Arewadi	Biroba	Kavathe Mahankal
Wildlife Sanctuary	No	2	Banali	Banshankari	Jath
		3	Dandoba	Dandnath	Miraj

		4	Raywadi	Lord Shiva	Kavathe Mahankal
		5	Sagreshwar WLS	Lord Shiva	Kadegaon
		6	Shukacharya	Sukhdev	Khanpur-Atpadi

Court case details:

Court Case	NA
Additional information (if any)	NA

Affidavit/Undertaking details:

Affidavit/Undertaking	Enclosed
Additional information (if any)	NA

Previous EC compliance and necessary approvals:

Particulars	**Letter no. and date**
Certified EC compliance report (if applicable)	Shri. Shantidas Mukhopadhyay, Assistant Audit Officer and Shri. G.D. Kengale, Sr. Auditor visited for performance audit of Environment Clearance and Post Clearance Monitoring on 22.02.2016 to 26.02.2016 Recently request letter submitted to RO, MOEFCC, Nagpur dated 22.02.2023 and reminder on 05.07.2023 for certified compliance report
Status of Stage- I FC	**FP/MH/Pipeline/431430/2023** Submission date 30/05/2023
Additional detail (If any)	NA
Is FRA (2006) done for FC-I	NA

Miscellaneous

Particulars	**Details**
Details of consultant	MITCON Consultancy & Engineering Services Ltd. Pune **Certificate No.** NABET/EIA/2124/RA 0229_Rev 02 Valid up to Feb 05, 2024
Project Benefits	❖ The proposed expansion intends to irrigate 26500 ha land of 65 villages of Jat Taluka of Sangli District ❖ GoM in the year 2017 adopted

	policy of Pipe Distribution Network (PDN). ❖ Provide better consumer experience and improved operational performance with an end-to-end coverage from pump house to water distribution network with minimum water charges cost to farmers. ❖ Improvement in operational performance and reliability in water supply by futuristic interventions enabled through SCADA interventions qualifying smart utilities and digital utilities ❖ Due to PDN, there is increase in water use efficiency, Speedy construction early benefits and more irrigation per Mcft ❖ Solar Energy Proposed to be Installed: 200 MW; (However requirement for Mhaisal Scheme including proposed extension is 97.51 MW and for entire project is 138.75 MW) ❖ **During construction phase** **Permanent employment** No. of permanent employment: 145 Period of employment (days): 1825 **Temporary employment** Temporary / Contractual employment (No. of Man days): 1355 **During operational phase** Permanent employment proposed: 50 Temporary employment proposed: 145
Status of other statutory clearances	**Environmental Clearance** • Letter No. J.-12011/2/89-IA dated June 1, 1989 • Expansion of EC No. J-12011/5/2009-IA.I dated 01.07.2009 **Forest Clearance** • Letter No. 8-549/88-FC dated 08.03.1989 for 11.10 ha • Letter No.1368 dated 25.07.2014 for 1.7338 ha

	• Applied for additional forest land • FP/MH/Pipeline/431430/2023 • Submission date 30/05/2023

Public Hearing (PH) Details

Advertisement for PH with date	Marathi News Paper: **Sakal** Dated 15.04.2023 and Corrigendum 27.04. 2023; Pg No.7 English News Paper: **Times of India**, Saturday 15.04.2023
Date of PH	17.05.2023
Venue	Bhima Yatri Niwas Hall, Guddapur, Shri Dhanmmadevi Devasthan Parisar, Taluka-Jath, District – Sangli (416 412) Maharastra at 12.00 noon
Chaired By	(Vijaysinh Patil) Chairman, Environment Public Hearing Committee And Additional District Magistrate, Sangli
Main issues raised during PH	All the participants raised the water scarcity issue by heart. Many years the local people are suffering due to drought
No. of people attended	114

Brief of base line Environment

Particulars	**Details**
Period of baseline data collection/Sampling period.	01.03.20222 to 31.03.2023
(Air, noise, water, land)	The data collected was divided, for analytical convenience, in to the following 3 Seasons: 1. Season 1 – March 2022 to May 2022 2. Season 2 – June 2022 to August 2022* 3. Season 3 – January 2023 to March 2023 * Air and Noise samples not collected
Flora and Fauna of the Project Area	Total 201 floral species were recorded in and around the project area (i.e. 10 km radius study). Among them 39% Herbs, 37 % Trees, 19 % shrubs & climbers were 5% each Faunal Diversity: Mammals: 21 sps. Bird Diversity: 45 sps Fish Diversity: 73 sps Frog: 3 sps Spiders : 70 sps.
Aquatic Ecology etc.	Fish Diversity: 70 sps Frog: 3 sps Aquatic Birds : 11 sps

Brief description on hydrology and water assessment as per the approved Pre-DPR:	Koyna Dam	19.07 TMC	
	Warna dam	6.00 TMC	
	Run-off of the Krishna River during Kharif	7.71	
	Total	**32.78 MC**	

Availability of Schedule-I species in study area

Sr. No	Class	Scientific Name	Common Name	IWPA Status	IUCN Status
1.	Mammal	Varanus bengaiensis	Bengal Monitor	Schedule I	EN
2.	Mammal	Canis lupus	Grey Wolf	Schedule I	LC
3.	Mammal	Antilope cervicapra	Blackbuck	Schedule I	LC
4.	Mammal	Hyena hyaena	Striped Hyaena	Schedule I	Not Enlisted
5.	Mammal	Vulpes bengalensis	Bengal Fox	Schedule I	LC
6.	Mammal	Bos gaurus	Gaur/Indian Bison	Schedule I	VU
7.	Mammal	Prionailurus rubiginosus	Rusty Spotted Cat	Schedule I	NT
8.	Mammal	Felis chaus	Jungle Cat	Schedule I	LC
9.	Bird	Pavo cristatus	Indian Peafowl	Schedule I	LC
10.	Bird	Accipiter badius	Shikra	Schedule I	LC
11.	Bird	Haliastur indus	Brahminy Kite	Schedule I	LC
12.	Reptile	Fowlea piscator	Chequered keelback	Schedule I	LC
13.	Reptile	Ptyas mucosa	Dhaman	Schedule I	LC

Details of EMP

SI	Activities	Capital Cost Rs. Lakhs	Recurring Cost (per annum) Rs. Lakhs
1.	Ambient Air Quality	-	16.00
2.	Noise Level	-	10.00
3.	Surface and Ground Water Quality	-	23.00
4.	Soil Quality	-	10.00
5.	Solid/ hazardous wastes	02.00	10.00

SI	Activities	Capital Cost Rs. Lakhs	Recurring Cost (per annum) Rs. Lakh
6.	Ecology & Biodiversity /Green Belt Development &	755.58	15.00
7.	Health & Safety	-	25.00
8.	Command Area Development Plan	79032.00	-
9.	Corporate Environmental Responsibility	400.00	-
Summary of allocation of fund for EMP			
1.	EMPs: (eg.: Air Environment, Water Environment)	84.00 L	
2.	Capital Cost (in Lakhs)	80189.58 L	
3.	Recurring Cost per annum (In Lakhs)	109.00 L	

49.2.3: The EAC during deliberations noted the following:

The proposal is for grant of Environmental Clearance (EC) to the project for expansion of Krishna Koyna Lift Irrigation Project from 1,09,127 to 1,35,627 CCA at Village Jath, Taluka Ananthagiri and Araku Valley, District Sangli & Solapur, Maharashtra by M/s Department of Irrigation, Government of Maharashtra.

The project/activity is covered under Category 'A' of item 1 (c) 'River Valley projects' of the Schedule to the Environmental Impact Assessment Notification, 2006 and appraised at Central level by the sectoral EAC in the Ministry as category A.

The ToR has been issued by Ministry vide letter No. J-12011/5/2009-IA.I (R) dated 6th March 2023. The proposed expansion involves total 2.67 ha additional forest land, accordingly the PP has submitted the application for obtaining Stage I Forest Clearance on 30.05.2023 vide proposal no. FP/MH/Pipeline/431430/2023.

Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 17.05.2023 at Guddapur, Shri Dhanmmadevi Devasthan Parisar, Taluka-Jath, District – Sangli (416 412) Maharashtra. The main issues raised during the public hearing on water scarcity issues. EAC observed that the PP has proposed to allocate Rs. 400/- L @ of 0.25 % towards CER (as per Ministry's OM dated 1st May 2018); whereas, the CER is being considered as per provisions of the MoEF&CC Office Memorandum No. 22-65/2017-IA.III dated 30/09/2020 and suitable safeguard measure will be suggested accordingly by the EAC.

The EAC noted that being an expansion proposal compliance status report of earlier EC granted by the Ministry on 01.07.2009 need to be examined in terms of Ministry's OM no. IA3-22/10/2022-IA.III [E177258] dated 08.06.2022. The PP informed that request letter dated 22.02.2023 was submitted to RO, MOEFCC, Nagpur for certified compliance report and reminder was sent on 05.07.2023, however visit of MoEF&CC IRO Officer is awaited. The PP submitted the compliance report certified by the Member Secretary, Maharashtra Pollution Control Board vide letter no. MPCB/JD (WPC)/230728-FTS-0146 dated 28.07.2023. The certified compliance report was circulated to the EAC vide email dated 01.08.2023 for perusal and comments. The EAC observed that compliance report is satisfactory.

The EAC in the present meeting (49th meeting) deliberated on the information submitted (Form 2, EIA/EMP report, kml file, etc.) and as presented along with consultant M/s. MITCON Consultancy & Engineering Services Ltd.

49.2.4 The EAC after examining the information submitted and detailed deliberations **recommended** the proposal for grant of Environmental Clearance by the Ministry to the project for expansion of Krishna Koyna Lift Irrigation Project from 1,09,127 to 1,35,627 CCA at Village Jath, Taluka Ananthagiri and Araku Valley, District Sangli & Solapur, Maharashtra by M/s Department of Irrigation, Government of Maharashtra, under the provisions of EIA Notification, 2006 and as amended with subject to compliance of applicable Standard EC conditions with the following additional conditions:

[A] Environmental management and Biodiversity conservation:

i. Stage I FC for 2.67 ha of forest land involved in the project shall be submitted prior to grant of EC.
ii. The water of rainfall yield of self-catchment of the reservoir shall be released to downstream through body of dam/ barrage/ embankment etc.
iii. Monitoring in all season in the d/s of lifting the water from Krishna River at Takari and Mhaisal.
iv. The water for filling of reservoir/ recoupment of evaporation and recirculation losses shall be met from a source other than the rainfall yield of catchment of non-perennial stream/ nallah.
v. The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports. The budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.
vi. The contract clause limiting the No. of vehicles used during excavation and transportation shall followed scrupulously and the same shall informed to the ministry.
vii. Ambient Air Quality Monitoring Stations for real time data to be installed at project site, shall be displayed at project site and its report to be submitted to IRO, MoEF&CC.
viii. Budget for conservation of Schedule I species is very low. The project proponent may be revised the same after consultation with CLWL. No vehicle purchase shall be allowed from funds earmarked for implementation of Wildlife Conservation plan. Measures for minimizing the human–animal conflict specially for black bear and leopard be suitably incorporated in the wildlife conservation plan in consultation with State Forest Department.
ix. 10000 plants shall be planted around the muck disposal area and the survival of plants shall be submitted with the 6 monthly compliance report.
x. Watershed development plan shall be prepared in consultation with ICAR/expert Govt. institute and be implemented within 10 km radius of the projects. Implementation status be submitted in the 6 monthly compliance report.

[B] Disaster Management:

i. Disposal of the excavated muck and its filling on the low-lying area with proper measures for the stabilization and greenery to minimize the impacts of the generated construction muck shall be taken up pari passu with construction work.

ii. Stabilization of muck disposal sites using biological and engineering measures shall be taken up immediately to ensure that muck does not roll down the slopes and does not pollute the natural streams and water bodies in surrounding area. The plantation on muck disposal site with local species for restoration of ecology and environment of the project site area.
iii. Necessary control measures such as water sprinkling arrangements, and construction of paved roads leading to muck disposal sites etc. shall be taken up on priority to arrest fugitive dust at all the construction sites.
iv. Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.

[C] Socio-economic:

i. Land acquired for the project shall be suitably compensated in accordance with the prevailing guidelines of the state government and provisions under Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
ii. The area is ecologically fragile therefore Project Proponent shall ensure that safety measures as mentioned in the EMP shall be fully implemented.
iii. Public Health Delivery Plan including the provisions of drinking water supply for local population shall be in the EIA/EMP Report. Status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the need of the labour force and local populace.
iv. Land acquired for the project shall be suitably compensated in accordance with the prevailing guidelines of the state government and provisions under Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

[D] Miscellaneous:

1. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment. The study shall be undertaken by an independent agency.
2. Bio-Gas plant (Deenn Bandhu Model of Bio-Gas) shall be installed in the Project affected area for Utilizing Cattle waste (Cow Dung) into renewable source of fuel.
3. RO plant shall be installed in the nearby 5 villages and the maintenance shall be done by the project Authorities.
4. Solar panel be provided to the families living in rural areas within 10 km radius of project.
5. The compliance of above conditions shall be monitored by IRO, MoEF&CC through regular site visit twice in a year.
6. PP shall procure construction material only from those Organizations having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.
7. An institutional mechanism to be developed to ensure the preference of jobs to PAFs and also a policy for preferential treatment for award of sundry works to the PAFs and their dependents.

Agenda item No. 49.3:

Kharauli Pumped Storage Project (500 MW) in an area of 51.1 ha at Village Kharauli, Tehsil Oudgi, District Surajpur, Chhattisgarh by M/s Kharauli Energy Private Limited – Terms of References (TOR) – reg.

[Proposal No. IA/CG/RIV/432239/2023; F. No. J-12011/35/2023-IA.I (R)]

49.3.1: The proposal is for grant of Terms of Reference (ToR) to the project for Kharauli Pumped Storage Project of capacity 500 MW in an area of 51.1 ha at Village Kharauli, Tehsil Oudgi, District Surajpur, Chhattisgarh by M/s Kharauli Energy Private Limited.

49.3.2: The Project Proponent and the accredited Consultant M/s R S Envirolink Technologies Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

i. The proposal is for ToR for Kharauli Pumped Storage Project located at Village Kharauli, Tehsil Oudgi, District Surajpur, Chhattisgarh by M/s Kharauli Energy Private Limited.
ii. The project is listed at S.N. 1 (c) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and is appraised at Central Level by Expert Appraisal Committee (EAC).
iii. The estimated project cost is Rs 2374.96 crore. Total capital cost earmarked towards environmental pollution control measures will be worked out during EIA study as well as the Recurring cost (operation and maintenance).
iv. Tamorpingla WLS is at 4.6 km distance from the project site. Proposed Mahan II SHEP reservoir will be used as Lower Reservoir. Mahan River flows in southwest direction.
v. Details of Solid waste/ Hazardous waste generation/ Muck and its management will be covered in EIA report.
vi. Status of Litigation Pending against the proposal, if any. No
vii. The salient features of the project are as under:-

EAC Meeting Details:

EAC meeting/s	49th Meeting
Date of Meeting/s	18.07.2023
Date of earlier EAC meetings	Nil

Project details:

Name of the Proposal	Kharauli Pumped Storage Project
Location (Including coordinates)	Upper reservoir: 82°59'20"E; 23°29'03"N (to be constructed new) Lower reservoir: 82°59'09"E; 23°29'34"N (Common with proposed Mahan II SHEP)
Inter- state issue involved	No
Seismic zone	Zone-II

Category details:

Category of the project	A
Provisions	
Capacity / Cultural command area (CCA)	500 MW
Attracts the General Conditions (Yes/No)	Yes
Additional information (if any)	Nil

Electricity generation capacity:

Powerhouse Installed Capacity	500 MW
Generation of Electricity Annually	1095.00 MU
No. of Units	3 nos. (3 X 166.66 MW)

ToR Details:

Cost of project	2374.96 Cr.
Total area of Project	51.0 ha
Height of Dam from River Bed (EL)	Upper Dam – 18 m
Length of Tunnel/Channel	2250 m
Details of Submergence area	31.0 ha
Types of Waste and quantity of generation during construction/ Operation	Muck from excavation, solid waste from labour colony and construction waste
E-Flows for the Project	NA
Is Projects earlier studies in Cumulative Impact assessment & Carrying Capacity studies (CIA&CC) for River in which project located. If yes, then a) E-flow with TOR /Recommendation by b) EAC as per CIA&CC study of River Basin. If not the E-Flows maintain criteria for sustaining river ecosystem.	No

Muck Management Details:

No. of proposed disposal area/ (type of land- Forest/Pvt. land)	2.0 ha Private Land
Muck Management Plan	Will be Provided in EIA/EMP report
Monitoring mechanism for Muck Disposal	Will be Provided in EIA/EMP report

Land Area Breakup:

Government land/Forest Land	No
Submergence area/Reservoir area	31.0 ha
Land required for project components	20.0 ha
Additional information (if any)	Nil

Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone		**Details of Certificate / letter/ Remarks**
Reserve Forest/Protected Forest Land	--	Tamorpingla WLS is at 4.6 Km distance from project site.
National Park	--	
Wildlife Sanctuary	--	

Court case details:

Court Case	Nil
Additional information (if any)	Nil

Affidavit/Undertaking details:

Affidavit/Undertaking	Enclosed
Additional information (if any)	Nil

Previous EC compliance and necessary approvals:

Particulars	**Letter no. and date**
Certified EC compliance report (if applicable)	Not Applicable
Status of Stage- I FC	Yet to Apply
Additional detail (If any)	Nil
Is FRA (2006) done for FC-I	Yet to Apply

Miscellaneous

Particulars	**Details**
Details of consultant	M/s. R S Envirolink Technologies Pvt. Ltd. (RSET) (NABET Accredited Consultant Organization) Certificate No : NABET/EIA/2225/RA0274 Validity : August 15, 2025 Contact Person : Mr. Ravinder Bhatia Name of Sector : River Valley and Hydroelectric Projects

	Category : A MoEF Schedule : I(C) Address: 403, Bestech Chambers, Block-B, Sushant Lok Phase I, Sector 43, Gurugram, Haryana - 122009 E-mail : ravi@rstechnologies.co.in Land Line : (0124) 4295383 Cellular : (+91) 9810136853
Project Benefits	• Pumped storage hydropower is a modified use of conventional hydropower technology to store and manage energy or electricity by moving water between an upper and lower reservoir. Currently, pumped storage round-trip or cycle energy efficiencies exceed 80%, comparing favorably to other energy storage technologies and thermal technologies. This effectively shifts, stores, and reuses energy generated until there is corresponding demand for system reserves and variable energy integration. This shifting can also occur to avoid transmission congestion periods, to help more efficiently manage transmission grid, and to avoid potential interruptions to energy supply. This is important because many of the renewable energy resources being developed (e.g., wind and solar) are generated at times of low demand and off-peak energy demand periods are still being met with fossil fuel resources, often at inefficient performance levels that increase the release of greenhouse gas emissions. • Further, pumped storage projects are critical to the national economy and overall energy reliability because it's: o Least expensive source of electricity, not requiring fossil fuel for generation o An emission-free renewable source o Balancing grid for demand driven variations

	○ Balancing generation driven variations ○ Voltage support and grid stability Apart from this, proposed PSP will also benefit the local community by creating employment opportunities and will result in upliftment of livelihood and socio-economic conditions.
Status of other statutory clearances	Forest Clearance - Online application seeking forest diversion for 47.0 Ha after receipt of ToR Approval. Alongside, other statutory clearances (as applicable) from State as well as Central government will be obtained post completion of Detailed Project Report.
R&R details	Details shall be evaluated during EIA/EMP Studies
Additional detail (If any)	Nil

49.3.3 The EAC during deliberations noted the following:

The EAC deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the proposal is for grant of terms of reference to the project for Kharauli Pumped Storage Project of capacity 500 MW in an area of 51.1 ha at Village Kharauli, Tehsil Oudgi, District Surajpur, Chhattisgarh by M/s Kharauli Energy Private Limited**.**

The project/activity is covered under Category A of item 1 (c) 'River Valley & Hydroelectric projects' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The EAC noted that the project comes in river itself. The scheme is proposed with an installed capacity of 500 MW having 3 units of 166.66 MW each, located in the Oudgi Taluka of Surajpur district of Chhattisgarh envisages utilization of water from proposed Mahan SHP II reservoir (lower reservoir) and a new upper reservoir, which is to be constructed by making a bund. The water will be diverted through an Intake- HRC-Penstock to a Surface powerhouse to generate 500 MW of power by utilizing Rated turbine head of 233.0 m.

The water requirement of Kharauli PSP (On-Stream Open Loop Project) will be 0.19 TMC (non-consumptive use by recirculation) for establishing 500.00 MW pumped storage components with 6.0 hours storage capacity. Project comprises of Upper reservoir which shall be newly constructed and proposed Mahan SHP II reservoir will be used as lower reservoir.

These two reservoirs will be inter-connected with water conductor system and the generator and turbines installed at the powerhouse.

49.3.4 The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** for grant of Standard ToR for conducting

EIA study for Kharauli Pumped Storage Project of capacity 500 MW in an area of 51.1 ha at Village Kharauli, Tehsil Oudgi, District Surajpur, Chhattisgarh by M/s Kharauli Energy Private Limited, under the provisions of EIA Notification, 2006, as amended along with the following additional/specific ToR:

[A] Environmental Management and Biodiversity Conservation:

i. Cumulative Impact of project on carrying capacity and sustainability of Reservoir/ nalahs of catchment area, irrigation facilities due to tapping of water for filling reservoir.
ii. Action plan for survival of the rivulets in the study area.
iii. Alternative sites for various components shall be identified in terms of loss of forest area.
iv. Impact zone decided prior to base line data generation and accordingly, sampling location shall be finalized. Baseline data as mentioned in Standard ToR shall be collected for preparation of EIA/ EMP report along with soil characteristics which shall be studied at minimum 10 locations. The ground water level at 10 locations shall be measured in project area in all three seasons.
v. A study shall be carried out on impact of project activity on the aquatic and terrestrial ecosystem, within project area classifying the impact zones (highly impact/low impact zone) based on seasonal variations and covering the aspects related to impacts on aquatic ecosystem/ primary productivity due to quantity of water to be lifted for power generation and thermal stratification. Accordingly, Environment Management plan shall be prepared.
vi. Sampling locations be located to cover villages situated near the reservoir and around boundary of forest area for collection of baseline data and data to be incorporated in EIA/ EMP report.
vii. Identify the sand mining/ quarrying sites in submergence area and downstream of reservoir.
viii. Scope of watershed development in the 10 km radius of the project shall be studied in consultation with expert Govt. institutions/ Indian Council of Agriculture Research (ICAR)and accordingly a detailed Water Shed Development Plan shall be prepared and incorporated in EIA/ EMP report.
ix. Source of construction material and its distance from the project site along with detailed transportation plan for construction material.
x. A detailed reclamation/ restoration plan of quarrying site/sites be incorporated in the EIA/EMP report.
xi. Reservoir/ River banks protection plan all along the submergence need to be prepared and incorporated in EIA/ EMP.
xii. Scope of watershed development in the 10 km radius of the project shall be studied in consultation with Govt. institutions/ Indian Council of Agriculture Research (ICAR)and accordingly a detailed Water Shed Development Plan shall be prepared and incorporated in EIA/ EMP report.
xiii. MoU for water uses for the project signed and approved by concerned authority shall be submitted.
xiv. Environmental matrix during construction and operational phase needs to be submitted.
xv. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report.
xvi. Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.

xvii. Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature of the tree species required to be felled for reservoir creation and other project component.
xviii. Impact assessment on the fish diversity based on the hydrological alteration at the water drawing sources shall be studied.
xix. Stage-I Forest Clearance shall be obtained.
xx. Explore the possibilities to reduce Forest area for the construction of proposed project, Muck disposal sites should be outside the forest area.
xxi. Revised the project layout by shifting the muck disposal site to non forest area.
xxii. Submit environmental cost-benefit analysis and submit detailed alternate site analysis report, details of tree cutting involved in the project and explore the possibility to reduce the forest area.

[B] Socio-economic Study

i. Declaration by the project proponent by way of affidavit that "No" Inter-state issue/ policy issue is involved with any State in the project.
ii. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/ EMP report in the relevant chapter.
iii. 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.
iv. Tentative no. of project affected families shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.
v. Details of settlement in 10 km area shall be submitted.
vi. Details of Tribal population and resettlement plan if any.

[C] Muck Management/ Disaster Management

i. Details of quantity of muck generation component wise and disposal site along with transportation plan and its monitoring to be provided.
ii. Details of Muck Management plan prepared along with estimated cost incorporated in EIA/ EMP report.
iii. Techno-economic viability of the project must be recommended from CEA/ CWC

[D] Miscellaneous

i. Pre-DPR Chapters viz. Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
ii. Undertaking need to submitted on affidavit that regarding no activities has been yet started on the project site and water allocated to this scheme shall not be diverted to other purpose.
iii. Both capital and recurring expenditure under EMP shall be submitted.
iv. The photograph should bear the date, time, latitude & longitude of the monitoring station/ sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyse the samples.
v. Arial view video of project site shall be recorded and to be submitted.
vi. Detailed plan to restore wider roads and convert them into narrow upto 10m after construction of the project.
vii. Commitment for lifting of water during rainy season.

Agenda item No. 49.4

Renukaji Dam Project (40 MW) in an area of 1988.27 ha at Village Dadahu, District Nahan, Himachal Pradesh by M/s Himachal Pradesh Power Corporation Limited – Validity Extension of Environmental Clearance (EC) – reg.

[Proposal No. IA/HP/RIV/435307/2023; F. No. J-12011/53/2008-IA-I (R)]

49.4.1: The proposal is for grant of validity extension of environmental clearance (EC) of Renukaji Dam Project (40 MW) in an area of 1988.27 ha at Village Dadahu, District Nahan, Himachal Pradesh by M/s Himachal Pradesh Power Corporation Limited.

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

i. Environmental Clearance was accorded by MoEF&CC on 23.10.2009.
ii. The project construction work couldn't be started in the validity period of EC due to the following reasons:

The case for diversion of forest land was submitted on 25.09.2008, however, due to various issues involved and multiple inspections and subsequent recommendations of changes by forest authorities of State and Centre, Stage-I clearance could be obtained only on 20.02.2015. The funds for Project, including its clearances are to be provided by GoI and beneficiary states, however, due to non-signing of "Interstate Agreement" and CCEA approval, funds required for Stage-II forest clearance could not be received. To codify the rights and liabilities of all stake holders "Interstate Agreement" was signed on 11.01.2019. Thereafter, the Investment Clearance was accorded on 07.08.2020 by the Department of Water Resource, RD & GR Ministry of Jal Shakti Govt. of India and approval from Cabinet Committee on Economic Affairs (CCEA) was accorded on 15.12.2022. Then the Ministry of Jal Shakti Govt. of India released the amount of compensatory levies for deposition in State CAMPA Account for Stage-II clearance vide letter dated 30-03-2022 and the same has been deposited on 12-05-2022. Now, the compliance will be submitted for Stage-II forest clearance which is under process.

Request:
The proposal has been submitted for seeking the extension of validity of EC so as to continue on the project activities for the implementation.

49.4.3: The EAC during deliberations noted the following:

The proposal is for validity extension of Environmental Clearance of Renukaji Dam Project (40 MW) in an area of 1988.27 ha at Village Dadahu, District Nahan, Himachal Pradesh by M/s Himachal Pradesh Power Corporation Limited.

The Environmental Clearance was granted by the Ministry vide letter dated 23.10.2009. The validity of said EC was extended by the Ministry vide letter dated 6.11.2019 till 22.10.2022.

As per the Ministry's Notification S.O. 1807(E) dated 12.04.2022, the environmental clearance granted to River Valley project shall be valid for a period of thirteen years and

may be extended in respect of valid Environmental Clearance, by the regulatory authority concerned by a maximum period of two years.

Ministry has issued OM vide dated 11.04.2022 wherein it has mentioned that the time taken for obtaining Stage-II FC, after the grant of EC, may not be considered as part of the EC validity up to a maximum period of two years.

However, as per MoEF&CC notification S.O. 221(E) dated 18.01.2021 the period from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of Prior Environmental Clearances granted under the provisions of this notification in view of outbreak of Corona Virus (COVID-19). Accordingly, the EC dated 23.10.2009 shall be considered as valid till 22.10.2025 and as per the Ministry's Notification S.O. 1807(E) dated 12.04.2022 the validity of EC may be extended for two more year till 24.03.2027.

49.4.3: The EAC after detailed deliberations noted that as the EC dated 23.10.2009 is still valid till 22.10.2025, the project proponent may submit proposal for extension of validity of EC in 2025 before expiring EC. The proposal was therefore **returned in present form**.

Agenda item No. 49.5

Gond Major Irrigation Project (20.40 MW and CCA: 41250) at Village Jhara and Gotra, Tehsil Sarai and Kushmi, District Singrauli and Sidhi by M/s Water Resource Department, Govt. of Madhya Pradesh– Terms of References (TOR) – reg.

[Proposal No. IA/MP/RIV/435931/2023; F. No. J-12011/36/2023-IA.I (R)]

49.5.1: The proposal is for grant of ToR to the project for Gond Major Irrigation Project (20.40 MW and CCA: 41250) at Village Jhara and Gotra, Tehsil Sarai and Kushmi, District Singrauli and Sidhi by M/s Water Resource Department, Govt. of Madhya Pradesh**.**

49.5.2: The Project Proponent and the accredited Consultant M/s. R S Envirolink technologies Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

i. The proposal is for ToR to the project Gond Major Irrigation Project (20.40 MW and CCA: 41250) located at Village Jhara and Gotra, Tehsil Sarai and Kushmi, District Singrauli and Sidhi, Madhya Pradesh by M/s. Water Resource Department, Govt. of Madhya Pradesh
ii. The project proposal was considered by the Expert Appraisal Committee (Hydro River Valley Sector) in its 9th meeting held during 24/10/2017 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-1201/33/2017-IA-I(R); 29/11/2017.
iii. The project is listed at S.N. 1(c) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and is appraised at Central Level by Expert Appraisal Committee (EAC).
iv. The estimated project cost is Rs. 1316.00 Crore. Total capital cost earmarked towards environmental pollution control measures will be worked out during EIA study as well as the Recurring cost (operation and maintenance).
v. There is Sanjay Dubri Tiger Reserve within 10 km distance from the project site.

River Gopad is flowing at a distance of 0 km in western and northern direction.

vi. Details of Solid waste/ Hazardous waste generation/ Muck and its management will be incorporated in EIA/EMP report.

vii. Status of Litigation Pending against the proposal, if any. No

viii. The salient features of the project are as under:-

Project details:

Name of the Proposal	Gond Major Irrigation Project
Location (Including coordinates)	Songarh/ Jhara Barrage is located near Jhara village, Sarai Tehsil, Singrauli district of Madhya Pradesh with the geographical latitude of 23°59' 21.69" N and longitude of 82°6' 8.03" E. The Gotra Barrage is located near Gotra village, Kushmi Tehsil, Sidhi district of Madhya Pradesh with the geographical latitude of 24°5' 24.49" N and longitude of 81°54' 21.15" E.
Inter- state issue involved	No
Seismic zone	Zone -III

Category details:

Category of the project	1(c) River Valley Projects
Provisions	
Capacity / Cultural command area (CCA)	41250 ha
Attracts the General Conditions (Yes/No)	Yes
Additional information (if any)	Nil

Electricity generation capacity:

Powerhouse Installed Capacity	20.40 MW
Generation of Electricity Annually	Captive use only
No. of Units	4 nos. (5.10 MW each)
Additional information (if any)	Nil

ToR Details:

Cost of project	1316.00 Cr.
Total area of Project	2380.104 ha
Height of Dam from River Bed (EL)	Songarh Barrage – 20.0 m Gotra Barrage – 16.0m
Length of Tunnel/Channel	0 km
Details of Submergence area	2327.104 ha
Types of Waste and quantity of generation during construction/ Operation	Muck from excavation, solid waste from labour colony and construction waste

E-Flows for the Project	Water will be stored during monsoon and diverted for irrigation. Available annual 75% dependable total yield at Songarh Barrage and Gotra Barrage is 678.642 MCM and 878.136 MCM respectively. There are 7 upstream projects for which water allocation (u/s commitment) is 5.76 MCM. Hence net available yield at Songarh Barrage and Gotra Barrage is 672.882 MCM and 872.376 MCM respectively. Approximately 95% of the yield is contributed by monsoon flow and only about 5% yield will be come from non-monsoon period. Therefore, to mitigate the impact of reduced flow or drying up of the river downstream of the dam; the project is designed with live storage/proposed utilization of 75.66 MCM and 43.30 MCM at Songarh Barrage and Gotra Barrage respectively, and remaining water from monsoon contribution will be continuously discharged for downstream and upstream users. The quantum works out to be 597.222 MCM and 829.076 MCM at Songarh Barrage and Gotra Barrage respectively. Almost 89% and 95% of the water will be available at Songarh Barrage and Gotra Barrage respectively in pre-project conditions. Therefore, no additional environment flow is required to be released during monsoon period. To ensure that downstream conditions do not change substantially during non-monsoon period, entire discharge of non-monsoon period is recommended to be released as environmental flow.
Is Projects earlier studies in Cumulative Impact assessment & Carrying Capacity studies (CIA&CC) for River	No

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.	

Muck Management Details:

No. of proposed disposal area/ (type of land-Forest/Pvt. land)	Not applicable as entire muck generated will be utilized in the constriction of earthen dams. If any quantity remains unutilized, same will be used for the construction of approach road.
Muck Management Plan	Will be studied in detail and will be provided in EIA/EMP report
Monitoring mechanism for Muck Disposal	Will be studied in detail and will be provided in EIA/EMP report

Land Area Breakup:

Private Land	1110.824 ha
Government land/Forest Land	1093.710 ha Govt. Land/ 175.570 ha Forest Land
Submergence area/Reservoir area	2327.104 ha
Land required for project components	53.0 ha
Additional information (if any)	Total land required – 2380.104 ha

Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	**Yes/No**	**Details of Certificate / letter/ Remarks**
Reserve Forest/Protected Forest Land	No	

National Park	Yes (Tiger Reserve)	Songarh Barrage is at a distance of 0.34 km from the core zone and its entirely inside the buffer zone of Sanjay Tiger Reserve. Distance between Gotra Barrage and core and buffer zone of Sanjay Tiger Reserve is 13 km and 2 km respectively. Letter No. मा.ची./2023/913 dated 13.02.2023 from the office of CF, Sanjay Tiger Reserve provides the above information.
Wildlife Sanctuary	Yes	As above

Court case details:

Court Case	Nil
Additional information (if any)	Nil

Affidavit/Undertaking details:

Affidavit/Undertaking	Enclosed
Additional information (if any)	Nil

Previous EC compliance and necessary approvals:

Particulars	**Letter no. and date**
Certified EC compliance report (if applicable)	Not Applicable
Status of Stage- I FC	Proposal No. FP/MP/IRRIG/23033/2016. The proposal is pending with user agency as it is under revision
Additional detail (If any)	Nil
Is FRA (2006) done for FC-I	Yes (as per earlier forest proposal)

Miscellaneous

Particulars	**Details**
Details of consultant	M/s. R S Envirolink Technologies Pvt. Ltd. (RSET) (NABET Accredited Consultant Organization) Certificate No : NABET/EIA/2225/RA0274 Validity : August 15, 2025 Contact Person : Mr. Ravinder Bhatia Name of Sector : River Valley and Hydroelectric Projects Category : A MoEF Schedule : I(C) Address : 403, Bestech Chambers,

Particulars	Details
	Block-B, Sushant Lok Phase I, Sector 43, Gurugram, Haryana - 122009 E-mail : ravi@rstechnologies.co.in Land Line : (0124) 4295383 Cellular : (+91) 9810136853
Project Benefits	On completion of the Project the following benefits can be derived: • Annual Rabi irrigation of 41250 Ha. • Rise in sub soil water level in the project area. • Development of fisheries in the reservoir. • Production of crops will increase Hence per capita income will increase. • Employment to local labour largely tribes during construction period.
Status of other statutory clearances	**Forest Clearance:** Online application seeking forest diversion for 383.868 was submitted on 23.10.2017 (Proposal No. FP/MP/IRRIG/23033/2016) As the location of the proposal is revised and forest land requirement has been reduced to 175.57ha, application seeking forest diversion will also be revised. Alongside, other statutory clearances (as applicable) from State as well as Central government will be obtained post completion of Detailed Project Report.
R&R details	522 families residing in 13 villages have been identified as project affected families. Out of the 522 families, 348 families are likely to be displaced. The process of R&R is yet to be initiated. Detailed R&R plan will be Provided in EIA/EMP report
Additional detail (If any)	Nil

49.5.3 The EAC during deliberations noted the following:

The EAC deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the proposal is for grant of terms of reference to the project for Gond Major Irrigation Project (20.40 MW and CCA: 41250) at Village Jhara and Gotra, Tehsil Sarai and Kushmi, District Singrauli and Sidhi by M/s Water Resource Department, Govt. of Madhya Pradesh**.**

The project/activity is covered under Category A of item 1 (c) 'River Valley & Hydroelectric projects' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

49.5.4 The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** for grant of Standard ToR for conducting EIA study Gond Major Irrigation Project (20.40 MW and CCA: 41250) at Village Jhara and Gotra, Tehsil Sarai and Kushmi, District Singrauli and Sidhi by M/s Water Resource Department, Govt. of Madhya Pradesh, under the provisions of EIA Notification, 2006, as amended along with the following additional/specific ToR:

[A] Environmental Management and Biodiversity Conservation:

i. A study shall be carried out on impact of wildlife due to construction of Gotra and Songarh Barrage, accordingly Wildlife Management plan shall be prepared in consultation with State Forest Department and be incorporated in the EIA/EMP report.
ii. Detailed wildlife conservation plan for Schedule –I species shall be prepared and incorporated in the EIA/EMP report.
iii. Impact on the funal diversity based on the hydrological alteration due to construction of barrage shall be studied.
iv. Cumulative Impact of project on carrying capacity and sustainability of Reservoir/ nalahs of catchment area / due to tapping construction of Barrage in the Gopad river.
v. Alternative sites for various project components shall be identified in terms of loss of forest area.
vi. Certificate from Chief Wildlife Warden shall be submitted mentioning that project boundary is located outside the Eco Sensitive Zone (ESZ).
vii. Water availability studies/hydrological regime study of various seasons be conducted and approved by CWC.
viii. Impact zone be decided prior to base line data generation and accordingly, sampling location shall be finalized. Baseline data as mentioned in Standard ToR shall be collected for preparation of EIA/ EMP report along with soil characteristics which shall be studied at minimum 10 locations. The ground water level at 10 locations shall be measured in project area in all three seasons.
ix. Scope of watershed development in 10 km radius of the project shall be studied in consultation with Indian Council of Agriculture Research (ICAR)/ expert Govt. institutions and accordingly Watershed Management Plan shall be prepared with time schedule of implementation in the project catchment area.
x. Prepare Environmental Cost Benefit Analysis in terms of loss of forest ecosystem due to diversion of Forest land/loss of biodiversity and its impacts on ecosystem, water availability, water uses for generation of hydro power and Ecological flows in the stream/Nallah and Gopad river in study area 10 km from periphery of Project components.
xi. A study shall be carried out on impact of project activity on the aquatic and terrestrial ecosystem, within project area classifying the impact zones (highly impact/low impact zone) based on seasonal variations and covering the aspects related to impacts on aquatic ecosystem/ primary productivity due to quantity of water to be lifted for power generation and thermal stratification. Accordingly, Environment Management plan shall be prepared.
xii. Sampling locations be located to cover villages situated near the reservoir and around boundary of forest area for collection of baseline data and data to be incorporated in EIA/ EMP report.
xiii. Identify the sand mining/ quarrying sites in submergence area and downstream of reservoir.
xiv. Source of construction material and its distance from the project site along with detailed transportation plan for construction material.
xv. A detailed reclamation/ restoration plan of quarrying site/sites be incorporated in the EIA/EMP report.
xvi. Reservoir/ River banks protection plan all along the submergence need to be prepared and incorporated in EIA/ EMP.
xvii. MoU for water uses for the project signed and approved by concerned authority shall be submitted.

xviii. Environmental matrix during construction and operational phase needs to be submitted.
xix. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report
xx. In case any Wildlife Corridor is located within 10 km radius of the project site a detailed study shall be conducted to assess the impact of project on safe movement of wild animals.
xxi. Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.
xxii. Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature of the tree species required to be felled for reservoir creation and other project component.
xxiii. Impact on the fish diversity based on the hydrological alteration at the water drawing sources shall be studied.
xxiv. Explore the possibilities to reduce Forest area for the construction of proposed project, Muck disposal sites should be outside the forest area.
xxv. Action plan for survival of the rivulets located in the study area.

[B] Socio-economic Study

i. Public Health Delivery Plan including the provisions of drinking water supply for local population shall be in the EIA/EMP Report. Status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the need of the labour force and local populace.
ii. Declaration by the project proponent by way of affidavit that "No" Inter-state issue/ policy issue is involved with any State in the project.
iii. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/ EMP report in the relevant chapter.
iv. 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.
v. Tentative no. of project affected families shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.
vi. Details of settlement in 10 km area shall be submitted.

[C] Muck Management/ Disaster Management

i. Details of quantity of muck generation component wise and disposal site along with transportation plan and its monitoring to be provided.
ii. Details of Muck Management plan prepared along with estimated cost incorporated in EIA/ EMP report.
iii. Techno-economic viability of the project must be recommended from CEA/ CWC

[D] Miscellaneous.

i. Pre-DPR Chapters viz. Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
ii. Undertaking need to submitted on affidavit that regarding no activities has been yet started on the project site and water allocated to this scheme shall not be diverted to other purpose.

iii. Both capital and recurring expenditure under EMP shall be submitted.
iv. The photograph should bear the date, time, latitude & longitude of the monitoring station/ sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyse the samples.
v. Arial view video of project site shall be recorded and to be submitted.

Agenda item No. 49.6

Chittamvalasa Pumped Storage Hydro-Electric Project (800 MW) in an area 366.79 ha at Village Kusumavalasa, Mandal Hukumpeta, District Alluri Sitarama Raju, Andhra Pradesh by M/s New and Renewable Energy Development Corporation of Andhra Pradesh Ltd. (NREDCAP) – Terms of References (ToR) – reg.

[Proposal No. IA/AP/RIV/432822/2023; F. No. J-12011/37/2023-IA.I (R)]

49.6.1: The proposal is for grant of Terms of References (ToR) to the project for Chittamvalasa Pumped Storage Hydro-Electric Project (800 MW) in an area of 366.79 ha at Village Kusumavalasa, Mandal Hukumpeta, District Alluri Sitarama Raju, Andhra Pradesh by M/s New and Renewable Energy Development Corporation of Andhra Pradesh Ltd. (NREDCAP).

49.6.2: The Project Proponent and the accredited Consultant M/s. Aarvee Asociates, Architects and Consultants Private Limited, made a detailed presentation on the salient features of the project and informed that:

i. The project is listed at S.No:1(C) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
ii. **Background of the Project**: Chittamvalasa Pumped Storage Project (GPSP) is an Off-Stream Closed Loop Pumped Storage development, proposed with an installed capacity of 800MW/4964 MWH. The proposed Chittamvalasa PSP is located near Kusumavalasa village in Hukumpeta Mandal of Alluri Sitarama Raju district of Andhra Pradesh. The upper dam is located near Kusumavalasa village in Hukumpeta Mandal of Alluri Sitarama Raju district, Andhra Pradesh state having a geographical Latitude 18°12'38.91"N and Longitude 82°53'11.09"E. The lower dam is located near Kusumavalasa village in Hukumpeta Mandal of Alluri Sitarama Raju district, Andhra Pradesh state with the geographical Latitude 18°11'22.01"N and Longitude 82°54'23.11"E.
iii. **Land requirement:** The total land required for construction of project components, reservoir areas, muck dumping, construction camps and colony, etc., works out to be **366.79 ha (366.79 ha Private Land**).
iv. The Project comprises of development of upper & lower reservoirs with a gross storage capacity of 8.140 MCM (0.287TMC) & 10.493 MCM (0.371 TMC) respectively, out of which upper reservoir to be constructed with maximum dam height of 57 m (from river bed) to create the desired storage capacity while the lower reservoir will have maximum height of 61 m (from river bed) constructed at the downhill. The land required for the proposed upper reservoir and intake is **91.02** ha and the land required for the proposed lower reservoir and intake is **137.97** ha
v. The one-time filling of the PSP reservoir will be carried out from **Raiwada Reservoir,** which is about 6.0 Kms from the PSP lower reservoir. The scheme of operation for the project is with 6.2 Hours of peak power per day and 7.04 Hours

for pumping back the water to the upper reservoir. Water will be used cyclically for energy storage and discharge. Evaporation losses, if any will be recouped periodically.

vi. **Alternative studies**: Considering the more R&R issue in Alternative-2, Alternative-1 seems more feasible as compared to Alternative-2. Based on the comparative study, Alternative-1 is more feasible compared to Alternative-2. Considering Techno-Economic parameters, Alternative-1A with underground powerhouse is selected for further study
Hence, **Alternative-1 is considered for further study.**

vii. Total land area is 36,67,900 m^2. Greenbelt will be develop in an area of 7.90 % i.e. 2,90,000 m^2 out of total area of the project.

viii. Generation of Power During Peak Hours: The Project will generate 800 MW of peak power for about 6.2 hours by utilizing a design discharge of 332.96 cumec with a rated head of 273.23 m and will utilize 880 MW to pump 7.417 MCM (0.262 TMC) of water to the upper reservoir in 7.04 hours

ix. **Project Cost**: The estimated project cost is Rs.3,677.79 Crores. Total Employment will be 1,500 persons as direct & indirect.

x. **Environmental Sensitivity**: There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. The proposed project site area is not passing through the forest area.

xi. **Estimated Muck generation:** About total 23 Lakh cum of excavated muck will be safely dumped in the designated muck dumping yard to mitigate the environmental hazard. An area of 23 Ha of private land has been earmarked for the Muck Dumping area. details are as under:

Quantity of muck =	23,00,000 Cum (for 4 years)
density of muck =	1300 kg/m^3
Quantity of muck in kg =	2990000000 kg for 4 years
	747500000 kg for 1 year
	7,47,500 TPA

xii. No Court cases, Public Interest Litigation are pending with the proposed Chittamvalasa PSP Project**.**

xiii. The salient features of the project are as under:-

Project details:

Name of the Proposal	Chittamvalasa Hydro-Electric Pumped Storage Project (800 MW)
Location (Including coordinates)	The proposed Chittamvalasa PSP is located near Kusumavalasa village in Hukumpeta Mandal of Alluri Sitarama Raju district, Andhra Pradesh. The geographical coordinate of upper reservoir is at latitude 18°12'38.91"N and longitude 82°53'11.09"E. Similarly, the geographical coordinate of lower reservoir is at latitude 18°11'22.01"N and longitude 82°54'23.11"E.
Inter- state issue involved	No
Seismic zone	As per the seismic zonation map of India, the Project area lies in the seismic zone-II which falls in

	moderate zone.

Category details:

Category of the project	Category A
Provisions	Pumped Storage Project
Capacity / Cultural command area (CCA)	800 MW
Attracts the General Conditions (Yes/No)	No
Additional information (if any)	Nil

Electricity generation capacity:

Powerhouse Installed Capacity	800 MW
Generation of Electricity Annually	1721.24 MU
No. of Units	4 (Each of 200 MW)

ToR/EC Details:

Cost of project	Total Hard Cost of the project is Rs. Rs.3,67,779.00 Lakhs (3677.79 Cr).
	Total cost of the project including IDC is Rs 429627.00 Lakhs (4296.27 Cr)
Total area of Project	366.79 Ha
Height of Dam from Riverbed (EL)	57 m for Upper reservoir dam and 61 m for Lower reservoir dam
Length of Tunnel/Channel	2 nos;8.4 m dia HRT – 376.96 m (L) 4 nos;5.8 m dia Unit TRT – 95.11 m (L) 2 nos;7.8 m dia Main TRT – 772.99 m (L) 2 nos; 6.5 m dia Main Pressure Shaft – 465.19 m (L) 4 nos; 4.8 m dia Branch Pressure Shaft – 68.79 m (L)
Details of Submergence area	The Submergence area of the proposed project area lies in agriculture land of 63 Ha.
Types of Waste and quantity of generation during construction/ Operation	Sewage and solid waste generated at the construction staff colony/ project colony shall be adequately treated/ disposed to avoid water pollution and associated public health problems. Adequate measures will be undertaken to dispose the sewage and waste generated from the labour camps. Appropriate management measures will be recommended as a part of the Comprehensive EIA study.

E-Flows for the Project	Stream flow is not disturbed by the project. The proposed project is an off-stream closed loop project with an installed capacity of 800MW/4964 MWH.
Is Projects earlier studies in Cumulative Impact assessment & Carrying Capacity studies (CIA&CC) for River in which project located. If yes, then a) E-flow with TOR /Recommendation by EAC as per CIA&CC study of River Basin. If not the E-Flows maintain criteria for sustaining river ecosystem.	N/A

Muck Management Details:

No. of proposed disposal area/(type of land-Forest/Pvt. land)	Low Lying Areas. An area of 23 Ha has been earmarked for the Muck Dumping area.
Muck Management Plan	The huge, excavated material shall be utilized in the construction of embankment dam with processing the excavated material. Moreover, the excavated material from underground works of tunnel and powerhouse will also be utilized for processing of aggregates for concrete. Thus, about total 23 Lakh cum of excavated muck will be safely dumped in the designated muck dumping yard to mitigate the environmental hazard. An area of 23 Ha has been earmarked for the Muck Dumping area.
Monitoring mechanism for Muck Disposal	The project authorities have identified suitable muck disposal sites which are not located near the riverbanks.

Land Area Breakup:

Private land	366.79 Ha
Government land/Forest Land	0 Ha/0 Ha
Submergence area/Reservoir area	The Submergence area of the proposed project area lies in agriculture land of 63 Ha. The proposed project is an off stream closed loop project with an installed capacity of

	800MW/4964 MWH. The land required for the proposed upper reservoir and upper intake is 91.02 ha and the land required for the proposed lower reservoir and lowerr intake is 137.97 ha.
Land required for project components	366.79 Ha

Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	**Yes/No**	**Details of Certificate/ letter/ Remarks**
Reserve Forest/Protected Forest Land	No	Under process
National Park	No	
Wildlife Sanctuary	No	

Court case details: Nil

Affidavit/Undertaking details: The undertaking by NREDCAP is provided along with this document

Previous EC compliance and necessary approvals: NA

Miscellaneous

Particulars	**Details**
Details of consultant	M/s Aarvee Associates Architects, Engineers and Consultants Pvt Ltd, Hyderabad
Project Benefits	The following benefits are anticipated from the project construction and operation phases: • The availability of alternative resources provided by developer in the rural areas will reduce the dependence of the locals on natural resources such as forest. • A number of marginal activities and jobs would be available to the locals during construction phase. • Developer bringing large scale investment to the area will also invest in local area development and benefit will be reaped by locals. • Education, medical, transportation, road network and other infrastructure will improve. • With increased availability of electricity, small-scale and cottage industries are likely to come up in the area.
Status of other statutory clearances	N/A

R&R details	N/A

49.6.3: The EAC during deliberations noted the following:

The EAC deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the proposal is for grant of terms of reference to the project for Chittamvalasa Pumped Storage Hydro-Electric Project (800 MW) in an area 366.79 ha at Village Kusumavalasa, Mandal Hukumpeta, District Alluri Sitarama Raju, Andhra Pradesh by M/s New and Renewable Energy Development Corporation of Andhra Pradesh Ltd. (NREDCAP.

The project/activity is covered under Category A of item 1 (c) 'River Valley projects' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

44.9.4 The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** for grant of Standard ToR for conducting EIA study for Chittamvalasa Pumped Storage Hydro-Electric Project (800 MW) in an area 366.79 ha at Village Kusumavalasa, Mandal Hukumpeta, District Alluri Sitarama Raju, Andhra Pradesh by M/s New and Renewable Energy Development Corporation of Andhra Pradesh Ltd. (NREDCAP, under the provisions of EIA Notification, 2006, as amended along with the following additional/specific ToR:

[A] Environmental Management and Biodiversity Conservation:

i. Cumulative Impact of project on carrying capacity and sustainability of Reservoir/ nalahs of catchment area / due to tapping of water for filling reservoir due to presence of other proposed PSPs or hydroelectric project in close proximity of the project.
ii. Prepare Environmental Cost Benefit Analysis in terms of loss of Forest ecosystem due to diversion of Forest land/loss of biodiversity and its impacts on ecosystem, water availability, water uses for generation of hydro power and Ecological flows in the Raiwada Reservoir/ Streams and d/s of Dam on River Sharada at Devarapalli, in study area.
iii. Impact zone decided prior to base line data generation and accordingly, sampling location shall be finalized. Baseline data as mentioned in Standard ToR shall be collected for preparation of EIA/ EMP report along with soil characteristics which shall be studied at minimum 10 locations. The ground water level at 10 locations shall be measured in project area in all three seasons.
iv. A study shall be carried out on impact of project activity on the aquatic and terrestrial ecosystem, within project area classifying the impact zones (highly impact/low impact zone) based on seasonal variations and covering the aspects related to impacts on aquatic ecosystem/ primary productivity due to quantity of water to be lifted for power generation and thermal stratification. Accordingly, Environment Management plan shall be prepared.
v. Sampling locations be located to cover villages situated near the reservoir and around boundary of forest area for collection of baseline data and data to be incorporated in EIA/ EMP report.
vi. Identify the sand mining/ quarrying sites in submergence area and downstream of reservoir.
vii. Source of construction material and its distance from the project site along with detailed transportation plan for construction material.

viii. A detailed reclamation/ restoration plan of quarrying site/sites be incorporated in the EIA/EMP report.
ix. Certificate and certified map from Chief Wildlife Warden shall be submitted mentioning that project boundary is located outside the Eco Sensitive Zone (ESZ).
x. A detailed wildlife conservation plan for Schedule –I species be prepared duly approved by the Chief Wild Life Warden be submitted.
xi. Reservoir/ River banks protection plan all along the submergence need to be prepared and incorporated in EIA/ EMP.
xii. Scope of watershed development in the 10 km radius of the project shall be studied in consultation with Govt. institutions/ Indian Council of Agriculture Research (ICAR)and accordingly a detailed Water Shed Development Plan shall be prepared and incorporated in EIA/ EMP report.
xiii. MoU for water uses for the project shall be signed and approved by concerned authority.
xiv. Environmental matrix during construction and operational phase needs to be submitted.
xv. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report.
xvi. Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.
xvii. Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature of the tree species required to be felled for reservoir creation and other project component.
xviii. Project impact on avi-fauna shall be studied and incorporated in EIA/ EMP report.
xix. Impact assessment on the fish diversity based on the hydrological alteration at the water drawing sources shall be studied.

[B] Socio-economic Study

i. Public Health Delivery Plan including the provisions of drinking water supply for local population shall be in the EIA/EMP Report. Status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the need of the labour force and local populace.
ii. Declaration by the project proponent by way of affidavit that "No" Inter-state issue/ policy issue is involved with any State in the project.
iii. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/ EMP report in the relevant chapter.
iv. 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. Tentative no. of project affected families shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.
v. Details of settlement in 10 km area shall be submitted.

[C] Muck Management/ Disaster Management

i. Details of quantity of muck generation component wise and disposal site along with transportation plan and its monitoring to be provided.

ii. Details of Muck Management plan prepared along with estimated cost incorporated in EIA/ EMP report.
iii. Techno-economic viability of the project must be recommended from CEA/ CWC

[D] Miscellaneous.

i. Pre-DPR Chapters viz. Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
ii. Undertaking need to submitted on affidavit that regarding no activities has been yet started on the project site and water allocated to this scheme shall not be diverted to other purpose.
iii. Both capital and recurring expenditure under EMP shall be submitted.
iv. The photograph should bear the date, time, latitude & longitude of the monitoring station/ sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyse the samples.
v. Arial view video of project site shall be recorded and to be submitted.
vi. Detailed plan to restore wider roads and convert them into narrow upto 10m after construction of the project.

Agenda item No. 49.7

Palamuru Rangareddy Lift Irrigation Scheme (Phase II: Irrigation) in Districts of Mahbubnagar, Rangareddy & Nalgonda, Telangana by M/s Irrigation and CAD Department, Government of Telangana – Reconsideration Environmental Clearance (EC) - reg.

[Proposal No. IA/TG/RIV/289525/2017; F. No. J-12011/31/2017-IA.I (R)]

49.7.1: The proposal is for grant of environmental clearance to the project for Palamuru Rangareddy Lift Irrigation Scheme (Phase II: Irrigation) in Districts of Mahbubnagar, Rangareddy & Nalgonda, Telangana by M/s Irrigation and CAD Department, Government of Telangana.

49.7.2: The proposal was last considered by the EAC in its 48th EAC meeting held on 27th June, 2023, wherein the EAC observed that the project proponent has not calculated the damage cost appropriately as per the SOP. The EAC suggested to revise the environmental damage cost, Remediation Plan and Community Augmentation plan. Also bring all calculations in one table.
The PP submitted the revised information as suggested by the EAC vide letter dated 13.07.2023 accordingly the proposal was considered in 49th EAC meeting held on 24.07.2023.

49.7.3: The Project Proponent and the accredited Consultant M/s Voyants Solutions Private Limited, made a detailed presentation on the salient features of the project and informed the following:

[A] Package wise Details of Work Executed and Violation Period

Package Number	Work Description Under Package	Work commencement date	Date of halt	Total working days	% of work Completed

			of work		
1	Construction of Stage-1 Pumping Station	06-07-2016	22-11-2021	1596	42.37
2	Formation of Anjanagiri reservoir, Narlapur(V), Kollapur(M)	10-08-2016	31-10-2021	1551	89.44
3	Approach channel, Open canal including construction of CM & CD works and Head Regulator from Anjanagiri Reservoir at Narlapur (V) i.e., from Km 0.00 to Km 8.325 towards Veeranjaneya Reservoir at Yedula (V)	24-06-2016	01-11-2021	1341	72.30
4	Construction of Twin tunnel in between Narlapur Reservoir at Narlapur (v) and Yedula Reservoir at Yedula (v)	26-07-2016	22-11-2021	1904	66.62
5	Construction of Stage-2 Pumping station near Veeranjaneya Reservoir	21-07-2016	31-10-2021	1947	47.12
6	Earth work Exacavation of Approch channel, Open canal including construction of CM&CD Works and Head regulator from Veeranjaneya Reservoir at Yedula Village i.e., from km 0.00 to km 6.40 to Venakadri Reservoir,	13-07-2016	11-11-2021	1632	90.66
7	Construction of Tunnel from Km.6.400 to Km.25.400 between Veeranjaneya Reservoir at Yedula (V) to Venkatadri Reservoir at Vattem (V)	06-10-2016	21-11-2021	1797	55.05
8	Construction Of Stage -3 Pumping Station at	19-09-2016	17-11-	1873	48.00

	Vattem		2021		
9	Formation of Venkatadri Reservoir bund from Km 0.00 to Km Km.6.900/6.770 at Vattem(V), Bijinepally(M), Mahabubnagar District.	03-10-2016	18-11-2021	1365	80.00
10	Formation of Venkatadri Reservoir Bund from Km 6.770 to 10.750 at Vattem (V)	29-07-2017	16-11-2021	960	71.00
11	Formation of Venkatadri Reservoir Bund from Km 10.750/11.550 to Km 15.230/16.300	30-10-2016	20-11-2021	1540	63.35
12	Earth Work Excavation of Canal from Venkatadri Reservoir to Kurumutharya Reservoir & Construction of CM & CD works.	19-05-2016	13-11-2021	1728	74.00
13	Formation of Kurumurthyraya Reservoir Bund from Km.0.000 to Km.4.500 at Karvena (V) Boothpur (M) Mahabubnagar (Dist) of Palamuru Rangareddy Lift Irrigation Scheme.	18-10-2016	31-10-2021	1479	69.87
14	Formation of Kurumuthyraya Reservoir bund from Km. 4.500 to Km. 7.600 at Karivena (V), Boothpur (M), Mahabubnagar Dist.	18-10-2016	31-10-2021	1444	58.33
15	Formation of Kurumuthyraya Reservoir bund from Km. 7.600 to Km. 14.400 at Karivena (V), Boothpur (M), Mahabubnagar Dist.	18-10-2016	31-10-2021	1504	84.32
16	Construction of Stage-IV Pumping Station near Udandapur village of	09-04-2016	31-10-2021	1911	36.00

	Jadcherla Mandal in Mahabubnagar District.				
17	Formation of Udandapur Reservoir from Km 0.000 to Km 6.300 at Udandapur (V), Jadcherla (M), Mahabubnagar District	03-10-2019	31-10-2021	778	58.23
18	Formation of Udandapur Reservoir from Km 6.300 to Km 15.875 at Udandapur (V), Jadcherla (M), Mahabubnagar District	06-07-2018	31-10-2021	1092	48.38

The project proponent had been refrained from causing further damage to environment and as principal polluter the PP is responsible to compensate for causing damage to the environment as per Polluter Pays Principle, the project proponent has to undertake activities relating to Remediation Plan, Natural Resources Augmentation Plan and Community Resources Augmentation Plan in a time bound manner i,e:3 Years Time in an effort to restore the environmental damage afflicted including its implication on social aspects. Due to linear configuration of project, the work under the project is not concentrated at one point but spatially spread. The human settlement which are within 3 km from the project area under Phase-I works have been considered as project impacted villages (Table 13.29). There are in all 58 villages which can be catagorised as project impact villages of which 43 are covered in 8 mandals of Nagarkurnool district and 15 in 3 mandals of Mahabubnagar district. Accordingly, the various damages cost is enumerated. The summary cost of Remediation Plan, Natural Resources and Community Resources Augmentation Plan is Rs 153.70 Crores. As per Para11 Step:3 B viii of the OM dated, 7th July 2021, the project proponent shall be required to submit bank guarantee of equivalent amount i.e., Rs 153.70 Crores with the TPCB subject to recommendation of quantum of such amount by MoEF&CC. The said bank guarantee shall be released after successful implementation of the Remediation Plan, Natural and Community Resource Augmentation Plan. Besides this the project proponent shall have to pay the penal amount of Rs 106.00 Crores to TPCB.

[B] Summary of Environmental Damage Cost

S.N.	Environment Attributes	Damage cost (Rs lakh)
1	Land Environment	
(i)	Cost Compensation due to Improper Implementation of Muck Management	520.78
(ii)	Cost Compensation due to incomplete Implementation of Green Belt	2895.00
(iii)	Cost Compensation due to Partial Management of Solid Waste	368.00

2	Air Environment	
(i)	Damage Cost due to emission from excavation/Quarrying	5087.86
(ii)	Damage Cost due to emission from Dozing (Heavy Construction)	667.32
(iii)	Damage Cost due to emission from Transportation of construction Material	2383.33
3	Noise and Vibration	342.72
4	Wildlife Conservation and Biodiversity Plan	82.00
5	Water Environment (Compensation for Non-Provision of STP)	155.88
6	Cost Saving from Partial Implementation of Provision Under Sanitation Plan	230.19
7	Cost Saving from Partial Implementation of Fuel Wood Saving Devices	182.24
8	Cost Saving from Partial Implementation of Provision under OHS	191.77
9	Avoidance/Substitution cost saved in respect of other EMP	2262.00
Total		**15369.09**

[C] Remediation Plan with Year wise Break-up of Budget

S.N.	**Environmental Attribute**	**Plan Activity**	**Location**	**Quantity**	**Unit Rate (Rs)**	**Total Budget (Rs lakh)**	**Year wise Break-up**		
							I-Year	**II-Year**	**III-Year**
1 (a)	Air & Noise	Avenue plantation @ 5000 Nos/ village and areas between project and habitation with 3 years maintenance and cost of tree guard.	58 villages	290000	800/tree	2320.00	928.00	928.00	464.00
(b)		Community plantation /wind barriers in each of villages @ 1500 Nos/ village with 20% fruit	58 villages	87000	800/tree	696.00	280.00	280.00	136.00

		bearing 30% fodder trees with 3 years maintenance							
(c)		Supply of battery-powered Ride on Road Sweeper, 1800 watt, 2000mm including O&M charges for 3 years.	58 villages	58	2000000/No.	1160.00	460.00	460.00	240.00
2 (a)	Water Environment	Constructing RWH-Percolation tank one in each of PA villages	58 villages	58	1500000/each	870.00	345	345	180
(b)		1000 LPH SS RO Plant (ISI Standard) Including Storage Tanks and Installation 2 in each PA villages i/c 3-year maintenance	58 villages	116	400000/each	464.00	184	184	96
(c)		Renovation of water bodies like ponds, including desilting in nearby PA villages	58 villages	116	600000/each	696.00	278.40	278.40	139.20
3 (a)	Ecology& Biodiversity	Development of grazing and pasture land with proper fencing in PA Villages close to reservoirs	20 villages	26	2500000/each	650.00	260.00	260.00	130.00
(b)		Construction of Botanical Park for conservation of local/	Nagarkurnool Mahabubnagar	2	10000000/each	200.00	80.00	80.00	40.00

		endemic species							
(c)		Subsidy for intensive aquaculture in new ponds in areas nearby 5 reservoirs	Nagarkurnool Mahabubnagar	207	100000/person	207.00	80.00	80.00	47.00
Total						7263.00	2895.40	2895.40	1472.20

[D] Natural Resource Augmentation Plan with Year wise Break-up of Budget

S. N.	Environmental Attribute	Plan Activity	Location	Quantity	Unit Rate (Rs)	Total Budget (Rs lakh)	Year wise Break-up		
							I-Year	II-Year	III-Year
1 (a)	Land Environment	Reclamation of dump sites through conversion into community nursery sapling growing centre, 5 each in 2 districts, and issue of seeds and fertilizers for farmers located within 5 KM of project construction sites:	Nagarkurnool Mahabubnagar	10	2500000/each	250.00	100.00	100.00	50.00
(b)		Construction of Solid waste processing yard and supply & installation of machineries with handling	Nagarkurnool Mahabubnagar	4	10000000/each	400.00	200.00	100.00	100.00

		capacity of 10 Tons per day (Wet & Dry Processing) each 2 each in 2 districts							
2 (a)	Energy Conservation	Providing Solar Street Lighting (40 Watt) 30/31 in each PA villages and 200 in villages abutting 5 reservoirs, i/c all accessories and 3 years maintenances	58 villages	2789	40000/each	1115.60	446.24	446.24	223.12
(b)		Subsidy for arranging and installation of Solar submersible water pumps (5 HP) i/c all accessories 3 years maintenances @ 19/20 Nos each in each of PA villages.	58 villages	1131	200000/each	2262.00	904.80	904.80	452.40
Total						4027.60	1651.04	1551.04	825.52

[E] Community Resource Augmentation Plan with Year wise Break-up of Budget

S. N.		Plan Activity	Location	Quantity	Unit Rate (Rs)	Total Budge	Year wise Break-up

	Environmental Attribute					**t (Rs lakh)**	**I-Year**	**II-Year**	**III-Year**
1	Air & Noise								
(a)		Updation/renovation/ repair of public buildings like Community Centres, Library, Yuva (Youth) Mandal Centres, Anganwadi/Gymnasium and Public Toilets in locations within 5 KM of project construction sites @15 locations each in 2 districts	Mandals	15	3000000/each	450.00	180.00	180.00	90.00
(b)		Construction of Bus Shelters one each in villages / towns nearby project area	58 villages	58	500000/No	290.00	115.00	115.00	60.00
2 (a)	Socio-economic	Supply of Ambulance with basic life care amenities one each to nearby Government Primary Health Centres /CHC /District Hospital,	PHC/CHC near the affected villages	31	2000000/each	620.00	240.00	240.00	140.00
(b)		Supply, installation, and 3 years maintenances of medical equipment's like X- ray machine, Vitals Monitors, Stretchers, Wheelchair	PHC/CHC near the affected villages	25	1000000/each	250.00	100.00	100.00	50.00

		and Furniture one set each in nearby village Government primary health centres / CHC hospital of project area							
(c)		Supply, installation, and 3 years maintenances of Haemodialysis machine with RO System and Neo Natal Ventilator 2 each in nearby CHC /district hospital of project area	CHC/ District Hospital	20	5000000 /each	1000.00	400.00	400.00	200.00
(d)		E-learning for schools by providing computers	Affected Village schools	147	1000000 /each	1470.00	588.00	588.00	294.00
Total						**4080.00**	**1623.00**	**1623.00**	**834.00**

[F] Compliance of Grievances of Public Hearing vide O.M dated 30th September, 2020 in Superseding of CER

S.N.	**Description**	**Cost proposed under LADP (Rs lakh)**	**Cost proposed under other EMP (Rs lakh)**	**Total Cost (Rs lakh)**	**I-Yr**	**2 Yr**	**3Yr**
1	Health Care	394	0	394	158	158	78
2	Education	847	0	847	290	290	267
3	Infrastructure Development	1966	2000	3966	1322	1322	1322
4	Sanitation	129	0	129	43	43	43
5	Skill Development	385	0	385	154	154	77
6	Environment Enhancement	679	4415	5094	1698	1698	1698
		4400	**6415**	**10815**	**3665**	**3665**	**3485**

[G] Abstract of Cost of Plan, Penal Amount & Bank Guarantee Amount

S.N.	Particular/Plan	Estimated Cost (Rs. Crore)
1	Remediation Plan	72.63
2	Natural Resources Augmentation Plan	40.27
3	Community Resources Augmentation Plan	40.80
Total		**153.70**
4	Equivalent Amount of Bank guarantee	153.70
5	Penalty as per para 12a(i) & 12.2 of the OM, dated 7th July, 2021 on total project cost incurred i.e Rs. 21200 Crores.	106.00

49.7.4 The EAC during deliberations noted the following:

The proposal is for grant of environmental clearance for Palamuru Rangareddy Lift Irrigation Scheme (Phase II: Irrigation) in Districts of Mahbubnagar, Rangareddy & Nalgonda, Telangana by M/s Irrigation and CAD Department, Government of Telangana. The project/activity is covered under category 'A' of item 1 (c) 'River Valley projects' of the Schedule to the Environmental Impact Assessment Notification, 2006 and appraised at Central level by the sectoral EAC in the Ministry as category 'A'.

The EAC noted that the ecological damage assessment report has been revised as per SOP issued by the Ministry vide Office Memorandum no. 22-21/2020-IA.III dated 7.07.2021. The Project Proponent have to ensure the necessary steps towards successful implementation Remediation Plan, Natural Resources and Community Resources Augmentation Plan, as appraised by the EAC, in time bound manner.

The EAC examined the public hearing report and observed that the public hearing was conducted by Telangana State Pollution Control Board on 10th August, 2021 simultaneously in six districts namely Mahabubnagar, Nagarkurnool, Rangareddy, Vikarabad, Nalgonda and Narayanpet and major issues emerged were about land acquisition, compensation and water supply in drought prone area.

The EAC also observed the directions passed by the Hon'ble National Green Tribunal (NGT) vide order dated 22.12.2022 in the matter of OA No. 212 along with OA No. 148. The Hon'ble NGT has directed for constitution of an expert committee for suggesting the remedial measures for restoration of the ecological/social damage caused due to construction project without obtaining the Environmental Clearance. The project proponent must follow the recommendations of the expert committee in true sense.

The EAC agreed about the project requirement in the region but implementation of remedial measures for restoration of ecological sanctity is utmost requirement for ensuring the sustainable development.

49.7.4 The EAC after examining the information submitted by the project proponent on PARIVESH and as presented during the meeting **recommended** the proposal for grant of Environmental Clearance for Palamuru Rangareddy Lift Irrigation Scheme (Phase II: Irrigation) in Districts of Mahbubnagar, Rangareddy & Nalgonda, Telangana by M/s Irrigation and CAD Department, Government of Telangana, under the provisions of EIA Notification, 2006 and as amended with subject to compliance of applicable Standard EC conditions with the following additional conditions:

[A] Environmental Management and Biodiversity Conservation:

1. The Ecological/Social damage shall be restored in time bound manner as per Ecological Damage Assessment Report appraised by the EAC. EAC recommended for an amount of Rs 153.70 crore towards Remediation plan, Natural Resources Augmentation Plan and Community Resources Augmentation Plan to be spent within a span of three years.
2. The remedial measures to be suggested by the expert committee constituted as per directions of the Hon'ble NGT in the matter of OA No. 212 along with OA No. 148 vide order dated 22.12.2022 shall be implemented.
3. Project Proponent shall be required to submit a bank guarantee of an amount of Rs. 153.70 crore towards Remediation plan, Natural Resources Augmentation Plan and Community Resources Augmentation Plan with the SPCB prior to the grant of EC and proof will be submitted to the MoEF&CC.
4. Remediation plan shall be completed in 3 years whereas bank guarantee shall be for 5 years. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
5. The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the E (P) Act, 1986 and further no consent to operate to be issued till the project is granted EC. The action details shall be submitted to the Ministry prior to grant of Environmental Clearance.
6. The project proponent shall submit Rs. 106.00 crore as penalty as per Ministry's SOP vide OM dated 7.07.2021 under Polluters Pay Principle to the State Pollution Control Board.
7. Extensive plantation of native perennial trees shall be done along all the proposed reservoirs for developing tree layer of 500-meter width with 90% survival rate. Time bound action plan in this regard shall be prepared and implemented in association with State Forest Department and local panchayats.
8. The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports. The budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.

9. Ambient Air Quality Monitoring Stations for real time data to be installed at project site, shall be displayed at project site and its report to be submitted to IRO, MoEF&CC.

10. Watershed development plan shall be prepared in consultation with ICAR/expert Govt. institute and be implemented within 10 km radius of the projects. Implementation status be submitted in the 6 monthly compliance report.

11. Environment Management Cell shall be created in the project consisting environmental officers having post graduate degree in environmental sciences/Environmental Engineering to monitor implementation of Environment Management Plan in the project. The head of the Environment Cell shall report directly to the head of the project.

12. Wildlife conservation plan shall be implemented after due approval of the State PCCF/CWLW. Biodiversity Management Committee (BMC) shall be constituted for Monitoring and Evaluation of implementation of Biodiversity Conservation Plan

and Wildlife Conservation Plan as approved by the PCCF/CWLW. The BMC shall comprise MoEF&CC representative from concerned regional office.

[B] Disaster Management

1. Necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and subsequent amendments thereof.
2. Disposal of the excavated muck to be carried out in scientific manner. Restoration and reclamation plan of muck disposal area shall be prepared and shall be taken up pari passu with construction work and to be completed before commissioning of the project.
3. Stabilization of muck disposal sites using biological and engineering measures shall be taken up immediately to ensure that muck does not roll down the slopes and does not pollute the natural streams/canals and water bodies in surrounding area. The plantation on muck disposal site with local species for restoration of ecology and environment of the project site area.
4. Necessary control measures such as water sprinkling arrangements, and construction of paved roads leading to muck disposal sites etc. shall be taken up on priority to arrest fugitive dust at all the construction sites.
5. Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.

[C] Socio economic

1. Status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the need of the labour force and local populace.
2. The budget for plantation and other EMP activities should be revised as per existing rate.
3. R.O drinking water facilities be provided to villagers @ 10 households/Tap water.
4. Under CER activities, preference should be given to strengthen the basic amenities in the project affected villages like maintaining drinking water supply, providing health care facilities, etc.
5. Preference to be given to the local villagers as per the requirements and suitability, in the job/ other opportunities in the project, etc. Measures to be taken to develop skills of the local villagers particularly with respect to the trades related to construction works such as electrician, welder, fitter, etc.

[D] Miscellaneous:

1. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment. The study shall be undertaken by an independent agency.
2. Bio-Gas plant (Deen Bandhu Model of Bio-Gas) shall be installed in the Project affected area for Utilizing Cattle waste (Cow Dung) into renewable source of fuel.
3. Solar panel be provided to the families living in rural areas within 10 km radius of project.
4. PP shall procure construction material only from those Organizations having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.

5. An institutional mechanism to be developed to ensure the preference of jobs to PAFs and also a policy for preferential treatment for award of sundry works to the PAFs and their dependents.
6. The compliance of above conditions shall be monitored by IRO, MoEF&CC through regular site visit twice in a year.

Agenda item No. 49.8

Basania multi-purpose project (CCA 8780 and 100 MW) in an area of 6343.0 Ha Village Odhari, Tehsil Ghugari District Mandla (Madhya Pradesh) by M/s Narmada Valley Development Authority Madhya Pradesh - Terms of Reference (ToR) - reg.

[Proposal No. IA/MP/RIV/413201/2023; F. No. J-12011/01/2023-IA.I (R)]

49.8.1: The proposal is for grant of Terms of References (ToR) to Basania multi-purpose project (CCA 8780 and 100 MW) in an area of 6343.0 Ha Village Odhari, Tehsil Ghugari District Mandla (Madhya Pradesh) by M/s Narmada Valley Development Authority Madhya Pradesh.

49.8.2: The proposal was earlier considered by the EAC in its 40th meeting held on 25/01/2023 for grant of Terms of Reference, wherein the EAC deferred the proposal for want of additional information. The project proponent has submitted the additional information as under: -

Observation of the EAC	**Reply submitted by the project proponent**
The EAC noted that the project cover area involves around 2107 ha of forest land for establishment of project and its components. No exercise has been done for optimization of forest land as no alternative site analysis was done before submitting the application for TOR. In view of the fact that large chunk of forest land is required for development of project as well as the project cover area is also having tribal population, the EAC suggested to submit the Alternative Site Analysis in terms of ecological aspects viz. loss of Forest ecosystem due to diversion of Forest land/loss of biodiversity and its impacts on productivity of the ecosystem and likely impacts of project on Tribals etc.	A study was carried out by DMR hydro-engineering & Infrastructures Ltd., engineering consultant for the project and a "Study Report on Project Analysis" was prepared. The report covered alternative site analysis and optimization of the forest land. In order to meet the requirement of storing the monsoon flows of Narmada River upstream of Bargi dam reservoir and upstream of Mandla town, three alternative locations have been studied for dam site selection. Any other location upstream of Basania alternative III does not meet the yield requirement due to reduction in catchment area. These locations are spread over a length of 34Km of Narmada River starting from 23 Km u/s of Mandla town and 91 km downstream of proposed Raghavpur MPP. Further downstream locations were not possible due to presence of Mandla town. For optimization of forest land, detailed mapping of the forest land of finally selected alternative III has been carried

	out with the help of data sourced from forest department. Forest land requirement for the project has been reduced to 1788 ha, from 2107 ha as per earlier proposal which was discussed in 40th meeting. Project proponent further submitted, that they will study in detail, all the likely impacts of the project on tribal population during EIA study and shall prepare a tribal development plan.

49.8.3 The EAC during deliberations noted the following:

The EAC deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the proposal is for grant of Terms of Reference to the project for Basania multi-purpose project (CCA 8780 and 100 MW) in an area of 6343.0 Ha Village odhari, Tehsil Ghugari District Mandla (Madhya Pradesh) by M/s Narmada Valley Development Authority Madhya Pradesh.

The project/activity is covered under Category A of item 1 (c) 'River Valley projects' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The EAC also noted that there is a representation received raising concerns about project viability, water availability for the project and need for studying the cumulative impacts of project in the region.

49.8.4 The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** for grant of Standard ToR for conducting EIA study for Basania multi-purpose project (CCA 8780 and 100 MW) in an area of 6343.0 Ha village Odhari, Tehsil Ghugari District Mandla (Madhya Pradesh) by M/s Narmada Valley Development Authority, Madhya Pradesh under the provisions of EIA Notification, 2006, as amended along with the following additional/specific ToR:

i. Cumulative Impact of project on carrying capacity and sustainability of Narmada River and Reservoir/ nalahs of catchment area / due to construction of the project.
ii. Forest land should be minimized to ensure environmental sustainability of the area.
iii. Comments of Narmada Control Authority on the proposal shall be submitted along with EIA/EMP report.
iv. Prepare Environmental Cost Benefit Analysis in terms of loss of Forest ecosystem due to diversion of Forest land/loss of biodiversity and its impacts on ecosystem, water availability, water uses for irrigation and generation of hydro power and Ecological flows in the stream/Nallah and Narmada river in study area 10 km from periphery of Project components.
v. Baseline data as mentioned in Standard ToR shall be collected for preparation of EIA/ EMP report along with soil characteristics which shall be studied at minimum 10 locations. Sampling locations be located to cover villages situated near the reservoir and around boundary of forest area for collection of baseline data and data to be incorporated in EIA/ EMP report.

vi. The ground water level at 10 locations shall be measured in project area in all three seasons.
vii. A study shall be carried out on impact of project activity on the aquatic and terrestrial ecosystem, within project area classifying the impact zones (highly impact/low impact zone) based on seasonal variations and covering the aspects related to impacts on aquatic ecosystem/ primary productivity due to quantity of water to be lifted for power generation and thermal stratification. Accordingly, Environment Management plan shall be prepared.
viii. Identify the sand mining/ quarrying sites in submergence area and downstream of reservoir.
ix. Source of construction material and its distance from the project site along with detailed transportation plan for construction material.
x. A detailed reclamation/ restoration plan of quarrying site/sites be incorporated in the EIA/EMP report.
xi. A detailed wildlife conservation plan for Schedule –I species be prepared and submitted with EIA/EMP report after due approval of the Chief Wild Life Warden.
xii. Reservoir/ River banks protection plan all along the submergence need to be prepared and incorporated in EIA/ EMP.
xiii. Scope of watershed development in the 10 km radius of the project shall be studied in consultation with Indian Council of Agriculture Research (ICAR)/ Govt. institutions and accordingly a detailed Water Shed Development Plan shall be prepared and incorporated in EIA/ EMP report.
xiv. MoU for water uses for the project shall be signed and approved by concerned authority. Environmental matrix during construction and operational phase needs to be submitted.
xv. Matrix formulated on the basis of detailed study and field survey of flora and Fauna methodology used shall be mentioned in the EIA report.
xvi. Endemic plant and animal species found in the area concerned shall be provided instead listing entire endemic species found in the State.
xvii. Details of Flora and Fauna reported in submergence area, Nos. of tree along with their density and nomenclature of the tree species required to be felled for reservoir creation and other project component.
xviii. Project impact on avi-fauna shall be studied and incorporated in EIA/ EMP report.
xix. Impact assessment on the fish diversity based on the hydrological alteration at the water drawing sources shall be studied.

[B] Socio-economic Study

i. Public Health Delivery Plan including the provisions of drinking water supply for local population shall be in the EIA/EMP Report. Status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the need of the labour force and local populace.
ii. Declaration by the project proponent by way of affidavit that "No" Inter-state issue/ policy issue is involved with any State in the project.
iii. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/ EMP report in the relevant chapter.
iv. 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. Tentative no. of project affected families shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.
Details of settlement in 10 km area shall be submitted.

[C] Muck Management/ Disaster Management

i. Details of quantity of muck generation component wise and disposal site along with transportation plan and its monitoring to be provided.
ii. Details of Muck Management plan prepared along with estimated cost incorporated in EIA/ EMP report.
iii. Techno-economic viability of the project must be recommended from CEA/ CWC.

[D] Miscellaneous.

i. Pre-DPR Chapters viz. Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
ii. Undertaking need to submitted on affidavit that regarding no activities has been yet started on the project site and water allocated to this scheme shall not be diverted to other purpose.
iii. Both capital and recurring expenditure under EMP shall be submitted.
iv. The photograph should bear the date, time, latitude & longitude of the monitoring station/ sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyse the samples.
v. Arial view video of project site shall be recorded and to be submitted.
vi. Detailed plan to restore wider roads and convert them into narrow upto 10m after construction of the project.

The meeting ended with the vote of thanks to Chair.
****

ANNEXURE

ATTENDANCE LIST

S. No	Name& Address	Role	Attendance
1.	Dr. A. K. Malhotra	**Chairman**	P
2.	Dr. Uday Kumar R.Y	Member	P
3.	Dr. N. Lakshman	Member	P
4.	Dr. Mukesh Sharma	Member	P
5.	Dr. Amiya Sahoo	Representative of CIFRI	P
6.	Dr. J. A. Johnson	Representative of WII	P
7.	Shri K. Gowrappan	Member (Co-Opted for agenda item No. 49.7)	
8.	Shri Yogendra Pal Singh	Member Secretary	P
9.	Dr Saurabh Upadhyay	Scientist C, MoEF&CC	P

****

APPROVAL OF THE CHAIRMAN

From: ajitkumarmalhotra463@gmail.com
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Sent: Thursday, August 10, 2023 8:53:27 AM
Subject: Re: Draft minutes of the 49th EAC (RV&HEP) meeting held on 24.07.2023-reg

Dear Mr. Singh,
I have gone through the draft minutes and find them in order. As such they are approved.

Dr. A.K.Malhotra